Electronic Commerce: Opportunities and Challenges of general importers in Addis Ababa

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This is to certify that Ato Belaynew Asrie has carried out his research work on the topic entitled, electronic commerce: opportunities and challenges of general importers in Addis Ababa**,** with my advice and follow up. I also approve that no portion of the work referred in the thesis has been submitted in support of an application for another degree or qualification of this or any other university. His work is appropriate enough to be submitted as a partial fulfillment of the degree of Masters of Business Administration in finance (MBA in finance).

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Research Advisor:Venkati (PhD)

Date: _____

JUNE, 2012

ADDIS ABABA

DECLARATION

I, Belaynew Asrie hereby declare that this study entitled, electronic commerce: opportunities and challenges of general importers in Addis Ababa is my own work. All information in this document has been obtained and presented in accordance with academic rules and ethical conduct. This study has not been submitted for award of any degree or diploma program in this or any other institution and, I have fully cited, acknowledged and referenced all material and results that are not original to this work.

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ABSTRACT

Electronic Commerce: Opportunities and Challenges of general importers

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Advances in information technology have created great opportunities as well as threats to organizations in various business sectors. Though adoption of e-commerce is considered to provide substantial benefits to business; many general importers in Ethiopia still have not realized to adopt electronic commerce due to different factors. Identifying the main opportunities and challenges and suggests suitable strategies to promote e-commerce are the basic purpose of this research. To attain the objective, data for the study were obtained from sample of 203 general importers from total of 748 which are found in Addis Ababa and had collect data basically from primary sources. To do so questionnaire was designed and distributed to the top level managers of the selected companies. This study used descriptive survey research designs. The data collected was analyzed with the help of Microsoft Excel software packages. The empirical findings show that, although the country registered two digit economic growths, with stable political climate, the banking, ICT and E-commerce practice in Ethiopia are underdeveloped. Dominant barriers that highly hinder e-commerce adoption are; lack of skilled workers, Fear of risk security and privacy, lack of e-commerce infrastructure. The government of Ethiopia should formulate strategies that enhance the e-commerce infrastructure and enabling policy environment by involving full participation of all stakeholders, develop awareness raising campaigns. Finally, service provider and customer should sign service level agreements.

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ATM	Automated Teller Machine
B2B	Business-to-Business
B2C	Business-to-Customer
B2G	Business-to-Government
C2B	Consumer-to-business
C2C	Consumer-to-consumer
CAD	Cash against Documents
CBE	Commercial bank of Ethiopia
E-banking	Electronic banking
E-business	Electronic business
E-commerce	Electronic commerce
EDI	Electronic Data Interchange
EFT	Electronic Fund Transfer
E-mail	Electronic mail
E- Payments	Electronic Payments
ETA	Ethiopian Telecommunication Authority
ETB	Ethiopian Birr
ETC	Ethiopian Telecommunication Corporation
EU	European Union
G2B	Government-to-Business
GDP	Gross Domestic Product
HTML	Hyper Text markup language
HTTP	Hypertext Transfer Protocol
ICT4D	ICT for Development

ICT	Information and Communications Technology
IDI	Information Development Index
IP	Internet Protocol
ISDN	Internet subscriber digital network
ISP	International Service Provider
IT	Information Technology
ITU	International Telecommunications Union
LC	Letter of Credit
LDC	Least developing countries
M-commerce	mobile commerce
MOTI	Ministry of Trade and Industry
NBE	National Bank of Ethiopia
NRI	Network readiness index
NSF	National since foundation
OECD	Organization for Economic Co-operation and Development
PASDEP	Plan for Accelerated and Sustainable Development To End Poverty
SSL	Secure Socket Layer
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TCP/IP	Text Control Protocol/Internet Protocol
Telecom	Telecommunications
UNCITRAL	United Nations Commission on International Trade Law
UNCTAD	United Nations Conference on Trade and Development

UK	United Kingdom
UN	United nation
US	United States of America
USD	United state dollar
WAN	Wide Area Network
WB	World Bank
WTO	World Trade Organization
WWW	World Wide We

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Commerce (trading of products) has been a major impetus for human survival since the beginning of recorded history, which is based on specialisation of skills. Historically, there has been commerce for centuries but, developments in information and communication technologies have carried commerce to a new dimension in 1990s, which enable the transformation of traditional commerce to e-commerce (Turban et. al., 2000). This most strategic event specifically goes as far back as in 1991 when NSF lifted the restriction of commercial use of the Internet and that marked the beginning of the age of electronic commerce. Research so far show that the technologies designed to improve commercial transactions using the Internet have evolved as quickly. Since 1995, the economic consequences of the Internet and related technologies have increased dramatically (Guilherme et al., 2007). As of 1991, the Internet had less than 3 million users around the world, and its application to e-commerce was non-existent. By 1999, an estimated 250 million users accessed the Internet and approximately one quarter of them made purchases online from e-commerce sites, worth approximately $ 110 billion (Copell, 2000). It is also evident that as of September 2006, over 1 billion people (or 16.7% of the world population) had access to the Internet. Meanwhile, World usage has increased by over 200% between 2000 and 2006. Yet, in developing countries, usage rates are significantly lower than in developed countries (Guilherme et al., 2007).

The rapid change in technology, products, processes, severe competition, and trends towards globalization, force organizations to do business in new ways in order to survive and be successful. One of these new trends is e-commerce, a form of entrepreneurial activity, which transforms the manner in which firms operate using the Internet. The new technology has been used mostly as a tool to deliver value to the customer as a way to increase the core competencies (Starr, 2003).

The rapid and unpredictable advances in information and communication technologies (ICT) and the dissemination of networked data processing have led to widespread access to information resources and globalization of communications, businesses, and services. Among leading digital technologies, internet has brought the huge impact and greatly changing the way how business is conducted, access information, acquire products and services. These day's firms should rethink, redesign, and rework how businesses and public services operate and, typically, have been aimed at the improvement of productivity, effectiveness, and efficiency, both internally and in the external relationships with clients, customers, suppliers, and business partners to accommodate the demand of this changing environment.

Internet itself has grown at a remarkable pace since the emergence of the World Wide Web in the early 1990s. Murthy (2004) pointed out that due to a pervasive and steadily growth of information and communication technology, the world industry is entering into new phenomena of unprecedented form of competition supported by modern information and communication infrastructure. The rapid

growth and sophistication of information and communication technology is changing societies' ways of life in various parts of the world and in various economic sectors. This opened new frontiers in communication, commerce, medicine, politics, and almost every other aspect of private and public life. One of the leading areas where this is highly manifested is the way how the business is conducted. In the import sector, this trend is expressed by the growing use of e-commerce, an area distinguished by the combined utilization of electronic communication and information technology to transmit, store, and retrieve digital data.

The essence of e-commerce is reliable transaction delivery in a fast changing environment involving people, processes, and a service or business infrastructure. E-commerce in its simplest sense is trading electronically. Different scholars forward different ideas about growth of electronic commerce and its role on different aspect of business. Zwass (2003) pointed out that, over the past decade, electronic commerce on the technological foundation of the Web-Internet compound has entered extensive areas of organizational and social activity. Advances in information and communication technologies and the emergence of the internet have revolutionized business activities enabling new ways of conducting business referred to as electronic commerce (Zwass , 2003; Turban, 2000).

Electronic commerce looms large on the horizons of tomorrow, and it promises to transform trade and industry in ways not yet imagined or comprehended. For several countries it continues to be perceived as a double-faced blessing one

promising and the other threatening (Singh, 1999). Organizations are embracing e-commerce as a means of access or expanding to global markets, improving customer service, reducing costs, and enhancing productivity and efficiency (Wenninger, 1999). However, the range of benefits offered by e-commerce to transactional businesses has also given rise to key issues, especially on privacy of users and security of information shared online. These issues emerged because of the wide accessibility, openness and interconnectivity as innate features of the Internet (Smith et al., 1996).

Despite the global reach of e-commerce, not all countries have taken advantage of or benefited from e-commerce. With Internet, different characteristics of infrastructural, socioeconomic and socio-cultural have created a significant level of variation in the adoption and growth of ecommerce among countries. There is a big gap in Internet and ecommerce adoption between the developed and developing countries (Licker & Motts, 2000); thus creating a digital divides. According to Mbarika et al. (2005) digital divide is abundantly clear when comparing Sub-Saharan Africa with countries of the west like US or UK. In these countries, consumers, businesses and government have recognized the potential and benefits of adopting computer-enabled networks (Kole, 2000; Hoffman, 2000). The main obstacles that prevent developing countries from leveraging the internet and e-commerce solutions are lack of adequate , secure, efficient communication and banking infrastructure, technical knowhow, and information processing about the economy and environment (Khalfan & Akbar, 2006;Wondwossen &Tsegai, 2005). Guilherme et al. (2007) pointed out that developing countries have fallen behind in the early stages of technology

acquisition because of inefficient use of related knowledge, lack of investment within firms to acquire technology, lack of promotion policies that develop these technological areas and high costs of importing technology. Moreover, recent technological developments such as the introduction of digital signatures may widen the gap in the use of e-commerce technologies. Developing countries have poor telecommunication, poor transport systems, poor electronic payment systems, no security, and no skilled workforce (Odedra , 2003).

It is known that the success and growth of e-commerce, depends on efficient telecommunication facility and ICT infrastructure, secure electronic payment system, efficient regulatory framework, and widespread awareness among the public. This success factors do not characterize current Ethiopian information economy. The report forwarded by the international telecommunications union (ITU World Telecommunication Indicators, 1995) show that developing countries like Ethiopia were represented to be among the least developed in terms of the state of their telecommunication networks and limited range of services offered. Low level of internet penetration and poorly developed telecommunication infrastructure impede smooth development and improvements of e-commerce in Ethiopia. This statement supported by Lishan, 2009/10, who pointed out that Ethiopia's ICT sector remains far behind the rest of the world. It sits at the bottom of the Information Development Index (IDI), scoring 0.97 and placing 154th out of 159 countries in 2010 (Lishan, 2009/10) .

This study, therefore, is initiated in view of the fact that undertaking a research in the area can provide a useful insight regarding the opportunities, challenges e-commerce in Ethiopia, particularly for general importers.

1.2. Statement of the problem

The growth, integration, convergence and sophistication of information communication technology are changing our world. The world continues to witness a revolution in the way business is conducted, and the uncharted area of e-commerce presents many opportunities and challenges to a newly emerging world economy. E-commerce is an inevitable reality as the prime promoter of commerce & trade, and become one of the most essential components for current international trade; it greatly changed the ordinary manner of international trade (UNCTAD, 2003).

Apparently, the importance of e-commerce technologies in the development of international trade is immense and has a tendency to grow: under modern globalization circumstances, the application of information and telecommunication technologies has become a crucial factor of development in both international trade and economy in general (Aurelija, 2011). E-commerce benefits internationalization in two ways. First, as noted in PricewaterhouseCoopers (1999) there is a direct substitution of e-business technology and processes for physical locations, manual processes, or other expediting function. Second, e-commerce reduces coordination costs. Use of the Internet lowers communication costs, reduces the length of time-to-market for goods and services, makes possible the delivery of information in a digital

format, reduces transport and distribution costs and allows for more fully integrated and broader business alliances (International trade centre, 2009).

Regardless of the above benefit it offers not all countries are equally beneficial from this new technology. Research shows that the associated benefits of information technology have been under-realized in most developing countries. In most developing countries, business face severe limitations in terms of connectivity, ability to pay, deliveries, willingness to make purchases online, infrastructure accessibility (Straub, 2003). However, since e-Commerce is important tool for development, Poor countries can exploit rapidly expanding opportunities for profitable commercial ventures on the Internet.

It is known that, although the cost of using information and communication technologies for economic development is high, the cost of not doing so is likely to be much higher. Thus all sectors of a given economy should aware themselves to application of ICT. Import sector as part of trade subsector of Ethiopian economy should be competitive not only at home but also internationally. To this end this sector should aware about ICT and e-commerce to efficiently and effectively carry out the business operation. E-commerce managers should understand that e-commerce offers sustained growth and profitability. Although research(Wondwossen and Tsegai, 2005; Lishan, 2009/10) indicates e-commerce offers viable and practical solutions for organizations to meet challenges of predominantly changing environment, which enable businesses to cut costs, increase efficiency and reduce constraints of time and distance, enhancing their productivity, business in Ethiopia delay in adopting ICT and e-

commerce technologies. ICT is growing, but is still in its infancy. Very few private sector companies have established business-to-business websites and internationally accepted credit cards is none existent. It is evident that no significant attention has been made on electronic commerce to conduct and simplify commerce activities with the application of information communication technology (Wondwossen and Tsegai, 2005; Lishan, 2009/10).

The researcher believes that the aforementioned country wide problems are also exist on import sector, specifically on general imports. General importers in Ethiopia are not fully utilizing their capacities to introduce this new paradigm, to be competitive internationally and to exploit the benefit it offers. Additionally, the author argues that this technology is not yet applied in optimal way. At present there is low adoption of e-commerce, As well as the fully-fledged e-commerce has not yet been achieved by Ethiopia B2B commerce. In other words, 7 days a week, 24 hours a day have not yet implemented. These situations call for better understanding by the researcher. 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.

In attempting to investigate the opportunities and practical challenge of electronic commerce activity of general importers in Addis Ababa the researcher coined the following leading questions.

1. What is the current situation of Ethiopia's e-commerce market?
2. What are perceived benefits and risks of e-commerce adoption?

3. What are the main opportunities to adopt and implement e-commerce?
4. What are the main challenges that hinder the development of e-commerce?

1.3. Objectives of the study

The main objective of this research is to assess the current Practices, opportunities, and challenges of E-commerce in Addis Ababa city particularly on general imports.

The specific objectives of this research are:

i. Identify the main opportunities available to adopt and implement e-commerce.
ii. Identify the main challenges that hinder the development of e-commerce
iii. Review the existing e-commerce practice of the sector.
iv. To identify importers' attitudes, awareness and expectations in term of security in an e-commerce environment.
v. To suggest suitable/appropriate action to be taken to promote e-commerce in Ethiopia, particularly general import category.

1.4. Significance of the study

The researchers aim is to investigate the current situations as well as the prevailing problems and to come up with possible, attainable and relevant solutions. In general the study will have the following significance.

- Identification of opportunities and challenges can impact positively on the performance of companies that wish to adopt and/or have adopted e-commerce applications.

- The finding provides a framework for the companies for the design of their future directions and to adjust their goals and objectives as per real opportunities and challenges. Additionally, it enables government organizations and trade associations to develop companies e-commerce assistance programmes that are designed to address the factors identified by this research.
- Provide an opportunity for decision-makers and managers of the organizations to consider and evaluate the opportunities and problems observed in the existing practices, in order to take appropriate corrective measures in the area or to scale-up the positive factors (if any) for the promotion of e-commerce practices.
- The study serve as additional source for reference and it will also serve as a spring board for other researchers who want to conduct detailed research on the issue. So apart from providing a useful insight, is strongly expected to instigate other researchers to undertake a meaningful investigation by enlarging the scope of the issue.

1.5. Delimitation of the study

In order to ensure that the research project is manageable, it is necessary to demarcate the research. Although this research was limited to the general imports category in Addis Ababa city, it does not imply that research on the same topic is not needed in other cities and business sectors. With given the limited time allocated and budget constraints, the study did not cover all importers. Thus the scope of this study is confined to assess the current, opportunities and challenges of e-commerce in Addis Ababa city particularly on general imports. It

does not consider other import category, regional importer and export sector. Business-to-business (B2B) e-commerce is by far the largest category of e-commerce, and accounts for the lion's share of web transactions today (Corritore,et. al., 2004). Thus the study focused on business to business aspect of e-commerce.

1.6. Limitation of the study

While undertaking this study, researcher had encountered some limitations to mention some absence of well organized and documented information with regard to e-commerce in Ethiopia. Shortage of reference materials about e-commerce practice in Ethiopia enforced the investigator to depend largely on foreign countries experiences. Moreover, inconsistency of some historical data kept by different institution is another limitation that affects the research.

1.7. Organization of the paper

The research is organized in to five chapters. The first chapter deals with the introductory part of the research in which back ground of the research, statement of the problem, objectives of the study, significance, scope and limitation of the study , organization of the paper and Operational definition are incorporated. The second chapter deals with the literature review; general information about e-commerce is given; definition of e-commerce, conceptual framework of electronic commerce, classification of e-commerce, comparative analysis of e-commerce application in developed and developing countries, barriers hindering e-commerce adoption , e-commerce in Africa , selected developing countries e-commerce experiences and finally, Ethiopian experience

and nature of Ethiopian e- commerce environment are examined. Chapter three incorporate research design and methodology, which describes the methodology undertaken in relation to justification of the research design, questionnaire design, sampling process and data collection, administration and the intended analysis strategy. Chapter four discusses survey results presentation, analysis and interpretation. Finally, conclusion and recommendation are presented in the chapter five.

1.8. Operational definition

General Imports: is the trading activity that the company import different types of product rather than sticking in to only one types of product.

Importer: means any person who imports goods from abroad via land or sea or air into Ethiopia (federal negarit gazeta, 2010).

E-commerce: refers to the application of ICT to undertake trading activity which include from simple information searching using web, e-mail to electronic payment and full digitization.

Perceived Benefits of E-Commerce: refers to the gains or improvements derived from existing ways of operating business transactions using e-commerce applications.

Perceived Barriers of E-Commerce- refers to perceived obstacles in adopting, using or extending use of e-commerce technologies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review explains the concepts e-commerce and the results of previous studies on e-commerce. The sources considered in the review include books, past articles journals, previous thesis, and some documents from the government agencies and international institutions related to current e-commerce and ICT issues.

2.2 What is electronic commerce?

Electronic commerce is a growing aspect of the business community. In the past decade, the most decisive phenomenon is observed with the growth of internet and World Wide Web. Advances in the Internet and other telecommunications technologies have opened new frontiers in communications, commerce, medicine, politics, and almost every other aspect of private and public life. It is not an embellishment to suggest that the Internet is among the most influential forces shaping the end of twenty century on ward. The Internet with its open environment, and other networks have made it possible for the organization to access and exchange enormous amounts of electronic information both inside the organization and around the world with minimal time resulting in lower communication and coordination costs (Alter, 2002). Advances in information and communication technologies and the emergence of the internet have

revolutionized business activities enabling new ways of conducting business . (Zwass , 2003; Turban et al., 2000).

Development of e-commerce highly depends on the levels of technical, managerial, economic, social, cultural and political aspects. Particularly its development directly correlated with the development of information communication technology. The main vehicle of e-commerce remains the Internet and the World Wide Web. E-commerce has gained growing attention in many countries, particularly since the 1990s from both entrepreneurs and consumers. In 1991, the Internet had less than 3 million users around the world, and its application to e-commerce was non-existent. By 1999, an estimated 250 million users accessed the Internet and approximately one quarter of them made purchases online from e-commerce sites, worth approximately $ 110 billion (Copell, 2000).

2.2.1. Definition of e-commerce

Although e-commerce is widely discussed and studied, the definition is somewhat arbitrary. Besides, a single, clear definition delineating all the dimensions of e-commerce does not exist in the literature. Thus definition of e-commerce is very broad and e-commerce means different things to different people (Jentzsch & Miniotas, 1999). This section lists some of the various definitions present in the literature. E-commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. According to Zwass (1996), “Electronic commerce is the

process of sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks." Similarly, Electronic commerce can be defined as "the buying and selling of information, products, and services via computer" (Michael et. al., 1996).

Different international organizations also define e-commerce. According to UN, e-commerce includes the use of Internet and non-Internet communication systems, such as telephone ordering, interactive television and electronic messaging (UNTCTAD, 2004). The EU definition for e-commerce: "e-commerce is based on the electronic processing and transmission of data. It encompasses many diverse activities including electronic trading of goods and services, on-line delivery of digital content, electronic fund transfer, electronic share trading, public procurement." (EU(97)/157)

Electronic commerce can be defined broadly as : The use of electronic networks to exchange information, products, services and payments for commercial and communication purposes between individuals (consumers) and businesses, between businesses themselves, between individuals themselves, within government or between the public and government and, last, between business and government This definition encompasses the many kinds of business activities that are being conducted electronically, and conveys the notion that electronic commerce is much more comprehensive than simply the purchasing goods and services electronically(copell,2000).

Kalakota and Whinstone (1997) define e-commerce from the following different perspectives. From a communications perspective, E-Commerce is the delivery of information, products/services, or payments via telephone lines, computer networks, or any other means. From a business process perspective, E-Commerce is the application of technology toward the automation of business transactions and workflow. From a service perspective, it is a tool that addresses the desire of firms, consumers, and management to cut service costs while improving the quality of goods and increasing the speed of service delivery. From an online perspective, E-Commerce provides the capability of buying and selling products and information on the Internet and other online services.

The common points that different e-commerce definitions stress are (Gunes, 2003):

- E-Commerce is applied via open or closed networks.
- E-Commerce consists of producers, users, public or private organizations.
- The tools of e-commerce are, fax, EFT, EDI, ATM, telephone, Internet.

2.2.2 Conceptual Framework of electronic commerce

The argument in favor of moving to e-commerce is a belief that electronic markets have the potential to be more efficient in developing new information-based goods and services, and in finding global customers and trading partners with whom to conduct business. E-commerce, via the internet or the next generation of internet protocol, will change business institutions, operations, and products and services, as we know them today, just as the telephone, television, fax, and e-mail have changed the way businesses and consumers communicate.

E-commerce brings the benefits of product promotion, cost saving, timely information, shortened remittance time, information consistency, better customer service, and better customer relationships, customization of products, competitive advantages, and convenience of doing business (Wen et. al., 2001).

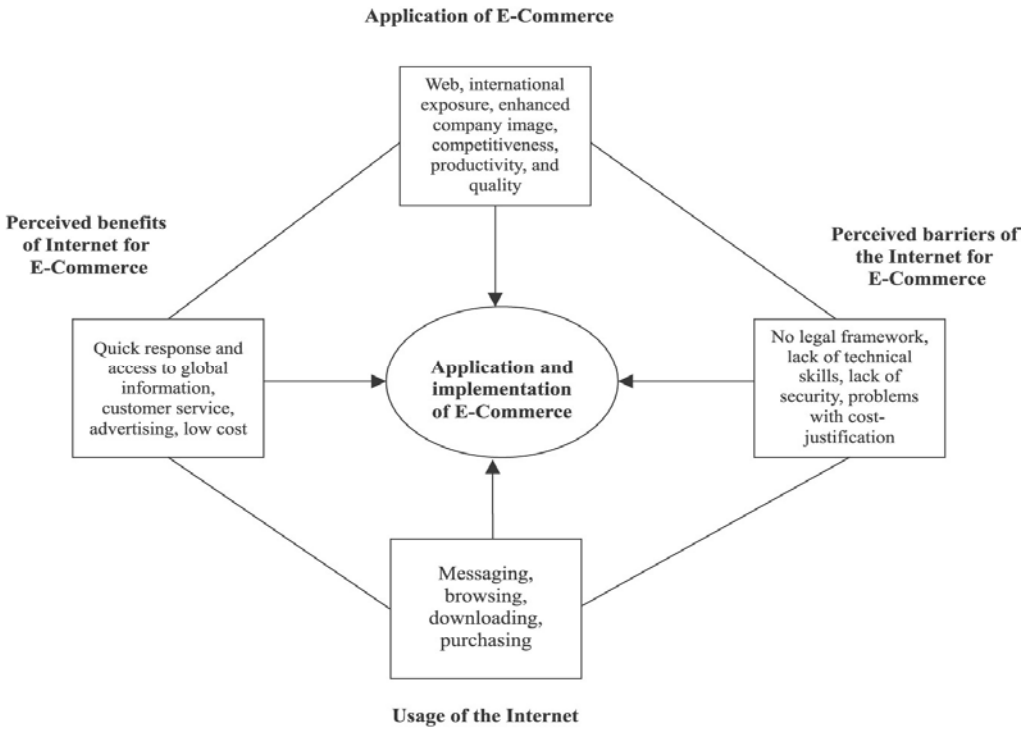

Figure 2.1: conceptual frame work of e-commerce (Wen et al., 2001).

2.3 Classification of e-commerce

There are many types of the E-Commerce that are practiced by different company. Academics have already drawn up a number of frameworks for classifying e-commerce but each one tends to explain it from a particular perspective. Two of these frameworks are discussed in more detail below.

Classification of e-commerce by transacting partners

E-Commerce can be between business and business, or between business and consumers, or can be between business and government, and can be many more.

The major different types of e-commerce are: business-to-business (B2B); business-to-consumer (B2C); business-to-government (B2G); consumer-to-consumer (C2C); and mobile commerce (Chen, 2001).E-commerce classification can be summarized in the following table

	Government	Business	consumer
Government	G2G	G2B	G2C
Business	B2G	B2B	B2C
consumer	C2G	C2B	C2C

Table2.1: e-commerce classification (Coppel, 2000)

Since this research focus on business to business aspect of e-commerce, the following paragraphs provides general overview about B2B.

Business-to-business electronic commerce is the wholesale and supply sides of the commercial process, where businesses buy, sell, or trade with other businesses (O'Brien 2002). It is the largest form of e-commerce involving business of trillions of dollars, and accounts for the lion's share of web transactions today (Beverly and Cynthia 2004). In this type, the buyers and sellers are both business entities and do not involve an individual consumer. Generally, this includes procurements of raw materials and supplies, liaison with contractors, sales channels, servicing customers, collaborating with partners, integrated management with data and knowledge.

There are three cost areas that are significantly reduced through the conduct of B2B e-commerce. First is the reduction of search costs, as buyers need not go through multiple intermediaries to search for information about suppliers, products and prices as in a traditional supply chain. In terms of effort, time and money spent, the Internet is a more efficient information channel than its traditional counterpart. Through B2B, suppliers are able to interact and transact directly with buyers, thereby eliminating intermediaries and distributors. Moreover, among the more evident benefits of B2B is the increase in price transparency. The gathering of a large number of buyers and sellers in a single e-market reveals market price information and transaction processing to participants. Furthermore, the bringing together of a significant number of buyers and sellers provides the demand-side economies of scale or network effects. Each additional incremental participant in the e-market creates value for all participants in the demand side. More participants form a critical mass, which is a key in attracting more users to an e-market (en.wikipedia.org).

Classification of e-commerce by degree of digitization

Choi et al. (1997) created a framework for the categorization of e-commerce into different configurations based on the degree of digitization of the product or service sold process of the transaction and the delivery agent. Three main dimensions can be isolated as:

Traditional e-commerce: where products or services are physical, the process of the transaction is physical and the delivery agent is physical. However, in reality in today's world, it is very rare that a business is truly traditional because of the use of electronic point of sale systems.

Pure e-commerce: where products or services are digital, the process of the transaction is digital and the delivery agent is digital. For example, software update services of companies like Microsoft, Cisco, and Symantec; downloading of electronic books; peer-to-peer file sharing.

Partial e-commerce: where either one or two of the dimensions are physical. For example in the case of booksellers Amazon, the products (books) are physical, the process is digital and the delivery agent is physical. By identifying the areas that could potentially be digitized, organizations can re-engineer their business processes to improve efficiency, reduce costs, access global markets and benefit from the advantages presented by e-commerce and e-business (Choi et al., 1997).

2.4. Comparative analysis of e-commerce application in developed and developing Countries

According to Huang & Chen (2010) Digital Divide refers to the gap between the more privileged who have access and the less privileged and who do not have access to information and communication technology. Developed and developing countries differ in terms of the level of IT investment, the degree of IT diffusion, and the economic return to technologies. Moreover, the extent of technology usage and performance impacts depends on a variety of economic, social, and political factors, including income, education, technology policies, cultural norms and access to formal and informal communication networks. In the case of e-commerce, the Asia-Pacific region, Latin America, and Eastern Europe have been experiencing rapid e-commerce adoption but very low volumes of transactions, while North America and Western Europe account for the vast majority of

worldwide e-commerce transactions. E-commerce poses challenges to developing countries, but at the same time offer opportunities. The commercialization of information communication technologies has been widely recognized as an important tool for economic growth. Most developing countries have yet to significantly benefit from the vast resources and opportunities made possible by information technology and benefits of information technology have been under realized in most developing countries. By and large, businesses in developing countries, because of managerial, organizational, and environmental constraints, face substantially greater risks in implementing e-commerce than businesses in developed countries (Alemayehu and Linker , 2005).

Odedra(2003) characterize developing countries as having poor telecommunication, poor transport systems, poor electronic payment systems, no security, and no skilled workforce. This lead to lack of knowledge on the benefits from ecommerce and if knowledge is present, the implementation of e-commerce projects for marginalized communities is still not undertaken for lack of resources.

2.5 Barriers hindering e-commerce adoption in developing countries

The study undertaken by Japhet&Usman (2010) identified barriers hindering the adoption of e-commerce in developing countries. The extent of e-commerce adoption is hampered by a ranges of obstacles including the unavailability and/or unreliability of infrastructure, the absence of government policy frameworks, the lack of banking facilities and amenities (such as credit cards), and ignorance on the part of possible users about the enormously beneficial

potential of ecommerce. The level of education, the availability of IT skills, the level of penetration of personal computers and telephone within the society hinders adoption of ecommerce.

Japhet&Usman (2010) identified the following specific barriers hindering the adoption of e-commerce in developing countries.

- Lack of convenient payment means, poor distribution system, imperfect legal system, and lack of large scale telecommunication transmission capability (broadband), Internet security are problems face these countries.
- Another most pressing limitations are access to technology (computers, connectivity, and gateway to Internet), limited bandwidth, which reduces the capacity to handle audio and graphic data; poor telecommunications infrastructures and unreliable electricity supply.
- The cost of the Internet access makes it inaccessible to most users in developing countries. The cost of accessing the infrastructures also influences the growth of ecommerce. The priority for most developing countries is to put in place the necessary infrastructure and a competitive environment and regulatory framework that support affordable Internet access. The monthly connection cost of the Internet far exceeds the monthly income of a significant portion of the population.
- Confidence and trust is also an essential requirement for secure electronic trading. The geographical separation of buyers and sellers, often coupled with a lack of real-time visual or oral interaction, creates a barrier to ecommerce adoption in developing countries.

- Language is another important hindrance to ecommerce adoption. Most people in developing countries are illiterates and uneducated. Moreover, English is a primary language used in many Western countries where new technologies originate. It is the predominant language for development of IT and ecommerce and it is the main language used on the Web.
- Finally, the study identified various socioeconomic characteristics as barriers hindering ecommerce adoption in developing countries. The most common are unfavorable economic condition , the poor state of educational system , Lack of ICT skills and business skills ,un reliable and non secure payment infrastructures , the inefficient logistics and distribution system and the lack of good transport.

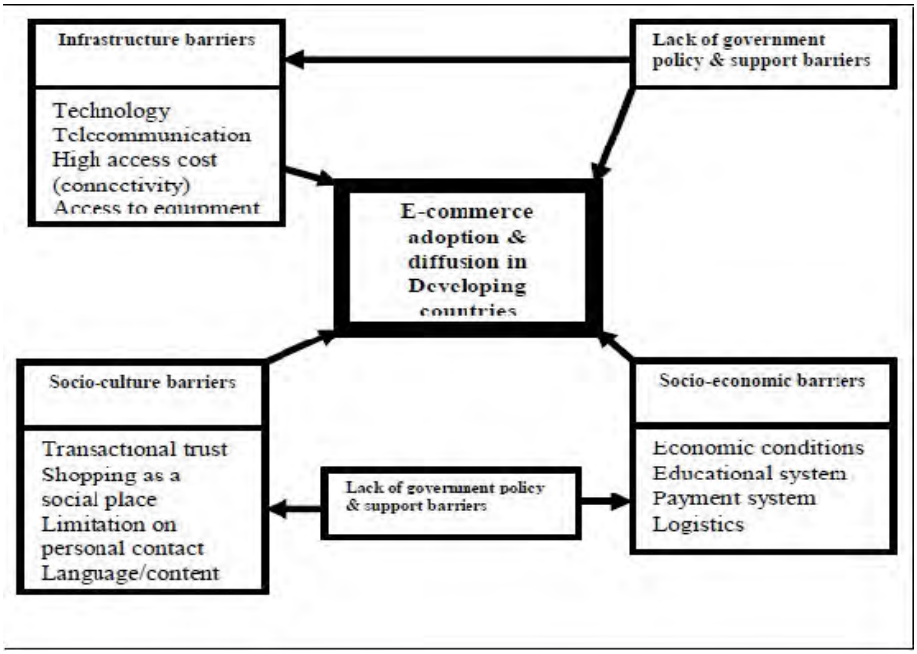

Figure 2.2: Barriers hindering e-commerce adoption in developing countries (Japhet&Usman 2010).

2.6 E-Commerce in Africa

In Africa e-commerce needs to be seen within the wider context of the so-called "digital divide" that separates the developed and developing world and especially Africa, which has most of the least developed countries on the globe. With the exception of South Africa, there is minimal evidence of ecommerce on the continent (UNCTAD, 2001).

Obstacles to E-Commerce in Africa

Mbarika (2009) point out the major constraints to e-Commerce and explained four telecommunication infrastructure development obstacles in reference to Africa's least developing economies.

Organizational obstacles: Access of most the telecommunication channels are controlled by state monopolies and conclude that monopolized situation in developing economies is the one of major obstacle.

Financial obstacles: many countries in Africa have low gross domestic products , low GDP per capita and no financial autonomy in operating entities and poor state of banking system usually faces the financial obstacles in the development of infrastructure (Meso et al., 2007; cited in Mbarika, 2009).

Technology obstacles: Mbarika, (2009) explained that technological issues are the major concerns in the growth of teledensity, most of the telephone system is placed to serve the need of the government which tend to be confined to major cities. Moreover the use of outdate equipment and poor maintenance of equipment is also creating hindrances.

Geographical obstacles: Remote areas usually offer low monetary returns and fewer incentives to telecommunication infrastructure extension. Hence such areas are not an ideal place for private investors (Mbarika, 2009).

2.7 Selected developing countries e-commerce experiences

2.7.1 E-commerce in Libya

Abdalla (2009) after investigating the e-commerce situation of Libya pointed out that E-commerce increase the efficiency of Libya's economy to make their products higher quality and their customer-service more efficient. Additionally, it also creates barriers that the Libyan society has to find ways to solve by adjusting their business practices to accommodate them. He concludes that E-commerce in Libya is still in its infancy stages of development. Another researchers, Ziad et al.(2009) studies e-commerce in relation to small business in Libya and summarized the benefits of e-commerce ;expands the marketplace to national and international markets; decreases the costs of creating, processing, distributing, storing, and retrieving paper-based information; excessive inventories and delivery delays can be minimized with e-commerce; and enables companies to interact more closely with customers.

Ziad et al. (2009) also analyzed ecommerce barriers in terms of three categories: economic, socio-political and cognitive. The economic obstacles include several factors that affect the diffusion of e-commerce such as slow internet diffusion, unavailability of credit cards, unavailability of a physical delivery system, and low bandwidth availability. The socio-political barriers take account of government regulations like privacy and security, lacks of business laws for e-

commerce, lacks of legal. Finally, the cognitive hindrances contain a number of factors which lead to a negative cognitive assessment of ecommerce of individuals and organizations like inadequate awareness, knowledge, skills, and confidence; a lack of awareness and understanding of potential opportunities; lack of confidence in service Providers and the postal network; and computer illiteracy.

2.7.2 E-commerce in Egypt

A study in Egypt (El-Nawawy and Ismail, 1999) found main contributory factors to non-adoption of e-commerce which include: awareness and education, e-commerce infrastructure, telecommunications infrastructure, financial infrastructure, the legal system, and social and psychological factors. Sherif and Maha (2001) identify number of challenges that face the growth of e-commerce in Egypt. According to them awareness is a critical challenge for e-commerce implementation in Egypt from the consumer and the corporate perspectives. Beside this e-commerce infrastructure is not yet fully in place. The non-existence of an appropriate and secure e-commerce enabled environment is a disincentive to the sector. Telecommunications Infrastructure is growing but still lagging behind in terms of being capable of providing the required infrastructure for the Internet. It is perceived that the cost of the telecommunications services is rather expensive. Lack of trust remains challenge for e-commerce diffusion.

In their latter studies Sherif and Maha (2002) relate e- commerce challenges in Egypt in to a variety of social, technical, financial and legal challenges.

With respect to the social challenges, there is lack of awareness, lack of training, lack of trust, resistance to change and the language barrier. With respect to the technological challenges, there is the problem of relatively weak resources with respect to the telecommunications infrastructure. This includes bandwidth cost that is almost two and half times more expensive than the international tariff with low capacity level, which is extremely modest, leading to long waiting time for access and downloading. With respect to the financial challenges, there is the lack of electronic payment systems. For e-commerce to succeed, electronic payment systems should be available, efficient and secured. However, to date the electronic payment system is non-existent in Egyptian banks. With respect to the legal challenges, the non-existence of an Egyptian certificate authority is a major problem.

Zeinab (2005) also undertake research and Analyzed Barriers that Face Egypt in Implementing E-commerce and forward the following major hindering factors.

- Low level of Consumer awareness
- The lack of corporate awareness of the conceivable business advantage of e-commerce
- The nonexistence of an appropriate and secure e-commerce-enabled environment
- Low Financial services and infrastructure
- The lack of existing SET compliance mechanisms in the country financial transactions on the Internet.

- The cost of international bandwidth is expensive, the Egyptian the pricing structure is still very expensive
- Language barrier, many web sites are in English and that is a huge obstacle for Arabic speaking natives who can only write and read Arabic.
- Lack of certificate authority: The nonexistence of a certificate authority (CA) in Egypt serves as an impediment toward the adoption of e-commerce on a national level, and more importantly, an international level.

2.7.3 E-commerce in China

Xiong (2010) research result reveals the following Problems of development of e-Commerce in China.

- Low level of computer and internet usage in Chinese companies

E-Commerce is practiced by less than 10% of Chinese companies, which is far from a popular form of business transaction as compared to developed countries like US.

- Technical barriers

Similar to lots of other developing countries, China suffers both low technical level of and market share by the Chinese native IT industries. Key hardware and software used in major e- Commerce application and engineering projects are dependent on foreign companies. System integration and information service level has lots to improve, while IT application and ecommerce standardization awaits lots of work for solutions. Wide band connection and quick response on line have been so far a luxury.

But it is not only IT side which constitutes the technical barriers. Three problems have been haunting Chinese companies in their acceptance and application of e-Commerce:

a. National credit rating system for both companies and individual consumers not yet completed.

b. Electronic payment means on line not up to security expectation

c. Logistically underdeveloped distribution and delivery system to conclude the demand and supply chain

- Human resources issues

One of the outstanding issues is Chinese companies have very few access to personnel familiar with both IT technology and the business sector the companies are involved. It is a problem of education system not yet responding to the market demand, combined with lack of financial incentives for training and preparing such type of engineers. There has been no adequate training of employees, including senior management, on application and significance of e-commerce, which may be one of reasons for lack of motivation towards e-business in lots of Chinese companies.

2.8. Ethiopian experience and nature of Ethiopian e-commerce environment

2.8.1 Introduction

The success and growth of e-commerce, depends on efficient telecommunication facility, ICT infrastructure, secure electronic payment system, automated financial network and efficient regulation. For the effective deployment of e-

commerce, it is necessary to have a reliable and cost effective infrastructure that can be accessible to the majority of the population.

Nowadays, information communication technology is one of the most decisive factors to achieve, economic development. Information and communication technologies can be an extremely powerful enabler in efforts to bring positive and sustainable socio economic and political development to countries around the globe. Information communication technologies facilitate the delivery of basic social services: health, education, agricultural extension services, and good governance. Conducting old businesses in new ways and embracing new business opportunities has now become part of any economic transformation (Assefa and Wubalem, 2007).

Major telecom and ICT infrastructure indicators

Network readiness index: The Africa's networked readiness continues to be at the bottom of NRI, with the majority of the region lagging in the bottom half of the NRI rankings. As show in the table 2.2 Ethiopia ranked 150th in the world and 31th in Africa.

Skills sub-index: reflects the high level of achievement in developed countries as well as the nature of the proxy indicators employed. Ethiopia sits at the bottom of skill sub index indicator, which lags behind even by African standard. Ethiopia sits at the bottom with global rank of 149 out of 152 countries.

Internet users: Africa has the lowest number of internet users compared to the other continents which left behind in the ICT race. Development of the Internet market in Africa is still at infant stage (ITU report, 2011). Ethiopia has small number of Internet users and very small Penetration even by African standard.

As shown in the table by number of internet users Ethiopia ranked 21th in Africa and 119th in the world.

Internet host: An Internet host is a computer connected directly to the Internet. The number of hosts is one indicator of the extent of Internet connectivity. Ethiopia ranked 200th in the world with total internet host 151(ITU, 2011).

Table 2.2: Summary of major telecom and ICT infrastructure indicators during 2010/2011

Indictors	No	Rank in Africa	Global Rank	Source
NRI		31	150	CIA, 2011
Internet users	447,300	21	117	CIA, 2011
Internet host	151	Na	200	ITU, 2011
Skill sub index		Na	149	ITU, 2011
Na: data note available				

2.8.2 The Telecom Sector

The development of telecommunication industry is one of the important indicators of social and economic development of a given country. In spite of recent liberalization and privatization in different sectors, the telecommunications industry has remained under Government control. For very long, the regulatory aspect was carried out by a single public organ**.** Very recently**,** on December, 2010 the state monopoly telecommunications service provider in Ethiopia, ETC renamed as Ethio Telecom after France Telecom**,** one

of the world's leader telecommunication companies, takes over the management**.** France Telecom will strive to improve and modernize Ethio Telecom's overall business aspect through implementing new organizational structure, better work process (newbusinessethiopia.com).

2.8.2.1 The Size of the Telecommunications Market

Ethiopia is one of the countries that face limited territorial coverage of mobile and fixed services and lag behind the rest of Africa in terms of the introduction of state-of-the-art services such as mobile banking. Ethiopia's communications market is far behind the global average. Fixed-line teledensity stands at1.2% and mobile teledensity 8.7 % during 2010. It is too low when compared to the global mobile subscription average, which was 67% in 2010 (Addis Ababa Chamber of Commerce, 2010)

2.8.2.2 Licensing of the telecommunications sector and Market Structure

Licensing in telecommunications consists of the ETC receiving a monopoly license from the regulator to provide fixed, mobile and Internet services on an exclusive basis in exchange for efficiency and quality of service requirements and infrastructure expansion targets. The market is characterized by excessive pricing, especially in the broadband and international direct dialling segment, poor quality of service, inefficiency, , and the absence of choice that had a detrimental effect on the revenue of the incumbent and the productivity of public and private enterprises.The telecom sector is therefore in Ethiopia a sector that is completely devoid of competition, except for those very small scale and fringe telecom services such as reselling phones and internet (Lishan, 2009/10)**.**

2.8.3 ICT Policies

ICT has become an integral part of Ethiopia's development programs over the last decade. The country faces a substantial gap between interest in the ICTs and the policy and regulatory instruments available to enable its development. ICT is one of the major components of Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) that runs between 2005 and 2010(Federal Democratic Republic, 2005).

2.8.4 Quality of telecom services

Quality of service comprises requirements on all the aspects of a connection, such as service response time, loss, signal-to-noise ratio, cross-talk, echo, interrupts, frequency response, loudness levels, and so on. In Ethiopia, , the low quality of services has been a common problem, is a result of the overall bad performance of the telecommunications regulatory environment. Despite improved network penetration over the last consecutive years, through a vendor sponsored loan programme, the incumbent monopoly did not have an incentive to improve the quality of service due to lack of competitive pressures and inherent inefficiency. (www.researchictafrica.net).

Eden Habtamu(2009), point out that, one of the last words many Ethiopian would like to hear is "Sorry, the subscriber that you have dialed is not in service area, please redial later"(Ezega News, 2009). Recently, December 26, 2011 Meron Tekleberhan pointed out that a constant grievance heard in Addis Ababa has been the persistent problems experienced with internet connectivity. Customers of the sole internet provider Ethio Telecom often complain about

various elements of internet service in the country including the slow speed of the connection, constant breaks in service, and ineffective customer service (www.theodora.com)

2.8.5 ICT challenges

As the general overview of Ethiopia's ICT infrastructure problems points out that there is a critical need to speed up the opportunities offered by ICT in addressing the complex socio-economic and governance problems facing the country today.

Before ten years from now, Mulat& Tadesse(2002) point out the major problems of ICT in Ethiopia. According to them the challenges of ICT sector in the country include agricultural backwardness with low output and productivity by global declines in commodity prices, erratic GDP growth arising from extreme variations in weather conditions, low per capita income and near-endemic poverty, low health service coverage and life expectancy aggravated by the prevalence of HIV/AIDS, rapid rate of population growth with a large and youthful population, low human resource base arising from limited access to educational opportunities, poorly developed physical, communications and telecommunications infrastructure, fledgling democratic and governance system**.**

The telecommunication law that favors Government monopoly has adversely affected the development of the ICT infrastructure. The long waiting time for fixed lines and mobile telephones and the complaints of users about the quality of the services suggest that closed-market policies are inconsistent with the desire to expand the use of the new technology. Competition among providers of

ICT could lead to increased investment, increased connectivity and better service (Mulat& Tadesse ,2002).

2.8.6 Human resource capacity

Like many other developing countries, ICT human resource in Ethiopia is in short of the requirements in many organizations (Mulat& Tadesse, 2002). Two years latter other survey was made and identified the problems related to human resource in ICT. An overall shortage of ICT professionals at all levels is observed (Frehiwot, et al., 2004). The sector faces a significant skilled human-resource shortage for planning, implementation and management of a modern next generation network and its regulation. The absence of technical, analytical, policy and regulatory capacity at all levels has been the major challenge in stirring the communication sector out of its low level development. Pro-competitive policy intervention is important to deal with current poor service penetration, low quality of service and high cost of broadband access.

2.8.7 Language barrier

Amharic is a working language in Ethiopia. Unfortunately, a lot of content on the Internet is in English, which creates a barrier to the Amharic speaking population (Harry, 2007).

2.8.8 Opportunities

In recent times, Ethiopia has shown encouraging strides in the expansion of utilizing information and communication technology for multi-purposes. The

country has recognized to play a meaningful role in the knowledge economy and is making significant efforts in the ICT arena.

The government is making high efforts to make information and communication technology (ICT) as a tool in its strategies of eradicating poverty. It has been also considered ICT as a vital aid to solve the poverty issues with the effective application of the technology. It was with this aims that Ethiopian Information and Communication Technology Development Agency (EICTDA) has been established as an autonomous federal government public office having its own juridical personality with the proclamation no.360/2003. EICTDA is also working with the aim of creating an informed and knowledgeable society as well as building a developed nation in line with the governments overall development goals and strategies have formulated various programs.

The possible realities in the near future regarding ICT Infrastructure indicate that there is a conducive environment for development of ICT applications. Some indicators for a promising future are that:

To overcome the problem of ICT human resource requirements, there are several initiatives of establishing tertiary level learning institutions both by the private sector and the government. Currently, there are more than twenty emerging tertiary level higher education institutions/colleges that have started to train at a diploma and degree level in the fields of ICT (Dawit et al., 2005).

The council of ministers decided on March 5, 2010, to establish the Information and Communication Technology Park Corporation with a capital of five billion Birr. The directive for the establishment was approved by the council after it

deliberated on the proposal of the Information and Communication Technology Development Agency (ICTDA). Various ICT companies will lease space in this park and conduct educational, service and production businesses. The park corporation will be critical for the success of these projects, which aim to interconnect all woreda, schools and universities in the country in an information network, which, according to the official, is the reason why the government has allocated a huge starting capital (Addis Fortune, 2010).

Even though the country may still have one of the lowest ICT development in the continent, there are signs that this situation will soon change. The ICT in Education Implementation Strategy and its corresponding Action Plan are components of a wider Ethiopian national e-education initiative. This initiative forms one of the pillars of the ICT for Development 2010 Plan.

The strategy is built on three main streams ((Dawit et al., 2005):

- Ethiopian National School Net Initiative
- The National ICTs in Higher Education Initiative
- The National ICT Education, Training and Awareness Initiative

The National School Net initiative, for instance, is aimed at the deployment and the exploitation of ICTs to facilitate the teaching and learning process within primary, secondary, technical and vocational schools. The ICTs in Higher Education Initiative focuses on deploying ICTs within the universities, colleges, and research institutions. Finally, the national ICT education, training and awareness initiative promotes ICT awareness and literacy, lifelong and adult education, and distance and virtual education and learning. The strategy also

identifies strategic goals and draws up a programme and activities for each initiative.

On 18 January 2012 Ethiopia and Egypt have signed a memorandum of understanding enabling them to work together in Information and Communication Technology. Egyptian delegation led by the country's ICT Minister, Dr. Mohammed Salamo held talks with its Ethiopian counterpart on ways of joining efforts for mutual benefit. The two countries expressed commitment to cooperate on the highest level with a view to support Ethiopia's ICT sector development plan and ICT penetration and usage in Ethiopia (Ethiopia radio and television agency news, 2012).

January 2011, an ICT association has been launched for the first time in the country, according to the Reporter. Following significant measures taken to improve the sector, the association, otherwise known as ICT-ET, has been launched 2010 with the Charities and Societies Agency License to expose, engage and enable the private sector within the ICT industry in Ethiopia, according to the association's statement, The association will have three sectors within its scope, namely Information Technology, Communications Technology and Broadcasting Technology (reporter news)

Ethiopia has announced tax exemptions on Information and Communication Technology (ICT) equipment as part of the country's "ICT for Development" campaign. The Ethiopian Information, Communications and Technology Development Agency (EICTDA) said that the tax free incentive on ICT equipment will help Ethiopia to enhance its ICT infrastructure in the next few years. Tax free

incentive on ICT equipment will be applied both to local and foreign companies, who want to invest on ICT (www.ictadethiopia-org.)

2.8.9 The Ethiopian financial sector and e-banking practice in Ethiopian commercial banks

The Ethiopian financial sector is one of the least developed in Sub-Saharan Africa. On a financial liberalization index, this measures banking security and independence from government control on a scale of 10 to 100. The sector is characterized by a shallow financial market, a closed nature, and strong government Control. With a growing number of import-export businesses, and increased international trades and international relations, the current banking system is short of providing efficient and dependable services (Kiyota et al., 2007).

E-banking challenges in Ethiopia

Banking and Finance is an important sector for establishing e-commerce. There are some roles of banking sector in ecommerce such as, online corporate banking, electronic fund transfer, automated teller machines (ATM), debit card, credit card etc. Bank is the only authorized organization which can store and transact money. Technological developments in banking sector make trading activities much easier and cheaper for customers. It provides convenience in terms of the capital, labour, time and all the resources needed to make a transaction (Uppal, 2008). Banking in Ethiopia faces numerous challenges to fully adopt E-Banking. Research result studied by Wondwossen &Tsegai (2005) forward the following challenges:

- Low level of internet penetration and poorly developed telecommunication infrastructure: Lack of infrastructure for telecommunications, Internet and online payments impede smooth development and improvements in e-commerce in Ethiopia.
- Lack of suitable legal and regulatory framework for e-commerce and e-payment: Ethiopian current laws do not accommodate electronic contracts and signatures. Ethiopia has not yet enacted legislation that deals with e-commerce concerns.
- Political instabilities in neighboring countries: Political and economic instabilities in Somalia, Southern Sudan, and Eritrea are threatening traits that do not provide a very conducive environment for e-banking in Ethiopia.
- High rates of illiteracy: Low literacy rate is a serious impediment for the adoption of E-Banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-Banking, they should not only know how to read and write but also possess basic ICT literacy.
- High cost of Internet: The cost of Internet access relative to per capita income is a critical factor. Compared to the developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements.
- Absence of financial networks that links different banks (Banks are not yet automated): Most of the banking-transactions currently taking place use credit and debit cards supplied by Visa and MasterCard. For conducting e-

banking, the use of credit or debit cards is mandatory thus requiring the need for specialized systems which are not currently available.

- ❖ Frequent power interruption: Lack of reliable power supply is a key challenge for smoothly running e-banking in Ethiopia.

2.8.10 Payment Systems in Ethiopia

A payment is the transfer of money from one party (such as a person or company) to another. A payment is usually made in exchange for the provision of goods, services or both, or to fulfill a legal obligation. The simplest and oldest form of payment is barter, the exchange of one good or service for another. In the modern world, common means of payment by an individual include money, cheque, debit card, credit card, or bank transfer. Currently cash and checking transfer are the dominant payment system in Ethiopia (Wondwossen &Tsegai, 2005). Currently the usage of credit card in Ethiopia is very low. There is no issuer of local and international credit cards. But there are some business firms (e.g. Hotels, supermarkets, etc) that accept international credit card. This payment system is mainly used by foreigners and Ethiopians residing abroad as they come to Ethiopia and want to get money using their credit card. The Ethiopian airlines currently provide an option for its customers to buy flight tickets online using their credit card (Wondwossen &Tsegai, 2005).

Import Trade Mode of Payment

An Ethiopian importer or exporter who is engaged in import or export business in Ethiopia should know what type of import and export payments in Ethiopia are possible while doing import or export trade in Ethiopia or with Ethiopian businesses. Pursuant to the authority vested in it by Article 39(1) and

(2) of the Monetary and banking Proclamation No. 83/1994, national bank of Ethiopia authorizes commercial banks to handle foreign exchange payment services and incoming payments involving imports and exports. The following section presents the methods of payment used in international import export business. The three methods of payment allowed by the regulation for import activities are listed below (CBE, 2011).

Cash against Document (CAD)

With regard to the use of the CAD, importers have to submit purchase order for prior approval from banks in addition to those documents required for the LC mode. Purchase order presented for prior approval by importers should include, among others, details of the place of cargo discharge. Importers who wish to import goods by effecting Advance Payment are required to submit a letter of undertaking to assure the entry of the goods into the country in addition to the documents required in the case of other modes of payment. The amount that would be approved for advance payment cannot exceed 5,000 dollar.

Import - Letter of Credit

It is a written undertaking by issuing bank (Ethiopian bank) to be issued, at the request of an applicant (customer of the bank, who is buyer or importer), in favor of a beneficiary (who is seller/supplier/ exporter) to effect payment to the latter against presentation of shipping documents which comply to terms and conditions stipulated in the text of an LC.

Table 2.3: summary of mode of payment

Instrument	Advantage	Disadvantage	Banks role
Letter of Credit	give assurance that payment will not be effected for non shipped item	shipment value and opening charges are high	give assurance to honor complying documents
Documentary Collection	late payment	none	Importer Effect payment (as per Importer's request)
Advance Payment	No advantage	lack of control over the goods, and other unforeseen risk	money transfer as per the buyer's instruction

Source: (CBE, 2011)

Brief summary

In highly competitive environment nowadays, E-commerce can be considered as an important source of competitive advantage for most of enterprises, especially, globalization coupled with development in Information and Communications Technology (ICT) has resulted in emergence of various new ICT to undertake trading activity. By reviewing the experience of different developing countries, number of benefit and challenges of ecommerce were identified in the literature. Such benefit and challenges also exist in Ethiopia but all may not exist in Ethiopia

because Ethiopia business, E-commerce, socio economic, political and legal environment is not exactly same with other part of the world. Even such specific opportunities and challenges available in Ethiopia before two or three years are different from today's situation. Identifying such specific opportunities and challenges specifically to current Ethiopian business environment gained more and more attention of researcher. Thus, study in this area is necessitated.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This section describes the methodology undertaken in relation to justification of the research design, questionnaire design, sampling process and data collection, administration and the intended analysis strategy.

3.1. Research design

A research design, which is a function of the research objectives, is defined as "a set of advance decisions that makes up the master plan specifying the methods and procedures for collecting and analyzing the needed information" (Burns & Bush, 2002, p.120). An appropriate research design is essential as it determines the type of data, data collection technique, the sampling methodology and the budget (Hair et. al., 2003).

In an attempt to assess e-commerce practices, opportunities and challenges of general importers in Addis Ababa, the researcher used descriptive type of research design. 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. 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 techniques 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**)**

3.3. 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 that are found in all sub cities, Addis Ababa. For this study, lists of general importer in each sub cities were got from ministry of trade and industry data base as a readily available list of population elements (ministry of trade and industry data base, 2011).

Sampling frame: To establish the sample frame, a list of general imports was 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.

Sampling method: two stage sampling was used to undertake this research. In the first stage the researcher select three 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, Judgmental sampling is used to select the three sub cities that are considered for the study. Accordingly, those sub cities which has the highest number of general importer were first considered and selected. There by kirkos (has total of 131 general importers), Bole (has total of 126 general importers, Addis sub city (94 general importers) were selected during first stage for further investigation. This three sub city account 46% of total general importers found in Addis Ababa.

Then for purposes of administering questionnaires, the researcher specifically selects sufficient number of sample general importers from these sub cities. To do this the researcher went to the above sub cities major trading centers and distributed the questionnaires to the general importers 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. So the sampling was based on their availability and questionnaires were distributed until the required number of sample was reached for those who are willing to complete the questionnaire.

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.

Sample size and selection: 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 Yaro Yamane (1969) which was cited in Obasi and Ekwueme (2011).

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

Where n = sample size N= population 1 = constant e = error estimate (0.05%) at 95% confidence interval.

Out of 748 importers the researcher had selected total of 258 general importers from the above chosen sub cities to be included as a sample.

3.4. Method of data collection, Data gathering instrument and data sources

In order to conduct this research basically primary were collected on a number of companies involved in general imports category. In addition secondary data were used in support of primary data.

A. Survey questionnaires

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, the questionnaires were distributed to 258 top level management of respective organizations which are included in

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$$n = \frac{N}{1 + N(e)^2} \quad 1 \qquad \frac{748}{1 + (748)\,0.05^2} \qquad \frac{748}{1+1.9} = \frac{748}{2.9}$$

$n = 258$

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 of general importers in Addis Ababa (as shown in Appendix A below). 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 Likert 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.

Questionnaire designing

Questionnaires were designed after reading a number of literatures extensively. Some of them are adapted from prior studies and previously designed questioners but with certain modification to feet with Ethiopian context and the objective of the research. For instance likert scale survey about Barriers of using e-commerce technology adapted from*(* Zou and Seo, 2006; Kapurubandara , 2009; Kapurubandara ,and Lawson , 2007), likert scale survey about benefits of using e-commerce technology adapted from Dube et al*. (2010*) and Ali et al. (2003).

B. Document analysis

Documentary analysis was also conducted to obtain broad, in-depth and specific information, from secondary data mainly about Ethiopian current ecommerce practices. To this end, various statistical reports, published and unpublished materials were examined. This provided a broader view and a deeper understanding of the research Problem and findings. However, due to a problem to access up-to-date data for some of the indicators, from ITU's World telecommunication indicators database, information during 2011/12 is not updated; the analysis is restricted to the available parameters.

3.5. Data analysis and presentation

Data analysis involves selecting the appropriate data analysis strategy, coding the responses and screening the data.

Data screening

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.

Data analysis strategy

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). 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 likert 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:

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	2.50 – 3.49	average	2.50 – 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.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND ANALYSIS OF DATA

This chapter deals with the presentation, interpretation and analysis of data gathered from both primary and secondary sources. The chapter has three sections. The first section of the chapter focuses on presenting information about e-commerce in Ethiopia which obtained from secondary sources. The second section presents demographic characteristics of the respondents. The third section of the chapter presents major findings related e-commerce practices, opportunities and challenges of general importers in Addis Ababa. Out of 258 questionnaires distributed to top level manger of the organization 203 (79%) questionnaires were returned with full information. So the analysis was based on this 203 respondents' response.

4.1. E-commerce in Ethiopia

Ethiopia still has a highly regulated telecommunications infrastructure. There is only one ISP (state-controlled) and demand for Internet services far outstrips supply (there are approximately 2,000 subscribers with a waiting list of a further 2000. Although the ETC has promised to provide such services, they seem unable to do so, or are slow to meet the demands of the community. One positive aspect of telecommunications in Ethiopia is that the cost of local telephone calls seems cheaper relative to other LDCs (UNCTAD, 2001).

According to UNCTAD (2001) development report, Ethiopia, probably more so than any other African LDC, has a large and affluent diaspora. Many Ethiopian entrepreneurs are based outside the country, selling various unique Ethiopian-content products online. Foreign-based Ethiopian websites market Ethiopian art, music, designs, geez Font software etc. Despite regulatory and infrastructure problems, there are a few Ethiopian companies identified as e-commerce operations. A poor banking infrastructure, the absence of credit cards and stringent exchange control regulations are significant barriers to development and the growth of e-commerce.

There is Low quality of Internet access (in terms of number, reliability, capacity, cost and range of services of Internet Service Providers. prohibitions, long waiting lists, low bandwidth. It seems to be the cost of internet is small relative to other neighboring states but it is expensive relative to per capita income of majority of the population. For instance 30 hours of Internet usage costs about 15% of the average salary of a high school teacher (UNCTAD, 2001).

According to this report, there is no policy framework or specific regulations in place that deal with e-commerce. But these problem solved very recently, when Ethiopia draft e-commerce law on February 2012.There are a few initiatives by the private sector and donor community to promote e-commerce. The Addis Ababa chamber of commerce has taken an interest in e-commerce and has organized a few workshops to highlight the benefits of e-commerce for business and to encourage government to liberalize this sector.

E-commerce site in Ethiopia

ebirana.com

The first ecommerce website, ebirana.com inaugurated Addis Ababa, Jan, 2011. E-books of different categories are available for sale. Articles are also available for reading. To buy e-books, search for the books of individuals' interest, add them to cart, and checkout. The buyer can pay using Dashen Bank ModBirr or in person. After the company receives the money, send back an email containing the download id and link (ebirana.com).

Ethiogift

EthioGift is a gift giving service in Addis Ababa during multiple occasion including anniversaries, wedding, New Year, cultural holidays and much more. Its main objective is to rebuild the family ties among families separated by the expatriation of millions of Ethiopians all around the world due to war and other economical problems. It also wishes to introduce E-commerce in Ethiopia where the ITC infrastructure is still minimal. As of today, ethiogift is the only successful E-commerce initiative in one of the poorest countries of the globe, Ethiopia. It is a service that receives gift orders from Ethiopians all over the world, through the Internet and delivers the gift to their families in Ethiopia within 24 hours **(**UNCTAD, 2001; http://www.ethiogift.com**).**

The gifts range from sheep, cakes, liquor, flowers and chocolates on a commission basis, all of which are typical gifts given on certain holidays and birthdays. For example, during Easter Ethiopians living abroad order sheep to be delivered to their relatives in Ethiopia. The goats are purchased over the Internet

via an Internet domain registered in the US and paid by credit card, but the goats themselves are sourced in Ethiopia and delivered to the family in Addis.

Most Potential business opportunities for this site is, there is an Ethiopian Diaspora of around one million people living mainly in Europe and the United States. This Diaspora is possibly the wealthiest of the African diasporas (UNCTAD, 2001).

Ethiogift basically face the following obstacles:

- Poor local banking infrastructure has obliged ethiogift to bank in the United States.
- Knowledge of laws in other countries; the company had to be established in the United States in order to open a bank account. The consequence of this is that Ethiogift is subject to United States tax laws.
- The banking system is not up to speed yet: there is limited privatization and the Commercial Bank of Ethiopia still controls lion share of the banking market.
- Customs procedures are difficult. With regard to exchange controls, anything over $30 must be approved by the National Bank of Ethiopia, which takes at least half a day.
- Sending five items to five separate buyers needs five separate customs clearances and exchange controls. In-house procedures take an hour or two to respond to an online order received correctly, which then takes two days to leave the country.
- Credit cards are not allowed by enterprises. The company works with a credit card clearing company in the United States; this is not legal but it has no choice (UNCTAD, 2001).

Genuine Leather

Also in Ethiopia, Genuine Leather Craft advertises its products on the Web, receives orders and dispatches leather garments throughout the world via regular courier services, promising delivery within ten days (Africa Recovery, 2001).UNCTAD (2001) e-commerce and development report point out the following Obstacles that face genuine leather.

- Not easy to get service on time from outsourced web maintenance. Urgent changes cannot be made.
- Customs procedures are difficult. With regard to exchange controls, anything over $30 must be approved by the National Bank of Ethiopia, which takes at least half a day.
- Sending five items to five separate buyers needs five separate customs clearances and exchange controls. In house procedures take an hour or two to respond to an online order received correctly, which then takes two days to leave the country. Also costly in terms of time and actual disbursement.
- Credit cards are not allowed by enterprises. The company works with a credit card clearing company in the United States; this is not legal but it has no choice.

Ethiopia e-commerce law

Although the country has an unskilled labor force and limited access to technology, by considering multiple benefits of e-commerce and the challenges associated with the absence of a regulatory framework, Ethiopia drafts e-commerce law on February 2012.The Ministry of Communication and Information Technology of Ethiopia and the United Nation Economic

Commission for Africa (UNECA) have started to work on developing a national draft law to govern and oversee electronic commerce. The Ministry of Communication and Information Technology, Ethiopia is preparing a national draft law to govern electronic commerce. The aim was to support Ethiopia's initiative to create conducive e-commerce environment specifically to:

- Enable and facilitate the use of electronic commerce by individuals and businesses, essential for the efficiency in the international trade.
- Build consumer confidence and trust for the fullest economic and social benefits to flow from e-commerce.
- Advance the acceptance of e-commerce across regions and sectors in Ethiopia.
- Improve the e-commerce capabilities of businesses.
- To give individual users of electronic commerce advice in the drafting of contractual solutions that are needed to overcome the legal obstacles associated with increased use of electronic commerce.
- Assist the government in enacting legislations governing the use of alternative to paper-based methods of communication and storage of legally relevant/binding/significant information.

In conclusion, electronic commerce plays a significant role in the development and economic growth of countries as well being a benefit for people applying technology in their daily. E-Commerce should also play an important role in allowing Ethiopian business and investors become more competitive internationally by modernizing the import and export sectors (http://www.tmcnet.com/).

4.2 General Characteristics and profiles of the Respondents

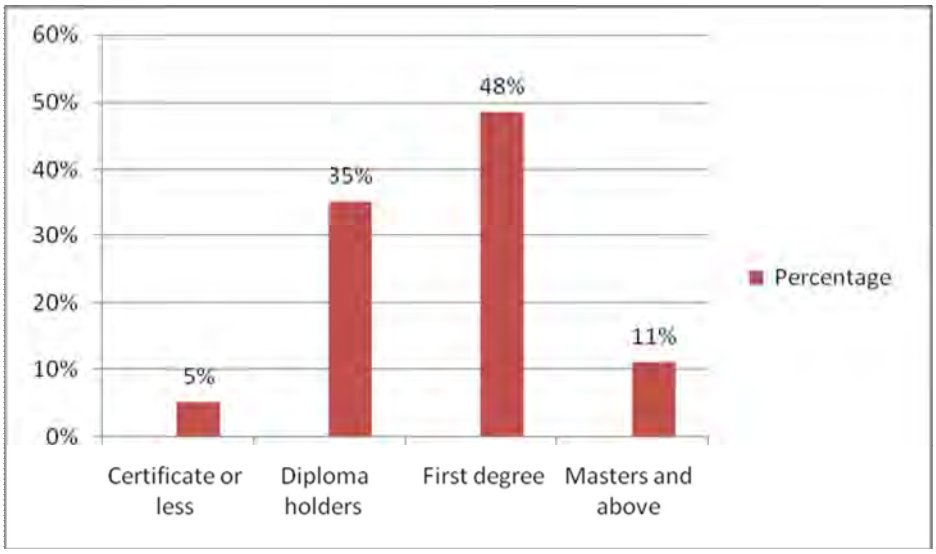
General characteristics of the respondents include both personal and professional characteristics. This section describes the respondents' general characteristics about sex, age, educational qualification and work experience.

Table 4.1: 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%

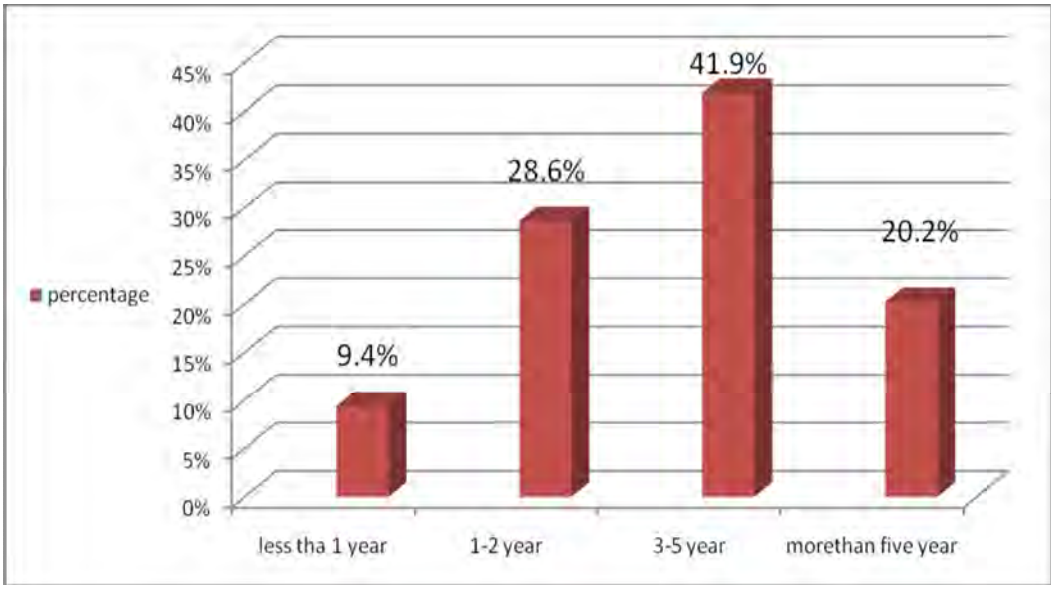
As depicted in table 4.1 item one above, sex wise, 87% of the respondents were male and the remaining 13% were females. The second item of the same table shows the age of the respondents. As shown in the table, 36.5% of the respondents were between 31 to 35 years old, 34.0% of them were between 26-30 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.

Figure 4.1: Academic background of the respondent



As shown in figure 4.1, out of the total of 203 respondents the majority of the respondents were first degree holders (48%) and diploma holders (35%). The rest 11% and 5% of respondents have master degree &above and certificate & less respectively. People with the higher level of education have more exposure to computer skills than people with the lesser education. It can be deduced that education level is positively related to the adoption of e-commerce. Even though masters degree and above is put in highest academic rank among the other , holding first degree and diploma is better than from lower rank of holding certificate or less. From this it can be conclude that on average majority of respondents have good academic backgrounds, so there is a tendency to make good managerial decision based on the knowledge they have.

Figure 4.2: Years of Experience in the organization



The figure 4.2 illustrated the number of years of respondents' experiences in the organization in the current position. Based on the figure, 41.9% of the respondents have 3-5 years experiences in the organization, where as 28.6% of respondent have 1-2 years experiences, the remaining 9.4 % and 20.2 % of respondents have less than one year and more than five years experiences in the organization respectively. it is known that experience is the source of knowledge. So it can be said then, that the majority of the respondents of this study are somewhat experienced enough to see the trends of e-commerce and computer technology, as well as its opportunity and trait it offers.

4.3. Company information

E-commerce involves business communication and transaction. This indicates exchanging and sharing of information across the network of organizations and participants. Therefore, the survey is targeted to encompass the variety of

participants and gather their current practice of e-commerce, opportunities and challenges.

*4.3.*1 Introduction to E-commerce practice and application by the companies

Table 4.2: company web page, IT department

no	item	respondents in no and percentage		
		Yes	No	Total
1	Does the business have its own Web site/homepage?	11(5.5%)	189(94.5%)	200(100%)
2	Does the organization have an IT department?	13(6.4%)	190(93.6 %)	203(100%)
NB, for the first item, 3 respondents were not answered, so analysis was based on the remaining respondent.				

Item 1 of table 4.2 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 WWW. So it is very difficult to display about company related information like, price, market information, availability of products etc 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 4.2 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 un secured 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 4.3: e-commerce level of awareness

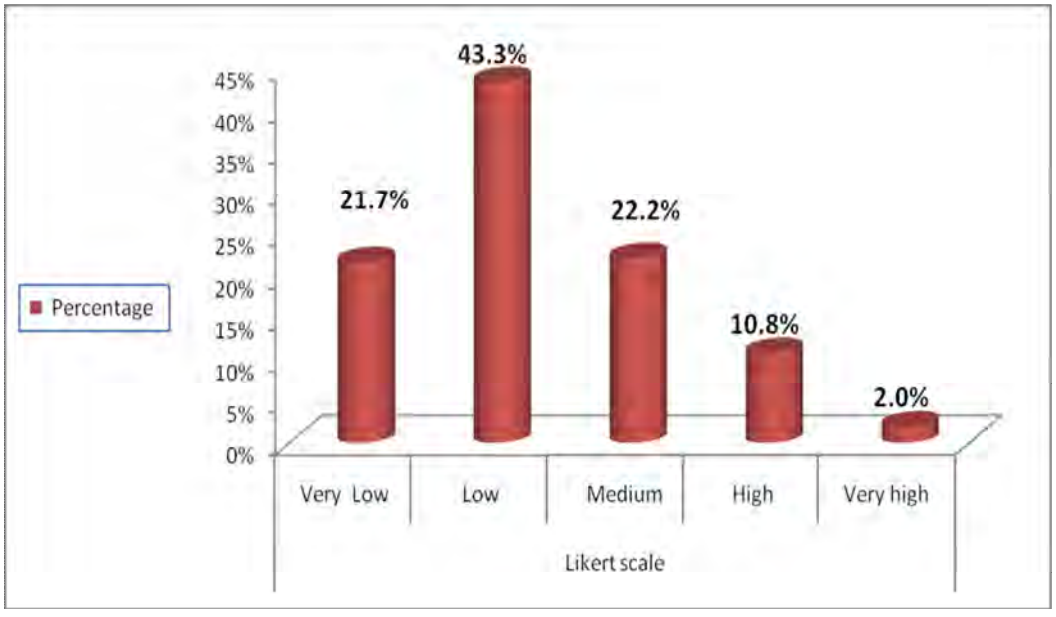


Figure 4.3 show that 43.3 % of respondents have low level of awareness and 22.2% of respondents have medium knowledge and awareness, 21.7% of respondents have low level of awareness, where as 10.8 % and 2 % of respondent have high and very high level of awareness about concepts of e-

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-programmes.

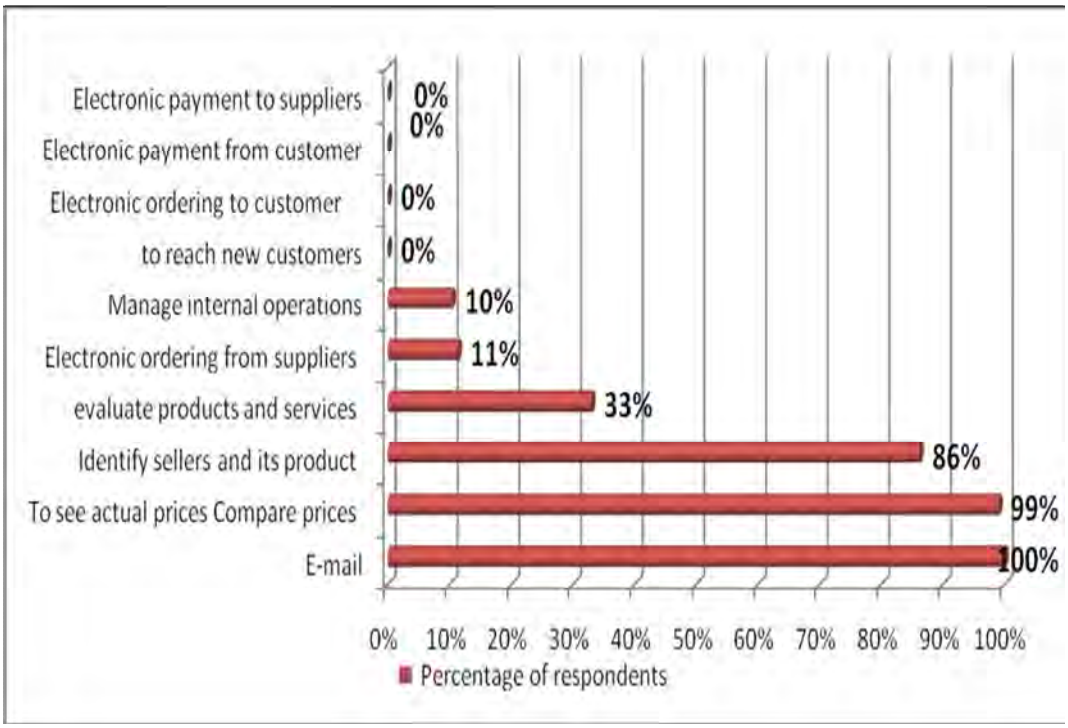
Table 4.3: e-commerce usage and degree of utilization

1. Does the organization use e-commerce?	Yes	Not at all	We plan to use it	total
Number of respondents	203	0	0	2003
Percentage of respondents	100	0	0	100%
2. 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	0.0%
		total(n)	203	100%
		weight total	428	
		median	2	
		weighted mean	2.1	
		SD	0.5	
		CV	0.24	

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 4.3 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 4.8 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 e-commerce 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.

Figure 4.4: E-commerce technologies application



The respondents had the option to choose as many applications of e-commerce technologies. From the figure 4.4 it can be understood that the top three applications with the largest usage frequency (sorted in descending order) are as follows:

The mostly popular application is email (100%), all of the company included in this study use email as one of ecommerce and computer technology application. The second most popular application is to see actual prices and compare it to other products' price (99%) followed by identifying the sellers and its product (86%).

Small percentage of the company used it for, evaluating products and services (33%) and electronic ordering from vendor (11%) and manages internal operation (10%).

Lastly, however, no one ever used e-commerce as a medium of payment, to reach new customer, and electronic ordering to customer. This situation is affected by existing e-payment and telecommunication infrastructure. Generally it is clear from Figure 4.4 that the usage of e-commerce in the sample general importers is more concerned with external communication and information gathering than facilitating transaction.

Table 4.4: Company e-commerce experience

For how many years you are using e-commerce?	<than year	1 year but<5year	>5year	Do not know	total
Percentage of respondents (%)	0.0%	43.8%	54.2%	2.0 %	100 %

Table 4.4 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 4.5: Company IS strategies to use e-commerce

item	respondents response		
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%)

As shown in table 4.5 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.

4.3.2 Payment modalities, service hour, e-commerce trust and advantages

Table 4.6: Means of payment

mode of payment	No of respondents	percentage
Letter of credit	203	100%
Cash against Document (CAD)	157	77%
Advance payment (SWIFT transfer)	44	22%
Payment carried out off-line (cash on delivery)	9	4%
By using a credit card online	0	0%
By using debit card online/ giving direct debit authorization online	0	0%

From the table 4.6 one can understand that letter of credit is the most common methods used for import trade compared to other modes. All importers included in the sample use it as a means of payment. 77% of Respondents responded that the company use CAD as a mode of payment. Very small number of company also use advance payment (22%) and payment at time of delivery offline (4%). Moreover, no one importer included in the sample use credit card and debit card for foreign trade payment. Infrastructure for this two payment modalities is not available in Ethiopia, as described in literature of this study, but companies may use international credit card. The vast majority of the general importers are dependent on the conventional and traditional payment system.

Table 4.7: service hour per day

How many hour the company serve customers per day?	no of respondents	percentage
For less than 6hr	0	0
7-10 hours	186	91.6%
11 -14 hours	17	8.4%
15-20	0	0
more than 21 hours a day	0	0
total	203	100%

Table 4.7 clearly show that Majority Company (91.6%) included in the sample serves customers 7-10 hours per day, very small percentage (8.4%) serve their customers 11-14 hours per day, this means they are serving customers at night also . But the essence of e-commerce is 24/7. It means all the time, 24 hours a day, 7 days a week. In such situation it is very difficult to apply the time aspect of e-commerce (24/7). So companies try to hear the sounds of their customers whether they require the extension of opening hours or not.

Table 4.8: Trust and commerce advantages

item	weight total	mean	SD	CV	**Interpretation (mean)**
1. participant of e-commerce lacks trust and confidence on e-commerce transaction	894	4.4	0.68	0.2	agree
2. Electronic commerce has substantial advantages over traditional d commerce	840	4.1	0.69	0.2	agree
n=203, 1=strongly disagree , 2= disagree , 3=neutral, 4= agree 5=strongly agree					

As shown in the table 4.8, item number 1, 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 4.8 also shows that, average respondents are agree 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.

Again consider table 4.8 the first item is an obstacle for e-commerce adoption and the second item is a driver for e-commerce adoption. To compare this two factors using, standard deviation (0.69 and0 .68), coefficient of variation (0.2 for both), and the two factor has no significant difference. Combined these to statistics with mean it can generally conclude that, the two factors are perceived as hindrance and drivers respectively.

4.3.3 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 4.5 operational efficiency benefits

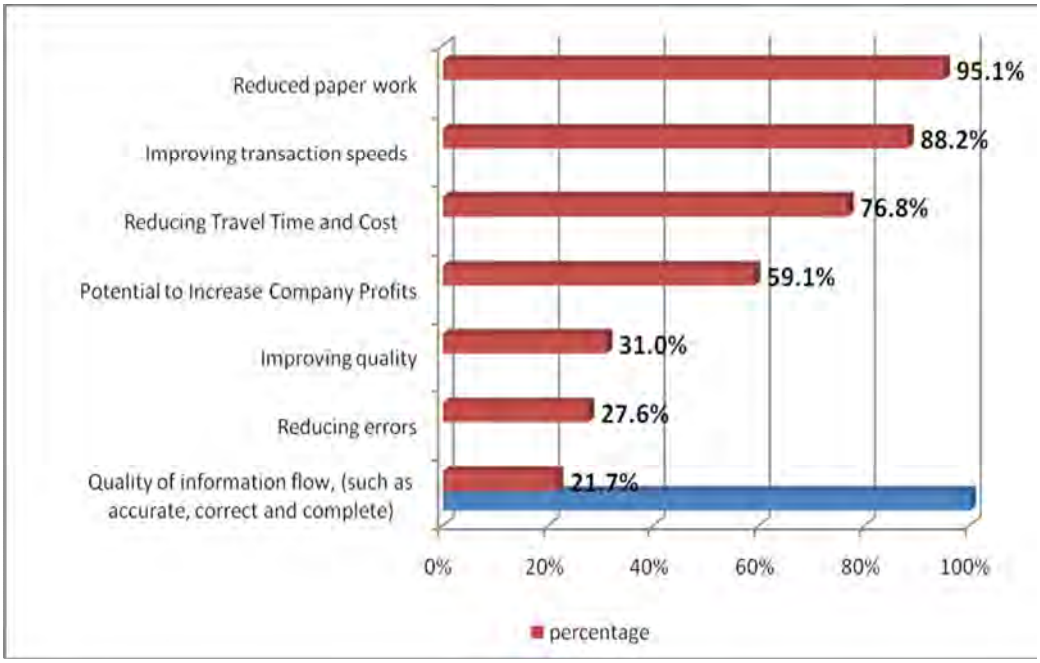


Figure 4.5 shows the potential operational efficiency benefits of e-commerce as perceived by the imports sector. Based on the frequency of respondents response the top four ranked operational efficiency benefits (sorted in descending order) are as follows.

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 4.6 service benefits

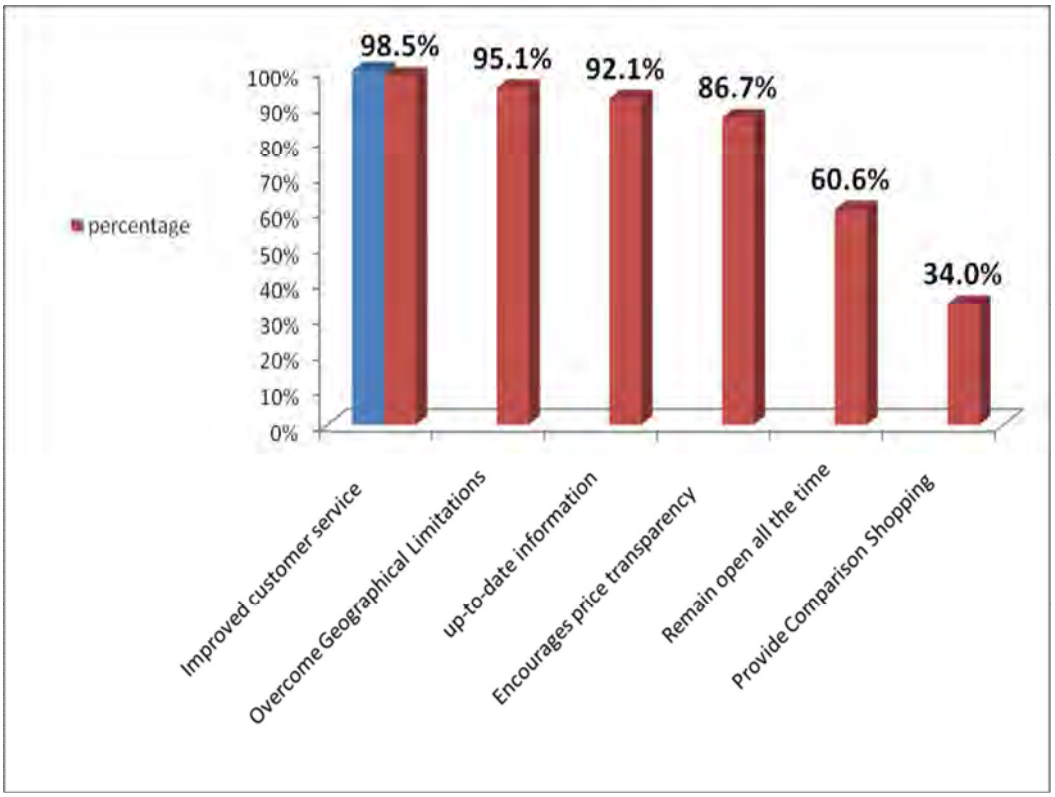


Figure 4.6 shows the majority of respondent (more than 75%) perceived the following service benefits:

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 4.5 and Figure 4.6 it can be concluded that companies have better perception of service benefit relative to operational efficiency benefits of e-commerce.

4.3.4 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, wherein 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 4.9: 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
Lack of skilled workers to handle/ maintain E-commerce system	832	4.1	0.94	0.2
Fear of risk security and privacy	827	4.07	1.10	0.3
Fear of risk product delivery	618	3.01	1.54	0.5
Lack of confidence in after sale service (guarantee, returns, remedies)	515	2.54	1.46	0.6
	n=203			

As shown in the table 4.9 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 4.9 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 4.10: External Barriers to using or extending use of e-commerce technologies

External Barriers to using or extending use of e-commerce technologies	Weighted mean	Interpretation	Rank of mean scaled score
Poor telecommunication infrastructure	4.81	Strongly agree	1
inadequate legal framework for businesses using e-commerce	4.72	Strongly agree	2
High rates of illiteracy of customers	4.12	agree	3
Computer technology not widely used	3.91	agree	4
Relatively High cost of Internet	3.80	agree	5
Customer awareness level is low	3.56	agree	6
lack of adequate banking infrastructure to facilitate e-commerce	3.55	agree	7
Low internet penetration and internet access	3.51	agree	8
Frequent power disruption	2.54	Neutral.	9

Consider table 4.10, as perceived by the majority of the respondents, the two most significant constraints to the uptake of e-commerce systems and as the potential barrier that characterizes the current import trade in Ethiopia in which on average respondents strongly agreed are telecommunication and legal infrastructure ranked first and second with mean score of 4.81 & 4.72 respectively. These barriers had coinciding with the idea written on the literature review part of this study. Telecommunication infrastructure is considered to be the backbone through which a companies can implement and develop its information and communication technologies such as e-commerce, moreover communication infrastructure enables the people to access the global

infrastructure. It is known that the lack of telecommunication infrastructure acts as a barrier in the growth of ICTs. But on the second barrier (legal infrastructure), very recently on February 2012 as mentioned in the literature the most decisive event in Ethiopian e-commerce environment is the draft of e-commerce law. If properly implemented this barrier may no longer existed as a major problem. This implies that more should be done to improve the existing infrastructure.

Furthermore, the table 4.10 also shows that the respondents on average agree that the following external barriers hampered e-commerce adoption.

High rates of illiteracy of customers(4.12, 3rd),Computer technology not widely used(3.91, 4th),Relatively High cost of Internet(3.80, 5th), Customer awareness level is low(3.56, 6th), lack of adequate banking infrastructure to facilitate e-commerce(3.55, 7th) , Low internet penetration and internet access(3.51, 8th) .finally , with regard to power disruption as a barrier on average the respondents neutral perception and put in last rank. Hence, any policy that aims at promoting E-commerce should take these factors into consideration.

Table 4.11: consider shopping online and effort of government

no	item	Number of respondents (%age)			
		Yes	No	don't know	Total
1	Would you consider shopping online, if Potential Barriers are minimized and guarantees such as privacy and security of data offered	192(94.6%)	0(0%)	11(3.4%)	203(100%)
2	Do you think that the government of Ethiopia is doing its enough to promote e-commerce in Ethiopia?	8(3.9%)	178(87.7%)	17(8.4%)	203(100%)

As one can observe from table 4.11 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.

Table 4.12: Public monopoly of ETC

item	1	2	3	4	5	Weighted mean	**Interpretation**
public monopoly of ETC Discourages the use of e-Commerce by business	0.0%	2.0%	10.8 %	54.7 %	32.5 %	4.18	agree
1=strongly disagree , 2= disagree , 3=neutral, 4= agree 5=strongly agree							

As clearly understood from Table 4.12 majority respondents agree (54.7%) and strongly agree (32.5%) on the statement public monopoly of ETC (current ethio telecom) for infrastructural development discourages the use of electronic

Commerce by business. Moreover, very small percentage of them is neutral. The mean score of 4.1 shows that average of the response of all respondents agreed that public monopoly of ETC for infrastructural development discourages the use of electronic commerce by business. The respondents' idea is similar with ideas mention in the literature review part of this paper.

At last, the researcher expected that managers have general overview about external environment that currently prevails in Ethiopia, and forward ideas about managers' view of opportunities as an enabling environment for ICT and e-commerce in the current Ethiopian socio, economic, political and business environment. Most of their view is similar and summarized in the following section.

4.3.5 Opportunities analysis

Ethiopia has been implementing the federal government structure since the overthrow of the military government in 1991. After the over through of the dreg many private sector initiations and privatization programs were implemented in different sectors. It is also true on ICT. But the government should do more than it does. Over the past two decades, Ethiopia has grown rapidly from a "command and control" economy to a market-based economy. Ethiopia is now closely integrated with the global economy. It is known that the process of liberalization started in the after1990s, march toward fully competitive markets. As a result of liberalization, Ethiopia's GDP has been rising by more than 10 % (double-digit growth) annually in the past decade. The Ethiopia economy experiences a double-digit growth even during the global recession.

Different government project is a promise and a major enabler for rapid ICT development in the country. Number of IT professional increase over time, through the exploitation of ICTs to facilitate the teaching and learning process within primary, secondary, technical and vocational schools and tertiary education.

Stable political climate in the country also can be taken as opportunities. Its history of political instability and military regimes with totalitarian forms of government, its transition to a more democratic form of government since 1990s has contributed to recent positive developments in many sectors of the economy including telecommunication. Government agenda geared toward addressing the inadequate infrastructure, breaking up government monopolies in many and enacting policies, rules, and regulations that promote active participation of businesses and, encouraging business through tax incentives and other mechanisms.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

In this paper an attempt has been made to study mainly e-commerce opportunities and challenges in Ethiopia, specifically on general import in Addis Ababa city. The objectives of the study was to assess the current practices and existing problems of the newly introduced commerce system, E-commerce in Ethiopia context particularly on general import and to suggest some solutions to overcome identified problems. To this end, in order to answer to the general problem of this thesis, the concept of e-commerce had been thoroughly explored, a review of the related literature, reports of different institution and statistical data, in addition to questioner, was carried out.

This empirical findings show that, certainly the banking, ICT and E-commerce practice in Ethiopia are underdeveloped. ICT and E-commerce development indicators reveal that Ethiopia is pitifully lagging behind the rest of the world.

With the direction of the growth of electronic commerce accelerating growth and entering the world economy, as one of the most important features of the modern digital economy, general importers in Ethiopia are still lagging behind on e-commerce adoption, despite the benefits it offers. Although companies perceived that, electronic commerce as a way of doing business has significant advantages; over traditional business, the adoption is lagging behind.

Although the country registered two digit economic growth, the ICT infrastructure in Ethiopia as a facilitator of e-commerce is still characterized by a low penetration and high cost of, internet services, government monopoly of telecom sector, shortage human resource development, Poorly developed telecommunication infrastructure, lack of suitable legal and regulatory framework for e-commerce are the most important challenges for development of e-commerce in Ethiopia. Such problem not only affects the development and automation of import sectors, but also has great impact on the development of other sectors, like banks. However, it is to be underlined that there are some promising future opportunities: such as expansion of primary, secondary, technical and vocational schools and tertiary education over time, stable political climate in the country, sustained economic growth, some government initiatives and project.

Generally, general importer:

- 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 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.
- With different application of ICT and e-commerce technology, general importers have average and appreciable experience.
- Although it is known that it is very difficult to cope up dynamic environment with rigid principle the major stake of general importers have no information systems strategies, formulated long term strategic, and short term tactical plans to support the overall e-Commerce adoption.
- The payment modalities used by general importers is conventional and traditional, as the world moved to cashless society, still importers use letter of credit as a major means of payment modality followed by CAD. No importer use online payment modalities such as credit card and debit card for foreign trade payment. This situation is exacerbated by the current Ethiopian payment regulation and existing Infrastructure.
- The essence of e-commerce 24/7/365 is not considered by the companies. They serve their customers half days each day. From e-commerce point of view this very is short time, time aspect of e-commerce is 24/7, 24 hours per day, 7 days per week.

- An overwhelming number general importers distrust online transactions with current Ethiopian ICT and e-business infrastructures. Unlike physical attack, cyber attack is boundary less. So unless good security measures are taken, it may be difficult to trace the source of cyber crime.
- 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.
- The two most dominant internal barriers in which that highly hinder e-commerce adoption are; lack of skilled workers to handle/ maintain e-commerce system and Fear of risk security and privacy. These two factors are closely interred linked. Limited knowledge of about e-commerce and how they operate by the company worker results fear of risk and security, there by create a great obstacle on e-commerce adoption. This makes the companies more inclined to trust and to use a traditional commerce system.
- With regard external barriers to using or extending use of e-commerce technologies the most significant constraint to the uptake of e-commerce systems and as the potential barrier that characterizes the current import trade in Ethiopia are telecommunication infrastructure , public monopoly

and legal infrastructure but very recently on 2012 Ethiopian government draft e-commerce law. More over, the following are also additional hindering factors

- High rates of illiteracy and level low of customer awareness
- Computer technology not widely used
- Relatively High cost of Internet
- lack of adequate banking infrastructure to facilitate e-commerce
- Low internet penetration and internet access
- Finally, general importers do not appeal power disruption as a barrier

❖ General importers are willing to consider online purchase if existing security and other barriers of e-commerce are minimized.

❖ General importers 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 the process of moving the country from a predominately agricultural economy to an information-rich and knowledge-based economy.

5.2. Recommendation

ICT and e-commerce development needs the full participation of all stakeholders at national and regional level. This can be achieved through encouraging cooperation and partnership and the full and effective involvement of all stakeholders. Government owned sectors like ministry of information and communication technology, ethio telecom, Information and Communication Technology Park Corporation, Ethiopian Information and Communication Technology Development Agency, ICT coordinating body should closely worked with different stakeholders, like other governmental agencies, private sector companies, donors and civil society to mobilize these force and then by improve of ICTs and e-commerce practice in the country.

The Government should encourage foreign ICT Company to invest in Ethiopia, support local ICT companies by improving access to credit, providing subsidy and other incentives and creating an enabling policy environment.

Develop awareness raising campaigns: Decision makers in the public sector, like ministry of information and communication technology, Ethoio telecom should formulate and implement appropriate informative awareness raising campaigns. It can be done; Set up a network or forum with representatives from the government, private sector, civil society, and the media to create awareness among the society.

The Government will facilitate development and implementation of a comprehensive human resource development programme to address the critical

human resource requirements of the ICT sector, by Promoting ICT research and development capacity to improve ICT human resources, Promoting the use of ICTs in education to bring more efficiency and better quality in education services by: strengthening IT clubs in schools and professional associations to increase their capacities in awareness creation and public discussions .

Even though there is no statistical evidence about the loss of profit for the banks as a result of net work problem, it is likely to be true that other sectors highly affected by poor service from service providers. For instance, if the telecommunication network disrupt for two days, anyone can easily guess how much money the bank losses, visa card customers can not withdraw from ATM machines, bank losses the ATM service charge, also increase queue in the bank to withdraw money physically. There are also other direct and indirect impacts. So the service provider and customer should sign service level agreements so that Service providers try to meet their service level agreements and respond to customers' needs. If not the service provider is liable for the loss.

In the physical world crime often leave evidence of finger print, foot print, witness, video on security camera. But unless good security measures are taken, it may be difficult to trace the source of cyber crime in e-commerce. So the government should create a secure ICT and e-commerce environment as much as possible, to this end the government should formulate the preventive and Network security policy.

General importer should formulate information systems strategies, long term strategic and short term tactical plans to support the overall e-commerce

adoption. They shall design their own website to easily reach information to customers, and they shall serve customers more hours per day, create convenient open hour to customers.

It is evidenced that the payment system allowed for importers by NBE are, letter of credit, CAD with limited amount and advance payment. This payment system is traditional, compared to the new e-commerce payment system like credit card and debit card. So NBE, regulator of banking industry in Ethiopia, should develop a comprehensive regulatory and legal framework to automate payment system infrastructure especially for importers.

Finally, it is recommended that government should adopt a nationwide strategy and build a platform to promote strong, forward-looking policy favoring ICT and e-commerce communication.

Recommendation for future research

Weather the country is developed or developing Competition is one of the most decisive factors for the development of a given country in every economic sector. A more comprehensive and detail study should be conducted about privatization program of state owned public enterprise (ethio telecom) by other researchers and Ethiopia privatization agency.

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Appendix A: Questionnaire

ADDIS ABABA UNIVERSITY
COLLAGE OF BUSINESS AND PUBLIC ADMINISTRATION
MASTERS OF BUSINESS ADMINISTRATION
***GRADUATE PROGRAM (MBA IN FINANCE*)**

Dear Respondents,

First of all I would like to forward my heartfelt gratitude and respect to you for Administering this questionnaire honestly and responsibly. The questionnaire is designed to collect the necessary information to undertake a research on the topic " Electronic commerce: Practices, Opportunities and Challenges of general importers' in Addis Ababa" for the partial fulfillment of the requirements of the degree of Masters of Business Administration in finance (MBA in finance) at Addis Ababa University.

Electronic commerce is the basic and contemporary concept that embraces a complex amalgam of technologies, infrastructures, processes, and products and services. It describes the process of buying, selling, transferring, or exchanging products, services, payments and/or information through computer networks, principally the Internet. In this research context, **E-commerce**: refers to the application of ICT to undertake trading activity which include from simple information searching using web to electronic payment and full digitization. The main objective of this research is to assess the current Practices, opportunities, and challenges of electronic commerce (abbreviated as e-commerce) in Addis Ababa city particularly on general imports and to suggest some solutions to Overcome identified problems.

E-commerce is a strategic issue which should be handled by top management of an Organization, thus I believe this questionnaire should be administered by the top managers of the organization.

Please answer every question. You can tick the option that you choose (÷) or write your answer on the blank space provided. Space is provided for you to add further comments or explanations.

Therefore, your genuine, frank and timely responses are quite vital to determine the success of this study. So, I kindly request your contribution in filling the questionnaire honestly and responsibly.(No need of writing your name)

Finally, I would like to confirm you that all the information you provide in this Questionnaire will be strictly confidential and will exclusively be used for this research purpose.

Thank you very much ahead for your cooperation!

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If you have questions to this questionnaire - please contact by this address

Thank you again for your time and attention to this research, please fill out the forms bellow:

Part-I Personal Information/ Profile

1. Sex: M ☐ F ☐

2. Age (Years): 18-25 ☐ 26-30 ☐ 31-35 ☐ 36 -40 ☐ >40 ☐

3. Educational Qualification

Certificate or less ☐ Diploma holder ☐ First Degree ☐ Masters or more ☐

4. Your work experience in the organization with this position

Less than One year ☐ 1-2 Years ☐ 3-5 ☐ more than 5 years ☐

Part-II Company Information

1. Does the company have its own Web site/homepage? Yes ☐ No ☐
2. Does the company have an IT department? Yes ☐ No ☐
3. What is your level of awareness and knowledge about the concept of e-commerce?

Very low ☐ Low ☐ Medium ☐ High ☐ Very high ☐

4. Does the company use e-commerce? (NB. E-commerce in these sense means using internet and other ICT tools from simple information searching, comparing price of product, information exchange with customer and supplier, electronic ordering and payment even more, your answer should consider different application of ICT to simplify your business operation).

Yes ☐ (go to question 5, 6, 7, 8) ☐ Not at all (go to, 9) we plan to use it (go to 10) ☐

5. How do you evaluate the degree of utilizing E-Commerce application to undertake trading activity? Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Very Good☐

6. For what purpose company use E -commerce and computer technology? (you can tick more than one)

E-mail ☐ Identify sellers and its product ☐ evaluate products and services ☐

To see actual prices Compare prices ☐ to reach new customers ☐

Manage internal operations ☐ Electronic ordering to customer ☐

Electronic payment from customer ☐ Electronic ordering from suppliers' ☐ Electronic payment to suppliers ☐

others ----------

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7. For how many years company is using e-commerce?

Less than one year☐ One year but<five year ☐ More than five year ☐ Do not know/ cannot say☐

8. 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 ☐

9. If the company doesn't start e-commerce application, why doesn't company want to apply e-commerce application to simplify trading activities?

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10. If your organization plans to use e-commerce applications, what do you think about e-commerce?

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11. Which of the following means of payment have you used to pay for something company bought from foreign market(Tick all that apply)

Advance payment, you transfer money (via your bank, SWIFT transfer) ☐

Payment carried out off-line (cash on delivery, by cheque…) ☐

By using a credit card online (typing in your credit card details on the seller's website) ☐

By using debit card online/ giving direct debit authorisation online (typing in your bank account details and authorising the seller to transfer the money from your bank account) ☐

Letter of credit ☐ Cash against Document (CAD) ☐

Other payment ----------

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12. Since transaction and money is not physical in nature, participant of e-commerce lacks trust and confidence on the transaction and faceless seller whom they have never met before. To what extent do you agree to this statement?

Strongly Disagree ☐ Dis agree ☐ neutral ☐ Agree ☐ Strongly Agree ☐

13. How many hour the Company serve its customers per day?

For less than 6hr ☐ 7-10 hours ☐ 11 -14 hours ☐ 15-20 ☐ giving service more than 21 hours a day ☐

14. Do you agree that electronic commerce has substantial advantages over traditional face-to-face, paper-based commerce?

15. Strongly Disagree ☐ Dis agree ☐ neutral ☐ Agree ☐ Strongly Agree ☐

Perceived benefits

16. Perceived benefits in this context are defined as the gains or improvements derived from existing Ways of operating business transactions using e-commerce applications. Identify Perceived benefits of e-commerce, Select all benefit you expect

Reducing Travel Time and Cost ☐ reducing errors☐

Improving transaction speeds ☐ reduced paper work☐

Improving quality☐ Potential to Increase Company Profits ☐

Improved customer service ☐ Overcome geographical limitations ☐

Providing up-to-date information ☐ Encourages price transparency ☐

Remain open all the time☐ Provide Comparison Shopping ☐

Quality of information flow, (such as accurate, correct and complete) ☐

Others (please specify):----------

Potential Barriers

17. Please indicate the extent you agree or disagree of the Potential Barriers that affect **to** using or extending use of e-commerce technologies.

Statement	Strongly disagree	Disagree	Neutral	Strongly Agree	Agree
Lack of skilled workers to handle/ maintain E-commerce system					
Fear of risk security and privacy					
Lack of confidence in after sale service (guarantee, returns, remedies)					
Fear of risk product delivery					
Computer technology not widely used					
Low internet penetration and internet access					
Frequent power disruption					
High rates of illiteracy of customers					
Relatively High cost of Internet					
inadequate legal framework for businesses using e-commerce					
Poor telecommunication infrastructure					
Customer awareness level is low					
lack of adequate banking infrastructure to facilitate e-commerce					

18. Would you consider shopping online, if the above Potential Barriers are minimized and guarantees such as privacy and security of data offered:
    Yes ☐ no ☐ Don't know ☐
19. What is your level of e-readiness to full scale adoption of e-commerce with existing Ethiopian business environment?

Very low ☐ Low ☐ Medium ☐ High ☐ Very high ☐

20. What's your opinion regarding the statement that public monopoly of Ethiopian Telecommunication Corporation, currently it is renamed as ethio telecom, (absence of competition) for infrastructural development discourages the use of electronic Commerce by business?

Strongly Disagree ☐ Dis agree ☐ neutral ☐ Agree ☐ Strongly Agree ☐

21. Do you think that the government of Ethiopia is doing its enough to promote e-commerce in Ethiopia? Yes ☐ No ☐ Do not know/Cannot say ☐

22. What opportunities do you observe as an enabling environment for ICT and e-commerce in the current Ethiopian socio, economic, political and business environment?(by assessing, political stability, economic growth, transition to free market and democracy,etc)

Finally, if you would like to add any comments about your answers, or e-commerce practices, please would you write them below?

Thank you for completing this survey!!

Appendix B: telecommunication statistics about Ethiopia

Table 1: Internet Users in Ethiopia historical trends

YEAR	Users	Population	% Penetration
2007	164,000	73,872,056	0.2 %
2008	291,000	78,254,090	0.4 %
2009	360,000	85,237,338	0.4 %
2010	447,300	90,873,739	0.50%

CIA World Fact book ,2011

Table 2: Internet usage statistics of Ethiopia relative to top five African countries, 2010

rank in Africa	country	Population	Internet Users	Penetration
1	Nigeria	155,215,573	43,982,200	28.30%
2	Egypt	82,079,636	20,136,000	24.50%
3	Morocco	31,968,361	13,213,000	41.30%
4	South Africa	49,004,031	6,800,000	13.90%
5	Algeria	34,994,937	4,700,000	13.40%
21	Ethiopia	90,873,739	447,300	0.50%

Source:CIA World Fact book,2010

Table3: Comparative analysis of internet usage in Ethiopia and some neighboring countries

country	No of internet user	No of population as of 2009	Percentage of the population
Kenya	3,995,500	41,070,934	9.7 %
Uganda	3,200,000	33,398,682	9.6 %
Sudan	4,200,000	41,087,825	10.2 %
Ethiopia	360,000	85,237,338	0.4 %

Source:CIA World Fact book,2010