ADDIS ABABA UNIVERTY

SCHOOL OF GRADUATE STUDIES

FACULTY OF BUSINESS AND ECONIMICS

DEPARTEMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT

EFFICIENCY OF ELECTRONIC SERVICE DERLIVERY: A CASE STUDY IN AUTOMATED SYSTEMS FOR CUSTOMS DATA (ASYCUDA) IN ETHIOPIAN REVENUE AND CUSTOMS AUTHORITY (ERCA)

A THESIS SUMITTED TO THE SCHOOL OF GRADUATE STUDIES, ADDIS ABABA UNIVERTY, DEPARTEMENT OF PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT IN PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE MASTERS DEGREE IN PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT

BY

KIDIST KUBIE

Under the supervision of

Prof. C.D.DASH, PhD

NOVEMBER 2010

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Approval of Board of Examiners

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   Advisor Signature Date

2. _____ _____ _____

   Examiner Signature Date

DECLATATION

I here by declare that the project entitled "EFFICIENCY OF ELECTRONIC SERVICE DERLIVERY: A CASE STUDY IN AUTOMATED SYSTEMS FOR CUSTOMS DATA (ASYCUDA) IN ETHIOPIAN REVENUE AND CUSTOMS AUTHORITY (ERCA)" is my original work and has not been presented (Submitted) by any body for any degree or diploma in any University and all material used for the project work have been dually acknowledge

Declared by:
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Date: ----------

Confirmed by:

Name: Prof. C.D.DASH, PhD
Signature: ----------
Date: ----------

Abstract

This study aims to explore the efficiency of electronic service delivery by taking Automate System Customs Data (ASYCUDA) as the case study in Ethiopia Revenue and Customs Authority (ERCA). To conduct this study descriptive research methods were used. The study tried to describe the effiency of the system (ASYCUDA) by triangulating different ideas from the point views of customers, employees and other relevant office, which used ASYCUDA, processed datain their works.

Asurvey has beenusedtocollect dataformthetotalof samplesizeof 194.Thesample of this study were chosen using systematic, purposive and non-random sampling. Questionnaires, interviews, data analysis and organization observations were used to collect necessary data. The research study involved three categories of sample population:customers of theorganization,employees of ERCA andrelevant office who directly used the report of ASYCUDA driven data. Data analysis was made by using SPSS version 17 software and other simple stastical tools like percentage, ratio and tables.

The study finding indicate that even though ASYCUDA is facilitating the import and export process of the organization, it face implementation problems. This creates in effiency in the maximizations of the benefits expected from implementations of ASYCUDA. The major technical and institutional problems associated with were also analyzed. Some of the challenges, which create problems in smooth process of implementation of ASYCUDA, were: repeated system failure because of different reasons, frequent electronic power interruptions and frequent failures of networks. These create a big problem inimport and export process of the organization.

From the analysis of the above problems through questionnaires and interviews, the study concludes that, these factors should be improved by creating coordination inside and outside of the organization to improve the efficiency of ASYCUDA which solve the problems of import and export process and make the revenue collection of ERCA very

smooth. The study gives recommendations accordingly and some of the recommendations are: give training to employees reading ASYCUDA, using latest versions of ASYCUDA, improve managing system of the work process, improve the availability of network by coordinating with Ethiopian Telecommunications (ETC) and Ethiopian Electric Power Authority regardingelectric power failuresoruseother means to reduce the power interruptions at working hours.

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ABBREVIATIONS AND ACRONYMS

ASYCUDA	Automated System for Customs Data
BPR	Business Process Reengineer i ng
CBE	Commercial Bank of Ethiopia
NBE	National Bank of Ethiopia
COMESA	Common Market for Eastern and Southern Africa
DDN	Digital Data Network
DTI	Direct Trader Input
ECuA	Ethiopian Customs Authority
EDIFACT	Electronic Data Interchange for Administration, Commerce andTransport
ERCA	Ethiopian Revenues and Customs Authority
ICT	Information Communication Technology
ISO	International Organization for Standardization
LAN	Local Area Network
MCB	Ministry of Capacity Building
MOFED	Ministry of Finance and Economic Development
SIGTAS | TIN	Standard Integrated Government Tax Administration System (Tax paying Number)
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programs
UNESCO	United Nations, Educational, scientific l and Cultural Organization
UNITED	United Nation Information and Communication Technology Development
WAN	Wide Area Network
WCO	World Customs Organization
WTO	World Trade Organization
WWW	WorldWideWeb

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Chapter One

Introduction

1.1 Background of the Study

All citizens who need to interact with government, while some interactions are voluntary and others are mandatory. Business and other organizations also need to interact with the government on a regular basis as they can exercise their rights; they are also obliged to obey the rules and regulations of state. These interactions may go through service giving and taking process, however, given a large population with widely varying needs, it is very difficult for the government to deliver the required services to citizens and organizations effectively. The problem becomes worse as population grows. In developing countries, due to this, service delivery becomes slow and uncertain, and the cost of technology in delivering service can rise in developing nations accordingly. (Worthington & Dollery, 2003:3).

To address these problems, governments can attempt to make more efficient service delivery and bring better speed, certainty, and transparency to the process. To this end, electronic service delivery is one way by which government can deliver services directly to the citizen, without the citizen having to go to a government building (http://en.wikipedia.org/wiki/ electronic services accessed on 13/02/2010).

During the last decade, service giving organizations have been under taking considerable transformations at macro and micro level, mainly due to the rapid development of emerging business applications, technological advances as well as the requirements and implications of the knowledge and experience-based economy. As a result, customers are becoming less loyal, more price sensitive and discriminating. To address such challenges and satisfy the dynamically changing customer needs,

exploitation of information technology capabilities, reengineering business processes and creating business value have become necessary condition (Sigala, 2003:6).

According to Sigala, current developments are not only required by service organizations to transform their business operating models, but also it helps to redefine their strategic scopes and roles. After all economic environments, business level of competitiveness and organization given dynamic performances related directly with issues such as service quality, experiences adding customer value, exploitation of information and communication technologies, customer relationship management, personalization and customization of services, cross-cultural understanding and eventually satisfaction of customer needs (Sigala, 2003:7).

> An efficient service delivery is the ability of an organization to deliver simple, effective, and transparent service, which addresses customer expectation. 7KLV LV WR VD\ HQVXULQJ FXVWRPHUV¶ VDWLVIDFWLRQ DQG HQDEOLQJ WKH confident towards the organization. Successful service giving companies focus their attention on both their customers and their employees. They often try to understand the relationship that links their service provision and customer satisfaction. This consists important considerations like internal service quality, satisfied and productive service employee, greater service value, satisfied, and loyal customer, healthy service profit, and growth to the company. The ingredient needed for success in the service area is the building of a client friendly system, making everything easier for customers and to satisfy the needs of the clients. The system must not be created for the convenience of the company rather on the axiom" do right thing in the right way". The system is a perfect combination of effectiveness and efficiency (Egidio, 1990:45).

The term electronic services delivery is much used, but seldom defined. The generic concept, for both the terms 'electronic business' and 'electronic commerce' is widely used as the conduct of business with the assistance of telecommunications, and of telecommunications based tools. Hence, electronic services delivery is electronic commerce in services. It is the delivery of information, products, service, or payments with the help of telephone, computer or other automated media. It includes many kinds of business activities, and all commercial transactions conducted by the internet,

telephone and fax and all forms of trade in digitized goods and services. However, it is not commonly used in relation to government services in developing countries especially like Ethiopia, but all in all the electronic technologies is a promising application to get a promising return to the companies who apply it and to the other stakeholders (C l arke, 1997:2) .

Electronic services delivery can be performed using a wide range of electronic tools. The emergence of the Internet and the World Wide Web (WWW) has resulted in a situation where substantial proportion of recent business activities being focused on that channel. While electronic commerce can help increase the effectiveness of tax administrations, it also raises major new issues and challenges established tax systems and laws. The potential with electronic commerce for avoidance and evasion is major and necessitates that countries review their tax policies and administration to ensure that tax laws are applied appropriately (C l arke, 1997:3) .

Achieving integration of electronic service delivery capability is not enough for a government. It also needs to ensure that these electronic services are accessible by the citizens. This is achieved through different Service Delivery Channel, which takes into consideration the information technology infrastructure, ability of a citizen to interact with the government electronically, and social considerations. It offers considerable potential to tax authorities to reduce costs, improve efficiency, accessibility, transparency, and client orientation (Jenkins, 2002:16).

In Ethiopia, the government has a monopolistic power to promote electronic public service delivery through its legitimate authority, budget appropriation and information and expertise preparation. Good service delivery system creates a very positive experience the benefit of which occur for both the provider and the beneficiary, good service availability, accessibly and ease of use will bring customer satisfaction and success to the organizations.

> Information technology penetration in Africa began just after the wider introduction of mainframe computers in the developed world by the end of 1960s. Later microcomputers spread widely in the region through direct purchase and by donor development aid programs. The initial stages of microcomputers introduction into Ethiopia were characterized by inadequate literacy and irregular understanding of the technology by potential users. Full adaptation of the technology had been difficult due to conditions like cultural and literacy problems, languages barriers, in existence of scripts and limited access to software and training materials. Still most users are still not aware of the potential of the technology. The original resistance, due to fear and dislike is, however, replaced by intensive application of word processing, transaction and data processing (Bekkers & Zouridis, 1999:29).

According to Lishan (1999) awareness about of information technology has been greatly growing among users in the field of academics and research, among workers of international organizations and in international business organizations. This has resulted in a growing recognition of the importance of networking and expansion of the technology. The Ethiopian Telecommunications Corporation has made huge investment in the development of the network infrastructures.

It is commonly understood that every government seeks to raise revenue, mainly through taxation, in order to pay its expenditure on infrastructure development, among others. In Ethiopia, the responsibility to collect revenue for the federal government rests with the Ethiopian Revenue and Customs Authority. In addition to raising revenue, the Authority is responsible to facilitate the legitimate movement of people and goods across the border. Simultaneously, the Authority focuses on those people and vehicles that may involve in the act of smuggling i.e. the act of bringing into or taking out of the country goods on which customs duty and taxes are not paid and goods of which the importation or exportation of which are prohibited by law. The Authority conducts investigation, audit and prosecutes offenders. In the attempt to discharge its responsibility, the Authority closely works with the Federal Police, Standardization

Authority, Ministry of Health, and Immigration Service and with other stakeholders (www.erca.gov.et , accessed on 11 March 2010).

As we have discussed earlier, the electronic service delivery offers every government innovative and better ways of doing its expected tasks. Experience suggested that electronic service delivery can provide massive gain in effectiveness and efficiency for all forms of tax administration. To accomplish its task the organization has come across two stages: Manual and Electronic declaration and data processing. However, during manual data processing there was not an updated data and the national reports were not indicated at their up to date conditions .Hence, recently as a solution to the problem observed on the manual stage the Ethiopian Revenue and Customs Authority adopted the ASYCUDA and the Standard Integrated Government Tax Administration System (Tax paying Number) SIGTAS | TIN systems.

The Automated System for Customs Data (ASYCUDA) is used for customs management system which covers most foreign trade procedures and activities in goods clearance process. ASYCUDA is a standardized system that takes into account the international codes and standards developed by International Organization for Standardization (ISO) and World Custom Organization (WCO) and they are adaptable to suit the national characteristics of individual customs regimes and duties of Ethiopia**.** It all began in 1995 when a group of COMESA delegates came to Ethiopia to introduce ASYCUDA version 2.7 to Higher Customs Officials.

The targeted objectives from the implementation of the ASYCUDA system in the Ethiopian Customs are:

- Trade facilitation
- Effective revenue collection
- MIS and generation of trade statistics
- Developing updating and building the ASYCUDA++ control files

- System studio test at HQ.(proto type)
- conducting training for final users
- Parallel test at pilot site.
- launch live operation

Customs computerization speeds up the clearance of goods and reduces delays in deliveries to customers. As a result the related overhead costs, which affect the cost of imports and the price of export, are greatly minimized. And provides more precise external trade statistics, the computerized database on trade is used for statistical economic analysis, generate timely reports as required and cash account is automatically closed every other working day (United Nations Conference on Trade and Development (UNCTAD), 2001).

1.2 Statement of the Problem

The heart of excellent service marketing is characterized by service reliability, performing the service consistently and accurately. When a company performs a service carelessly, when it makes avoidable mistakes, when it fails to deliver as per promises, it erodes the customer confidence in its capabilities and undermines its FKDQFH RI HDUQLQJ D UHSXWDWLRQ IRU VHUYLFH H[FHOOHQFH IURP WKH FXVWRPH SHUVSHFWLYH (Berry, 1991).

In Ethiopia, in most cases, service is provided in manner that suits the administrative convenience (i.e. provider) rather than compliance to the recipient interest. In relation to this, inconsistency of regulation and guidelines among governing institutions that provide related service as well as lack of coordination and cooperation among various departments with in an institution and between related institutions often hinder efficiency in service delivery (Ministry of Capacity Building(MCB), 2001:3).

Moreover, the service delivery in public institutions is time taking due to excessive hierarchal organizational structure. And yet sufficient attention is not given in the

planning process of many governmental institutions for improving their service delivery system of very long time taking as well as procedure of service delivery in governmental organizations. In addition, the human resource management system and working condition in the civil service do not motivate employees to provide quality service properly. The service users are also not aware of their rights and obligations regarding how and when to receive the public service (MCB, 2001:5).

Even though the quality of service delivery increased the satisfaction of customers, the efficiency of service giving company highly requires the ability to have a good service delivery system and efficient professionals who fit that technology. Now it is impossible to fail to remember the contribution of modern information technologies for efficiency of service delivery system. Electronic service delivery as a system will benefit the organization in increasing profit, in decreasing transaction cost and maximizing customer satisfaction and it is one of the best services giving system even thought it may stimulate stress because of the knowledge gap and change challenging nature of human behavior between employees (Quinn & Byron,2006).

&XVWRPHUV¶ H[SHFWDWLRQ SOD\V D IXQGDPHQWDO UROH LQ MXGJLQJ D FRPSDQ\ V EHFDXVH customers evaluate service quality by comparing what they want or expect with what they are getting from the company. To earn a reputation companies should work as per expectations and requirements of customers because customers are the sole judge of VHUYLFH TXDOLW_ +HUH_ HYHQ WKRXJK PDQDJHPHQW PD\ WKLQN WKH FRPSDQ\¶V ILQH and if customers disagree with the quality of the service the organization offer, we conclude that the company has problems and must accept and correct accordingly (Berry, 1991:15).

Service companies are under a constant and dynamic change, everybody is aware of this and so, proactive action is required. What they have aimed to do is to identify issues that are relevant to make them fit with the required service delivering system and as such applicable to all involved in the management and competitiveness of service

companies regardless of their location or national boundaries. Though, this is for private organization some parts are also extended to public organization and ERCA should watch its service delivery system as well as its efficiency in this changing situation to facilitate its revenue collection works.

Electronic service delivery facilitates the work of any organization and to maximize this opportunity and to get organizational efficiency, Ethiopian Revenue and Customs Authority (ERCA) adopted an electronic service delivery system called ASYCUDA. There is a claim that, the introduction of information technology based service delivery system cannot guarantee the development of a country even though it may contribute to total development, this claim of under satisfaction by the service delivery systems continue to the introduction of ASYCUDA.

It is the experience of the researcher that the transitors feel that the adoption of ASYCUDA does not bring any facilitation of works in the organization. They also believe that the adoption of it cannot bring adequate change in efficiency, transparency and effectiveness of service delivery in ERCA. This is due to the frequent system failure because of network failure and electric power failure. This study assesses the service delivery in ERCA and demonstrates the efficiency of the organization after the adoption of ASYCUDA.

1.3. Research Questions

The adoption of the service delivery policy puts clearly on civil service institutions their responsibility of improving the efficiency and effectiveness of their service and of making every effort on making to attain user satisfaction by ensuring fairness and DFFRXQWDEOH LQ WKHLU GHDOLQJ ZLWK WKH SXEOLF_ ,W DOVR HQDEOHV VHUYLFH VDWLVIDFWLRQ E\ ensuring fairness and accountability in their dealings with the public. It also enables serYLFH XVHUV¶ WR EH DZDUH RI DQG GHPDQG IRU WKHLU ULJKW WR UHFHLYH SX equitably. Above all the policy reminds civil service officials and employees that they

H[LVW WR VHUYH WKH SXEOLF DQG VKRXOG WKHUHIRUH FDUH IRU VHUYLFH XVHUV DQG courteously.

Hence, ERCA applied ASYCUDA system for facilitation of its import and export works and easy collection of revenues. In this thesis the researcher will address the following questions for data collection and analysis purpose.

i) Is ASYCUDA facilitating work process in the organization and helping to bring organizational efficiency and effectiveness in ERCA?
ii) What are the perceptions of customers towards efficiency of ASYCUDA?
iii) What changes have occurred on the perception and performance of employees after the introduction of ASYCUDA?
iv) How much the adoption of AYSCUDA reduces the transaction cost and the time the process takes?
v) What are the shortcomings and problems faced in utilization of ASYCUDA and what will be possible solutions?

1. 4. Research Objectives

ERCA adopted ASYCUDA to facilities the import and export process activities in the organization. Here the main objective of this research is to assess the efficiency of ASYCUDA in service delivery process of ERCA.

The specific objectives are;

i) To assess the role of ASYCUDA in facilitating work process in ERCA and improving organizational efficiency

ii) To assess the impact of adoption ASYCUDA at the level of customers satisfaction

iii) To assess the changes in work performance after the introduction of ASYCUDA

in the organization

iv) To assess the cost reduction and the shortening of time after adoption of ASYCUDA

V) To show the shortcomings and problems faced on utilization of ASYCUDA and give suggestions and recommendations accordingly.

1.5. Research Methodology

Service quality measured in different measuring criteria according to the purpose of the service quality evaluator but measuring public service quality and showing its efficiency or its challenges, is very difficult because measuring public performance is dependent up on many factors. The researcher tried to measure the efficiency by seeing the economic allocation, accountability, transparency and ease of administration of the system .In addition to this, the researcher further tired to measure the public service delivery quality and efficiency by taking the measurement which fits the private organization called SERVIQUL model having tangibles: about physical facilities, equipment, and appearance of personnel, reliability about ability to perform the promised service dependably and accurately, responsiveness about willingness to help customers and provide prompt service, assurance about knowledge and courtesy of employees and their ability to inspire trust and confidence and empathy about caring, individualized attention the service provider gives its customers. The researcher used descriptive research methods.

1.5.1 Data sources and Data collection Tools

Data collecting instrument used for this study was primarily semi structured questionnaires. The questionnaires were distributed to the customers of the agency like exporters, importers and transitors who are using the service at spot moment. And employees of the agency who directly work on the system implementation positions. And in-depth interviews were made with user institution (banks) of the service from the

ERCA. Secondary data sources like annual and monthly reports which are relevant to the research.

1.5.2 Sampling Technique and Size

The researcher used stratified purposive non random sampling technique to collect primary data, the stratification was based on customers (exporter, importer, and transistors), employees of ERCA who are in position of application of ASYCUDA and who work on front desk and private owned and government owned banks that used as input for their work process the out of ASYCUDA processed data like declarations.

The semi structured questionnaires were distributed to UHVSRQGHQWV¶_ FXVWRPHUV and employees of the organization, the interviews were made with relevant officers who used ASYCUDA driven data as their inputs for their work processes. The interviews were made to 6 relevant offices which are government banks like Commercial Bank of Ethiopia (CBE) and National Bank of Ethiopia (NBE), private banks NIB Bank, Dashen Bank and Ministry of Finance and Economics Development (MOFED) and the ERCA itself. Two interviewees (individuals) from each organization were selected.

The populations of the research are customers (importers, exporters and transitors) of ERCA which constitute 130, from 1200 the employees the Agency 5 percent (60) of them who work in Addis Ababa Airport Branch Office (Bole) and Addis Ababa Export and the other goods facilities Branch office (kaliti) which and in-depth interview was made with representative government and private owned banks, MOFED and ERCA which compose 12 in number.

1.5.3 Data Analysis

The data obtained from primary as well as secondary sources regarding customer satisfaction, time and cost minimization for customers after implementation of ASYCUDA would be seen from organization as well as customer wise using SPSS software and other simple statistical tools like percentage, ratio, and tables.

1.6. Scope and Limitation of the Research

1. 6.1 Scope of the Research

The research study is limited in Addis Ababa, which has the biggest customer load on the Authority and the Addis Ababa Airport Branch Office (Bole) and Addis Ababa Export and other goods facilities branch office (kaliti) are the main study areas of the research with equal proportion of samples was taken form both sites. Because of the time and budget limitations the research was conducted only in Addis Ababa Revenue and Customs Authority Bole and Kaliti office and the head office and IT departments were covered in the study that have relevant sources of data.

Ethiopian Revenue and Customs Authority adopted electronic service delivery system that facilitates its work on tax collection and they are ASYCUDA and SIGTAS. ASYCUDA deals with the tax collection on imports and exports activities and SIGTAS is tax collection from all sources at home. However, the researcher focused on the ASYCUDA package and assessed the efficiency of the import and export system after the implementation of ASYCUDA. This study does not cover the ICT application; it rather concentrated only on the administrative efficiency of ASYCUDA.

1.6.2 Limitation of the Research

It is better to investigate and assess both ASYCUDA and SIGTAS to see all over the efficiency of the system. But because of time and cost limitation the study is only limited to the ASYCUDA and made an intensive study on selected stratified purposive non random sampling.

1.7. Significance of the study

i) This paper is important for the agency to show its gaps in service delivery and to initiate corrective actions.

ii) It instigates other researchers to investigate more about the system which are not covered by this paper and other studies.

iii) It is valuable for other researchers to use it as a source of reference for comprehensive and thorough study on efficiency of the public organization.

1. 8. Organization of the Thesis

This study is presented in four chapters. It starts with the introductory part which discusses the service delivery, and electronic service delivery of ICT and ASYCUDA in Ethiopia .It also deals with statement of the problem, objective of the study, significance and methodology of the research as well as data analysis methods of this research. The second chapter deals with the literature of service delivery and deals more on concepts in Public Service Delivery and electronic service delivery, efficiency measurement of Public Service Delivery. It also deals more on ASYCUDA and its implementation ERCA.

The third chapter is committed to analysis of the data collected, there by on the improvement and gave hint on efficiency of service delivery to customers and cost reduction, transparency and effectiveness in customs operation. Based on the findings

of the study, the final chapter offers suggestions and recommendations towards the efficiency of ASYCUDA and gives ways for better utilization of the system for ERCA.

Chapter Two

Literature Review

Conceptual Framework; Electronic Public Service delivery And Its Efficiency Measurement

2. Introduction

This chapter reviews literatures on concepts in public service delivery, electronic service delivery, its efficiency and measurement in public sector performance. It also discusses the development of information technology and its service delivery contribution in Ethiopia. In addition, some limitations on ICT service delivery are discussed. Finally, development of information technology and implementation of ASYCUDA in Ethiopian Revenue and Customs Authority (ERCA) are also looked into.

Definitions of Important Terminologies

These sections attempts to define the terms widely used and are important to undersWDQG NQRZOHGJH¶V LQ WKH WKHVLV_ 7KH GHILQLWLRQV DUH derived from free dictionary (http://en.w i k i ped i a.org/w i k i /D i ct i onary accessed date 23/03/2010).

Service- is any work that is done by a person or a group of people that provides a function to others. Service work can be paid or voluntary. This is to say you provide a service rather than sell an object.

Service delivery- refers to delivery of work by a person or group for the benefit of someone else or assistance offered by an organization to its customers.

Public service delivery- is a term usually used to mean services provided by government to its c i t i zens , either directly (through the public sector) or by financing private provision of services.

Electronic service delivery- is electronic commerce in services, means the provision of services with the assistance of telecommunications and telecommunications-based tools .It is any application program or information resource which make to exploit the potential electronic service and internet service to facilitate all the activities involved.

Information Technology-in the broadest sense, information technology refers to both the hardware and software that are used to store, retrieve, and manipulate information. At the lowest level you have the servers with an operating system. Installed on these servers are things like database and web serving software. The servers are connected to each other and to users via a network infrastructure. And the users accessing these servers have their own hardware, operating system, and software tools.

2.1 Concepts in Public Service Delivery

A public sector or government organization first and foremost exists for providing service to its citizens through their operation. Service is generally any activity undertaken to meet social needs. Public service, particularly, refers to those activities of government institutions aimed at fulfilling the needs and ensuring the well being of the society as well as enforcing laws, regulations and directives of government (MCB, 2001:1).

Several distinctive characteristics make special the public service delivery system of the government from the private ones. These distinctive characteristic in combination make the performance measurement in public sector a challenging practices and it is not easy to make a comparison between performance of public and private sector organizations. The occurrence of differing competitive conditions, differing objectives, constraints and data difficulties makes very difficult to evaluate performance of public sector service deliveries (Fox, 2002:14).

According to Ghobadian (Ghobadian etal1994: 44-45), there are possibly major differences between service and manufactured goods. These differences have an impact on the approach and substance of quality management and four of them are:

- **Inseparability of production and consumption;** In service industries, usually the marketers create or carry out the service at the same time as the full or partial consumption of the service takes place. The high visibility of the conversion process means that it is not possible to hide mistakes or quality shortfalls. Moreover, the involvement of the consumer in the delivery process introduces an additional process factor, the consumer, over which the management has little or no direct control (Ghobadian etal1994:44-45).

- **Intangibility of service**; Many services are essentially intangible that it is difficult for the producer to illustrate the service and for the consumer to ascertain its likely qualities. The consumer cannot see, feel, hear, smell, or touch the product before it is purchased. Therefore, the consumer often looks for signs of quality: for example: word of mouth; reputation; accessibility; communication; physical tangibles; etc (Ghobadian etal1994:44-45).

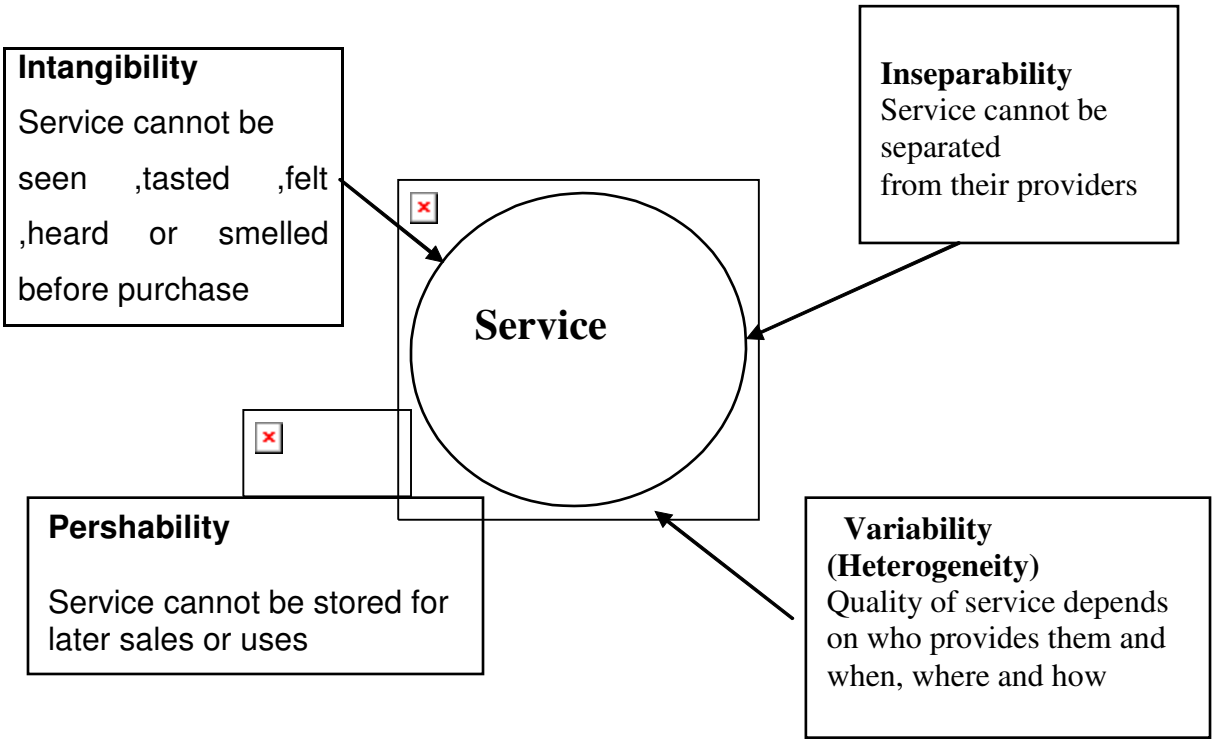
- **Perishability of services**; Services are perishable and cannot be stored in one time period for consumption at a later date. This means that, unlike manufactured goods, it is not possible to have a final quality check, Hence, service provider needs to get the service right first time, every time (Ghobadian etal1994:44-45)

- **Heterogeneity of services**; It is often difficult to reproduce a service consistently and exactly. A number of factors can affect the extent of the heterogeneity of service provisions. First, delivery of service often involves some form of contact

between the consumer and service provider. The behavior of the service SURYLGHU_ ,QIOXHQFHV WKH FRQVXPHU¶V Serception of quality. It is difficult to assu consistency and uniformity of behavior (Ghobadian, etal, 1994, 44-45).

Kotler and Armstrong (2001:317) further explain the difference of service and goods. Services are a form of product that consist of activities, benefits or satisfactions offered for sale that are essentially intangible and do not result in the ownership of anything. Today as a service becomes more and more commoditized many companies are moving to a new level in creating value for their offer, they are developing total experienced and expectation style of service delivery system.

Figure 1: Four service characteristics



(Source: Kotler & Armsrong, 2001:317)

Modern service delivery, which has been a distinguishing feature of the private sector, has become a topic issue among government as well as non-government institutions in their recent effort to transfer good management practices from private to the public sector. Service delivery basically refers to the systematic arrangement of activities in service giving institutions with the aim of fulfilling the needs and expectations of service users and other stakeholders with the optimum use of resources .In short, improvement of service delivery means increasing the cost effectiveness, coverage and impact as well as efficiency of service (MCB, 2001:1).

Service companies want to ensure that customers receive consistently higher quality service in every service encountered. However unlike product manufacturers who can adjust their machinery & inputs until everything is perfect, service quality will always vary depending on the interaction between employees & customers, problems will inevitably occur .As hard as they tried even the best companies will an occasional late delivery (Kotler.P & Armstrong 2001:323).

However, although a company cannot always prevent service problem, it can learn to correct the problems immediately. Good service recovery can change angry customers in to loyal ones. Therefore companies should take steps not only to provide good service every time but also to recover from service mistakes when they do occur. The first step is to empower front line service employees, to give them the authority, responsibility and incentive they need, to recognize, care about and tend to customers needs. Generally, they must learn to watch service performance closely and make needed corrections (Kotler.P & Armstrong 2001:323).

Improving public service delivery is one of the biggest challenges worldwide. Because, public services are a key determinant of quality of life while it is very difficult to measure in per capita income also it is very difficult to show its efficiency clearly. They are also an important panel of poverty reduction strategy in a country. But, it is a particular

challenge in Africa, given the low quality of service provision and the critical needs of the citizen for quality services from beginning to end by organizing public service provision is deemed to be a core function of government. These goods and services given by government have important benefits not captured in market as the reason of they are subject either to externalities or have equity or minimum service objectives . Given these features, it is well known that the market provides them as market allocation based on willingness to pay and the price system does not internalize externalities and mostly given by the government (Besley & Ghatak 2007:127-128).

In order to bring quality service, service providers can train current employees better or hire new ones who will work harder or more skillfully. Because it is known that everything depends on the behavior of staff, if they are empowered they will work for organizational goal achievements. Empowerment definitely calls for creativity and enhance employees efficiency. In addition, we can exploit the power of technology because it saves time and costs, it also has great and often untapped potential to make service workers more productive and efficient. Hence, companies can differentiate their service delivery having more able and reliable superior physical environment in which the service products delivered, or by designing a superior delivery process better customer service (Quinn.M & Byron.L, 2006:77-78).

Here, the private sector provides private goods efficiently, and the public sector steps in to provide public goods and services and uses taxes or subsidies to correct externalities. People are requesting for quality service which is by government reasoning out they are tax payers and it has a responsibility to provided as per the requirement of them because its responsibility is to serve the citizen (Besley & Ghatak, 2007:128).

Now days, continuous improvement in service quality is considered a requirement in the services industry. Supporting multiple service delivery channels with up to date technology is now a key competitive issue for service delivery institutions. Service

quality has become an essential part of organizational success due to increased customer expectations and customization of services in many markets. In fact, even the definition of service quality is changing. Good service quality used to mean that the output was made to conform to the specifications set by the process designers. Today, the concept of service quality is evolving to mean uniformity of the service output around an ideal (target) value determined by the customer (Frei, etal, 1997:36).

A performance evaluation in public sector is very difficult and it is particularly serious in three respects. First, it is frequently difficult to define the service being provided. Secondly, it is challenging always to price the service being provided. Third, quality matters particularly in the provision of service because service quality is notoriously difficult to define much less to measures (Fox, 2002:19).

Competition, processes, and technological improvements in delivery systems have resulted in a gradual shift in strategic focus from price to service quality. It depends on the magnitude of service process variability and its impact on service quality an organizations performance. It has become an essential part of organizational success due to increased customer expectations and customization of services in many markets (Frei, etal, 1997:36).

However, before applying quality control methods developed in manufacturing to service operations, more fundamental questions need to be addressed: How does process variation in services brings organizational efficiency? How do process variations affect an organization performance? It is very important to point out that removal of unnecessary process variation is a necessary, but not a sufficient condition, for improving service quality as well as for bring efficiency. It is not sufficient because high levels of inherent difference will continue to exist due to other factors and must be managed, even in the best of all possible scenarios (Frei, etal, 1997:38).

There are four major factors which contribute to the substantial difference in the delivery of services, But not all four of these factors apply to all services, nor is this complete list of variables, but these four factors represent major explanations for the existence of process variation in services: heterogeneous customers with different service expectations; lack of precise policies and processes; high employee turnover; and nature of customization (Frei, etal, 1997:39).

Due to the co-productive nature of most customers, the presence of heterogeneous customers usually introduces variation into the service delivery. The principal reason for this is that a component of the production process (the customer preferences and expectations) is different for each instance of service delivery. For example, one customer may want fast service with no idle chatter and another customer may want to have a discussion amidst service delivery. Serving these customers will likely to require different amounts of time, and thus will result in higher variation. Aside from variation in customers, there may also be process variability. Services, typically, do not apply as much rigor to the definition of each and every step of the production process. In fact, it is not uncommon for upper management not to know the details of a particular process and for there to be no institutional knowledge of process designs (Frei & Harker, 1995).

Many organizations want to work for the fulfillment of its goals but they may not get the right way of doing a work and intended to move ahead and improve organizational efficiency. But many activities in service giving organization requires better facilitation as well as skill full employees, hence organizations should work to empower employees to make the service quality as well as to bring organizational efficiency by following organizational goals well as implementing better information technology which helps its performance as well as make an organization efficient and effective in using its resources.

2.2 Electronic Public Service Delivery

Given a large population with widely varying needs, it can be difficult for the government to effectively deliver services to citizens and organizations. The problem can become worse as government and population grows but delivery systems do not change. Service delivery becomes slow and uncertain, and the cost of delivering services can rise. This can lead to corruption (for example, the payment of "speed money" to get a job done). These problems are common, perhaps more so in developing nations. To address these problems, governments can attempt to streamline service delivery and bring greater speed, certainty, and transparency to the process. Electronic Service Delivery is one way governments attempt to deliver services directly to the citizen, without the citizen having to go to a government building (http://en.w i kiped i a.org/w i k i /Electron i c_serv i ces_delivery,accessed on 16 /01/2010).

Electronic governance and web services for citizens will happen only in those countries that have the infrastructure to support it while some countries have embrace electronic government, a number of others have not placed enough information or services online, and are not taking advantage of the interactive features of the Internet. While some countries have embraced electronic government, a number of others have not placed enough information or services online, and are not taking advantage of the interactive features of the internet (Ahmed, 2003:3).

The increasing forces of intensifying global competition, continuing customer demands, and the significant revolution in digital communication technologies have together put pressure on many organizations to switch their operations into the e-business world by making use of electronic commerce, technologies such as the Internet and the World Wide Web (WWW) as media for business-to-business, and business-to-consumer transactions. This process potentially facilitates the expansion and development of new linkages among various business partners around the globe. It also speeds up

information flow and enables information and knowledge sharing with other entities in a "boundary less" business supply chain (Al-Mashari. M., 2005:2).

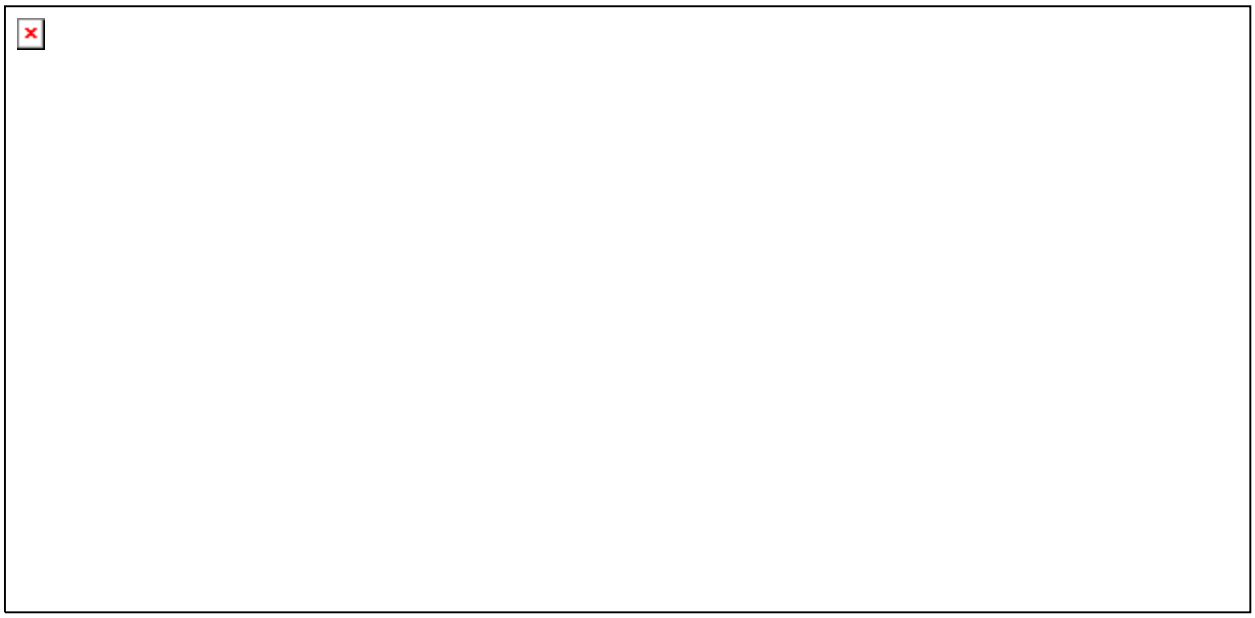
According to Fine (2003:2), determining the impact of information technology on organizational structure and outcomes has become a crucial task for government. With the speed of communications and the pace of business constantly on the increase, government need to know how technology is affecting them and their grantees what they need, what they could be doing better, whether their IT systems are helping or hindering them in achieving their missions. But certain knowledge of the impact of technology on an organization or a program is like a pot of gold at the end of the rainbow: its value is obvious, and it looks easy to find, but the path toward it is unclear and transient.

Implementations of electronic governance will bring benefit by providing efficiency to the government service. Improvements in information technology can have dramatic effects on both the internal and external operations of government internally, improved IT systems can enhance and strengthen organizational infrastructure and capacity by increasing the efficiency of client intake; service coordination; information sharing between departments, staff and board (Fine, 2003:2-3).

Implementing new information technology applications to enable a competitive edge has become a core and important strategy in most contemporary corporations. Earlier studies have suggested that information technology plays a fundamental role in an organization's ability to performance through innovations in products, channels and customer segments. Information technology infrastructure includes networks; management and provisioning of large-scale computing, electronic data interchange and shared databases, and research and development to identify emerging technologies (Chen, 2007:13).

Accordingly, as Chen (2007:13) Information Technology adoption will help the organization to maximize external advantage as well as internal advantage of the technology provides.

Figurer 2: Adoption of Information Technology



(Source: Chen, 2007:13)

2.3 Measuring Public Sector Performance

A service is an intangible experience of customers. It cannot be stored on a shelf, touched, tested or tried on for size because service is not a thing. Rather, it is a process performed for the benefit of customers (Brown & Fisk, 1984:250).

It is not easy to standardize and control the characteristic of service delivery and in some instants what the organization intends to deliver may be completely different from what the consumer receives. In addition to this the service operations depend on consumers to communicative their needs or provide information. The accuracy of the

information and the ability of the service provider to understand this information correctly have D VLJQLILFDQW LQIOXHQFH RQ WKH FRQVXPHU¶V SHUFHSWLRQ RI VHUYLFH TXDOLW\ The priority and expectations of the consumer may vary each time he or she use the service. Moreover, priority and expectations may change during the delivery of the service. The variability of service from one period to another and from consumer to consumer makes quality assurance and control difficult. Service providers have to rely heavily on the competence and ability of their staff to understand the requirements of the consumer and react in an appropriate manner (Kotler.P & Armsrong.G. 2001:318-319).

Even though it is very difficult to measure the efficiency of public service delivery since it is involved with many immeasurable factors and its nature makes it difficult to measure easily, Polidano.C. Identified some measurement of public service delivery, they are summarized as follows:

1. Understanding needs of its customers. These identify all types of customers or find out what they want and need.
2. Design its service in light of this understanding which means creates or reforms services to suit its customers and delivering as the way they requested.
3. Consult with user regularly by gathering information on user expectations so that service can respond to changing requirements and circumstances.
4. Introduces healthy and well developed arrangements for delivering service by design and introduces better ways of delivering a service.
5. Employing and motivating capable staff, especially on front line and recognize the value of its staffs at all level ,appreciate the impact of motivated frontline HPSOR\HHV RQ FXVWRPHUV¶ VDWLVIDFWLRQV_
6. Monitors service performances and learns lesson so that it can innovate by establishing suitable and credible performance measurement, regularly monitors

performance and carries out effective analysis, applying lessons learned to make service improvement.

7. Rectify when things go wrong-recognize sometimes things go wrong and appreciate FLWL]HQ¶V ULJKW WR UHGUHVV DQG HVWDEOLVK FRPSOLDQW and co channels that are accessible to all and efficient to administer.
8. Publicize service and performance levels to all users and communicate information on service and performance through tried-and-tested methods and innovative approaches.
9. Balances not overburdening service users with rules and demands for information with the need to safeguard public money.
10. Deliver and repeatedly deliver to the same high standards service (Polidano.C., 1999:7-9).

Shah (2005121-122), explain more on justification for the difficulties of performance measurement in public organizations and reasoned as the challenge to analyze output of service and difficulties to measure the outcomes of the given services. To evaluate the role for these bodies and how they should be structured, it needs a set of criteria. Some of them can be efficiency, accountability, transparency and ease of administration:

- Economic allocation/efficiency. This is achieved within the organization when all service responsibilities are organized and allocated to get the greatest possible gain from the use of all resources (inputs) as its disposal.
- Accountability is achieved when the customer or taxpayer is able to identify who is responsible for what and is able to link the governing unit responsible for the service directly to it funding which are tax payers.
- Transparency is achieved when citizen or tax payer have access to information and decision making forums so that the general public knows that what is happening and is able to judge whether it is appropriate.

- Ease of administration is an extension of the criteria of efficiency and accountability. The easiest system to administer is one that is not confusing and does not require an unnecessary amount of time and effort in consultations, correspondence and meetings in reaching decisions (Shah, 2005:121-122).

By considering only few factors it is very difficult to measure the efficiency of public service delivery because it is very difficult and complicated to measure the service delivery given by the public organization, hence sometime it is better to see it from the angle of private organization to make the service measurable. One of service quality measurement models that have been extensively applied is the SERVQUAL model developed by Parasuraman et al. (1985).

The dimensions of SERVQUAL framework are**;**

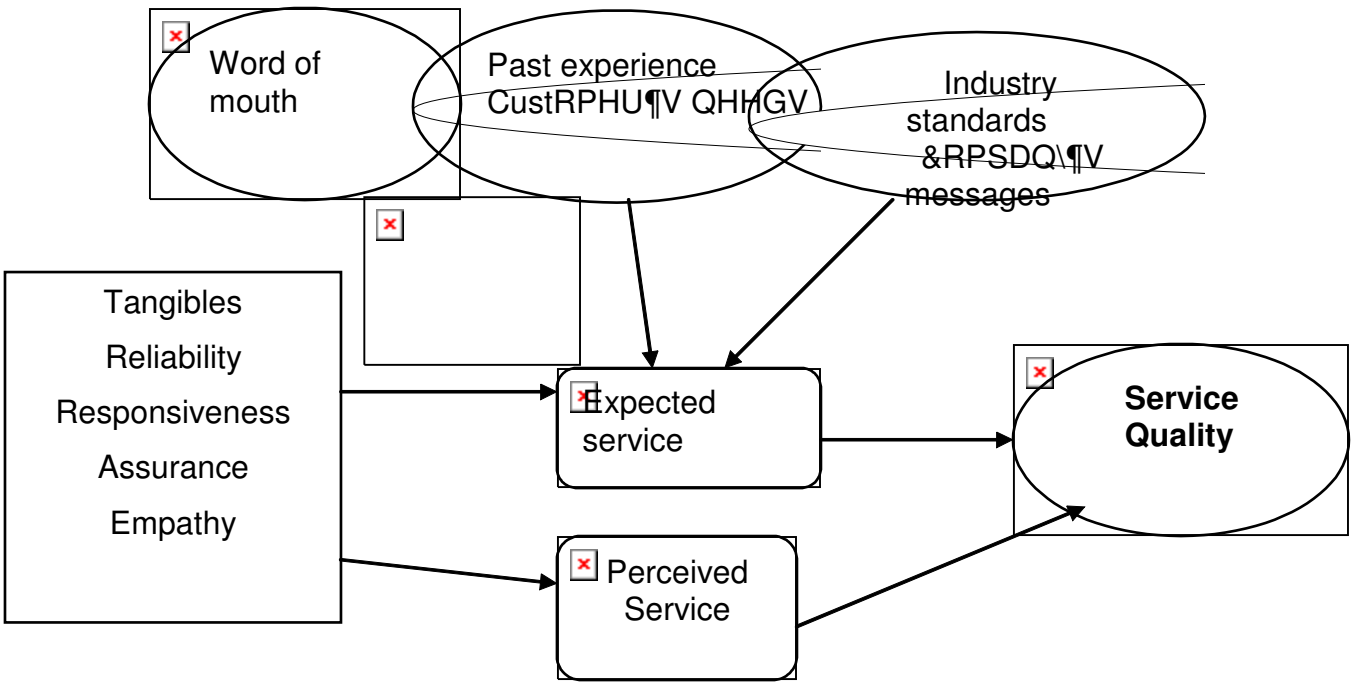
- Tangibles: Physical facilities, equipment, and appearance of personnel.
- Reliability: Ability to perform the promised service dependably and accurately.
- Responsiveness: Willingness to help customers and provide prompt service.
- Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- Empathy: Caring, individualized attention the service provider gives its customers.

(Prakash, etal, 2007:11).

Service quality continues to be a challenging topic in contemporary quality management theory and practice. Unlike products, services are not easily measured, tested or controlled for quality ,The most consistent findings of two decades of service quality research are that: (i) service quality is more difficult for the consumer to evaluate than product quality; (ii) service quality perceptions result from a comparison of consumer expectations with actual service performance; and (iii) quality evaluations are not based

solely on the outcome of a service but also involve evaluation of the delivery process(Nakhai.B.and Neves. J.S.2003:3).

Figure 3: Dimensions of Service Quality



(Source: Nakhai.B.& Neves. J.S.2003: 7)

The problem of measuring the performance of private or public sector organizations is fundamental to any economy concerned with the accountability, transparency, efficiency and effectiveness of these institutions. In the private sector it has long been assumed that, in the long run, the discipline imposed by the marketplace motivates corporations to strive for cost efficiency and profit maximization, facilitated by feedback from the markets for capital, corporate control and managerial labor. These include measures derived from profits, rates of return on assets, investment and invested capital, market shares and market power (Parasuraman.A., Zeithaml.V.A and Berry.L.L, 1985)

Overall performance is divided into two components: (i) efficiency, which describes how well an organization uses resources in producing services; that is, the relationship between the actual and optimal combination of inputs used to produce a given bundle of outputs, and (ii) effectiveness, the degree to which a system achieves its program and policy objectives. In turn, effectiveness encompasses a number of different desired aspects of service linked to program outcome objectives. These are: (i) appropriateness (matching service to client needs); (ii) accessibility (aspects such as affordability, representation amongst priority groups and physical accessibility); and (iii) quality (the process of meeting required standards or incidence of service failures) (Worthington.A and Dollery.B. 2003)

According to Ghobadian, et el. (1994:27) service quality is considered a critical determinant of competitiveness attention it can help an organization to differentiate itself from other organizations and through it gain a lasting competitive advantage. High quality of service is considered an essential determinant of the long-term profitability not only of service organizations, but also of manufacturing organizations. It affects the repurchase intentions of both existing and potential customers. Market research has shown that customers dissatisfied with a service will disclose their experiences to more than three other people. Positive word of mouth can be a very powerful tool for attracting new customers. Negative word of mouth can have a devastating impact on the crHGLELOLW\ DQG HIIHFWLYHQHVV RI RUJDQL]DWLRQV¶ HIIRUWV WR DWWUDFW FXVWRPHUV _ Q DGGLWLRQ_ FXVWRPHUV¶ VHUYLFH H[SHFWDWLRQV DUH FRQVWDQWO\ ULVLQJ_ ZKL WROHUDQFH IRU poor service is declining (Ghobadian,etal, 1994: 47).

The obstacles to service quality improvements are identified and discussed below:

1. Lack of visibility. Service quality problems are not always visible to the provider. This places greater responsibility on the service provider to be proactive in the identification of quality problems.

2. Difficulties in assigning specific accountability_ 7KH FRQVXPHU¶V RYHUDOO SHUFHSWLRQ service quality is influenced by experience at different stages of service delivery. However, it is hard to attribute quality problems to a particular stage of service delivery.

3. Time required to improve service quality. Service quality problems often require major effort over a long period of time to resolve. This is because service quality is more dependent on people than systems and procedures. Attitudes and beliefs take longer to change than procedures. It is difficult for managers to keep their attention focused on the problem and remove the root causes of the quality shortcomings.

4. Delivery uncertainties. Control of service delivery and quality is complicated by the individual and unpredictable nature of people. The people element encompasses both customers and frontline staff of the service organization (Ghobadian. et.el, 1994:46).

According to Ghobadian et el, (1994:27), The attainment of service quality requires a lot of performances through different directions, some of them are:

- Market and customer focus. Service quality problems are more likely to arise in RUJDQL]DWLRQV WKDW DUH QRW IRFXVHG RQ LGHQWLI\LQJ DQG DFWLQJ RQ W needs and expectations. A quality organization should put itself in the ³FXVWRPHU¶V VKRHV´ DQG EXLOG LWV SROLFLHV IURP WKH FXVWRPHU¶V YD (Ghobadian et el, 1994:27).
- Empowerment of frontline staff. Service quality can be enhanced by giving frontline staff tKH ODWLWXGH WR PDNH LPSRUWDQW GHFLVLRQV UHJDUGLQJ WK needs. It is generally recognized that devolvement of those decisions which affect customer care to the frontline staff pays (Ghobadian et el, 1994:27)
- Well-trained and motivated staff. Frontline staffs who are not adequately trained for their job will find it difficult to perform their tasks effectively. This will be noted by the consumer and is likely to cause adverse quality perceptions. It is also

important to ensure that frontline staff are effectively supported and well motivated. Motivated staff requires the provision of: an appropriate and clear career ladder and opportunities; remuneration and recognition system; a measurement system; and appraisal procedures (Ghobadian et el, 1994:27).

- A clear service quality vision. One consequence of the interactive nature of service is the need for a clear vision of quality. In the absence of a clear vision and definition employees are likely to have their own interpretation of service quality. Lack of common vision will inevitably increase the variability experienced by the customer within and without each stage of the service delivery. Inconsistency and variability of treatment is likely to have an adverse impact on the perception of quality (Ghobadian et el, 1994:27).

2.4 Information Communication Technology and service delivery experiences of Africa

In the continuum of human development five overlapping phases can be identified: the nomadic/agrarian, agrarian, industrial, service, and knowledge. In the latter stages, Africa has lagged behind the rest of the world. During the industrial phase, this lag was attributable to the colonial experience, which denied most of this continent its sovereignty over decisions and policies affecting its development and imposed on it activities that contributed to the development of the colonial powers. The colonial period was one during which Africa lost control over its political, economic, administrative and technological destiny (Gucheteneire.P & Mlikot.K, 2009:3)

If the delay in development in the past can be attributed to the loss of sovereignty, it will be difficult to explain the continuing lag in this era of political and administrative independence. Africa must avoid the spectre of a new form of colonialism based on the generation, storage, processing, retrieval, transmission, and distribution of information. Many African countries are burdened with inadequate communications infrastructure. The development of IT in African countries will be influenced by answers, if any, to

questions concerning the economic benefits of IT, IT policy, and its impact on government, society, business, and the security of the state. It is not clear how these concerns will be handled, given the limited experience of other societies. Nevertheless, they deserve consideration because acceptance of IT will depend on its perceived benefits in solving some of society's pressing and anticipated problems in education, health care, business, governance, and sustainable rural development (http://www.isoc.org/ i net97/proceed i ngs/B7/B71.HTM accessed on 19 January 2010).

African countries, by virtue of their potential market size, should not be obligated simply to react to trends in the IT industry, but should play an active part in their determination. A proactive rather than a reactive approach should be adopted in the development of IT in Africa. This means anticipating problems and designing strategies to resolve them before they occur. Our vision should not be limited to catching up with what exists in the developed world. This will simply guarantee the propagation of the gap between them and us. Secondly, it will perpetuate problems of appropriateness, adaptability, etc., perennial issues which will continue to eat up our meager resources (Wilson. J.2005:3).

With the rapid spread of Information and Communication Technologies (ICTs), new opportunities have been opened for a revival of public discourse and improved governance efficiency. ICTs offer concrete opportunities for local and national governments to improve their performance in terms of transparency, participation and GHFHQWUDOL]DWLRQ ³PDLQVWUHDPLQJ RI´ ,&7V ZLWKLQ SODQQLQJ DQG GHVLJQ RI development strategies helps to strengthen the establishment of efficient, effective and transparent governance systems. On-line tools can significantly improve the rendering of services and information flows from administrations to their constituencies; communication among administrations and citizens can be enhanced and, lastly, ICTs offer unique opportunities for broadened citizen involvement and participation in the decision-making process (Gucheteneire.P & Mlikot.K., 2009:3).

Ethiopia faces a number of developmental challenges including those that cause barriers to the development and roll-out of e-government systems. Unlike in the case of the developed countries whose systems (government administrative systems, etc) are in an advanced stage of development and hence can be described as e-government V\VWHP GHSOR\PHQW DQG H[SORLWDWLRQ UHDG_¶ (WKLRSLD FXUUHQWO\ IDFHV D government development and implementation barriers and challenges. A number of these barriers and challenges need to be addressed within the context of developing and implementing a suitable strategy for facilitating and mapping out how Ethiopia is to roll-out its e-government programs (Dzidonu.C.2006:33)

According to European free trade association, from the beginning of trade, the exchange of goods, services and money between two parties, has existed. The exchange of one merchandise for another between two persons or villages, that is barter, is an example of an early form of trade. It eventually led to persons or villages specializing in certain products with the sole aim of delivering them to other parties in exchange for commodities which the first did not have (the delivery of woolens from one village to another in exchange for cooking equipment produced by the latter, for instance) (Wilson. J, 2005:4)

Due to the fact that participants in free trade arrangements adopt separate external customs duties, they run the risk that third countries circumvent these duties by channeling exports into the free-trade area via the state with the lowest tariff. Consequently, for a product to qualify for regional preferences and in order to assure free circulation of goods and services within the free trade area, trade operators are required to prove by documentation that the traded product has been wholly obtained or sufficiently processed within the free-trade area. Within a Customs Union there is no need for rules of origin for internal trade because the Member States have harmonized tariffs and trade policy with regard to third countries. With regard to preferential trade in

services, in the context of economic integration, the nationality of the service supplier is relevant to determine whether or not preferential treatment can be granted (UN, 2009:5)

With the emergence of money, which is defined as a good and that can be exchanged for any other goods, exchange became more and more complex. Indeed, with the development of institutions that specialized in lending and borrowing money, including gold, and with revolutions in transport and technology, trade has evolved from exchange ZLWKLQ D OLPLWHG DUHD WR D JOREDO QHWZRUN RI WUDQVDFWLRQV LQ ZKLFK_ LQ RUGHUV which are instantly delivered by tele fax or e-mail allow a company in Hungary, for instance, to immediately supply made-to-order merchandise to a company in Germany.

As trade takes place world-wide between a network of competing producers and consumers, that is suppliers and clients, different trade procedures are established, some of which are more efficient than others. A given procedure may thus give a producer the edge over his competitors in a given market. Thus, if the exporting country has border and customs controls compatible with those of the importing country, the importing country will prefer to deal with that exporting country rather than with another whose export procedures are unfamiliar. Moreover, the simplification of trade procedures (also known as trade facilitation) will reduce transaction costs and increase the volume of trade.

Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value. In this usage, technology refers to tools and machines that may be used to solve real-world problems. It is a far-reaching term that may include simple tools, such as a crowbar or wooden spoon , or more complex machines, such as a space station or part i c l e acce l erator . Tools and machines need not be material; virtual technologies such as computer software and business methods , fall under this definition of technology.

The word technology can also be used to refer to a collection of techniques. In this context, it is the current state of humanity's knowledge of how to combine resources to produce desired products, to solve problems, fulfill needs, or satisfy wants; it includes technical methods, skills, processes, techniques, tools and raw materials. When combined with another term, such as "medical technology" or "space technology", it refers to the state of the respective field's knowledge and tools. " State-of-the-art technology" refers to the high techno l ogy availableto humanity in any field. Technology can be viewed as an activity that forms or changes culture. Additionally, technology is the application of math, science, and the arts for the benefit of life as it is known. A modern example is the rise of commun i cation technology, which has lessened barriers to human interaction and, as a result, has helped spawn new subcultures; the rise of cyber cu l tured has, at its basis, the development of the Internet and the computer. Not all technology enhances culture in a creative way; technology can also help facilitate political oppression and war via tools such as guns.

One of the greatest challenges facing public authorities today is to reconcile the apparently contradictory objectives of enforcing government regulations while at the same time posing the minimum obstacle to legitimate trade. Enforcement with a minimum of obstacles is a very good summary of the aim of trade simplification, facilitation and efficiency. With regard to this area, simplification of procedures is a key tool to facilitate trade and to increase trade efficiency. In fact, these approaches address the same goal: if enforcement is needed, then with minimum interference (Dzidonu.C.2006:35).

There is no commonly accepted definition of trade facilitation. This could partly be explained by the fact that the subject of simplifying and standardizing trade information and its electronic transmission is in a process of constant evolution. However, trade facilitation could be defined as the simplification of trade procedures for international traders and agencies in order to facilitate the trade transaction process. This requires a

series of governmental and non-governmental actions within international trade regulation and procedures. While trade facilitation is in the interest of both traders and governments, this must not be seen as easing the way for abuse or circumvention of national and international legislation nor circumvention of efforts to combat fraud.

With the lowering of tariffs across the globe, the cost of complying with customs formalities has been reported to exceed, in many instances, the cost of duties to be paid. In the modern business environment of timely production and delivery, traders need fast and predictable release of goods Clearly, this definition relates to a wide range of activities including but not limited to import and export procedures (for example, customs or licensing procedures), transport formalities, payments, insurance, and other financial requirements. However, recently, the definition of trade facilitation has been broadened to include the transparency and professionalism of customs authorities, harmonization of various standards and conformity to international or regional regulations. In a narrower sense, trade facilitation concerns the movement of goods in cross-border trade (Buyonge.C & Kireeval.I, 2006:4).

The main reason for the initial unwillingness of African developing or least-developed countries to negotiate on trade facilitation was the understandable fear that implementation of any such agreement would require considerable investment of the governments of these countries in infrastructure, change of operational procedures and human resources. It is at the same time unlikely that the developed countries would need to change anything for implementing any of the trade facilitation measures to be included in such a multilateral trade facilitation agreement. African countries are now very keen to explore the possibilities provided by trade facilitation whether in the context of the WTO negotiations, regional or country-specific initiatives. New trade facilitation initiatives in Africa address both physical infrastructure (roads, ports, telephone connectivity, etc.) and administrative hurdles (Buyonge.C & Kireeval.I, 2006:3).

Automated systems in Customs provide one of the most important tools for facilitation of trade procedures. Customs automation results in increased transparency in the assessment of duties and taxes, substantial reduction in customs clearance times, and predictability, all leading to direct and indirect savings for both government and traders. The higher the level of automation of customs procedures in a country, the greater the possibility of detailed inspections, detection of fraud, and firm action including SURVHFXWLRQ LQ FRXUW_ (DUO\ YHUVLRQV RI µ$6<&8'$¶_ WKH SUHIHUUHG FXVWRPV Africa, have limited functionality compared to contemporary versions such as µ$6<&8'$__¶_

0 RVW RI WKH HPSOR\HHV RI WKH FOHDULQJ DJHQWV¶ RUJDQL]DWLRQV GLG QRW KD NQRZOHGJH and ability to use computers and technology efficiently. So understandably it was quite a challenge for most of the clearing agents to comply with the requirements for exchange of electronic information with Customs while learning basic IT skills. An important lesson that should be learned is to invest in developing the IT skills of the staff of companies if customs technological developments are to lead to improved levels of trade facilitation (Dzidonu.C.2006:33)

Customs administrations in Africa are going through a period of rapid change, which requires a paradigmatic shift in customs operation. There are ongoing positive developments by Customs to reform and modernize procedures and processes, as well as commendable initiatives by the private sector to take a more proactive approach to improve customs administration for the benefit of governments and business. The increasing positive engagement of business with Customs has helped identify major trade facilitation weaknesses that if addressed, can help reduce transaction costs in Africa. These include the lack of a service ethos across all customs management levels, adversarial relationship between Customs and business, insufficient or inefficient supporting infrastructure, lack of a facilitation culture in other government departments, corruption and illicit trade. The challenges present opportunities for businesses to

engage with Customs to bring about the desired change (Danaher.P.J & Mattsson.J, 2007:3)

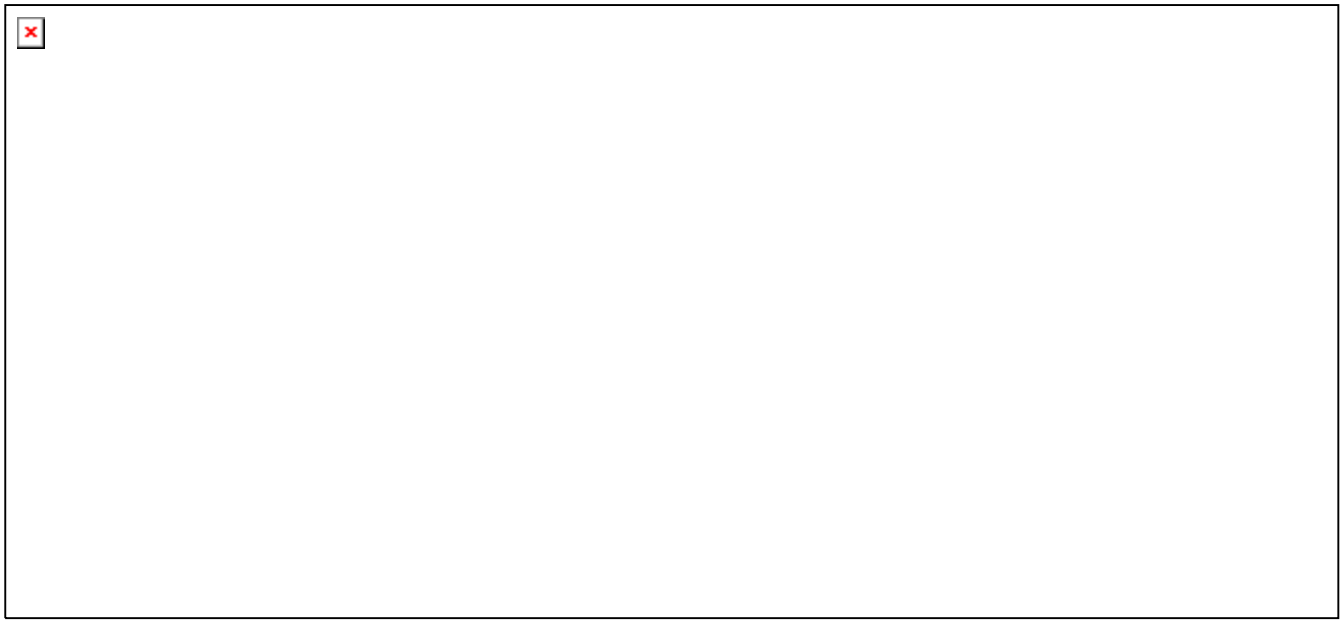
However, businesses need to create customs compliance strategies that reflect an understanding of the Customs business in specific countries. While investments in infrastructure can be expensive, delays can be minimized through cooperation between business, Customs and other government agencies. It is also important to take advantage of information and communication technologies, especially since many administrations are now automating their systems. Human factors will also determine the amount of customs-related delays that can be experienced ± specifically the integrity of employees and customs officials. Due to emerging supply chain security concerns at the global level, businesses across the world, including in many countries in Africa, are required to have more transparency in their operations including mechanisms for vetting third party service providers (Buyonge.C & Kireeval.I, 2006:5).

2.5 Development of Information Technology in Ethiopia

The world economy is experiencing the effects of rapid globalization and liberalization as well as the impact of the emerging information age. The prediction is that this will bring about a new global economic order to be dominated by information and information age knowledge-based economies. Like other developing countries, Ethiopia is facing new challenges to her socio-economic development as a result of the emerging information age characterized by information and communication technologies (ICTs). The crucial role that ICTs can play in facilitating and accelerating socio-economic development has been recognized worldwide. And Ethiopia like other countries is equally placed to take advantage of these technologies to facilitate her socio-economic development process (UN, 2003:3)

Technology has affected society and its surroundings in a number of ways. In many societies, technology has helped develop more advanced economies (including today's global economy) and has allowed the rise of a leisure class. Many technological processes produce unwanted by-products, known as pollution, and deplete natural resources, to the detriment of the Earth and its environment. Various implementations of technology influence the values of a society and new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, a term originally applied only to machines, and the challenge of traditional norms (http://en.wikipedia.org/wiki/Technology,acessessed 16 January2010).

Figure 4: Net Benefits of Information Technology



(Source: Shah, 2005:121-122-)

As shown in Figure-04, perceived services quality is the result of the consumer's comparison of expected service with perceived service. The comparison of expectations with perceptions is suggested in the service quality literature: the relative importance of

these criteria in shaping customer expectations prior to the delivery of service may differ from their relative importance in actual customer perceptions of the delivered service. 7KH JDS EHWZHHQ SURGXFHU¶V VSHFLILFDWLRQV DQG FXVWRPHUV¶ H[SHFWDWLRQV VHUYLFH level may lead to dissatisfaction even when the producer meets the exact design specifications (Nakhai.B. & Neves. J.S.2003: 7).

Information Technology (IT) is not a luxury for the poor: rather it is an essential tool for poverty alleviation as per Asian Pacific Newsletter. The impact of IT is pervasive both on an organization and on society as a whole ant it offers opportunities of breakthrough changes. The ongoing innovation in the IT the Internet is growing with accelerating pace (Mesfin, 2005:7).

Ethiopia recognizing the developmental potentials and opportunities of the information and technological revolution has embarked on a process of economic transformation through the modernization of the key sectors of the economy including those of agriculture, services and industrial sectors through the deployment and the exploitation of ICTs. Acknowledging the key role that development, deployment and exploitation of ,&7V FDQ SOD\ LQ (WKLRSLD¶V HFRQRPLF DQG VRFLDO GHYHORSPHQW_ WKH *RYH UHFRJQL]HV WKH HQHG IRU WKHUDSLG GHYHORSPHQW RI QDWLRQ¶V LQIRDQG WLRQ commXQLFDWLRQV LQIUDVWUXFWXUH DV ZHOO DV WKH GHYHORSPHQW RI WKH QDW HGXFDWLRQDO human resources –and other development-focused resources to bring about the necessary change and transformation required to achieve improvements in the determinants of the natLRQ¶V VRFLR-economic performance (UN, 2003:3).

According to Teferi (2004:13) the application of computers, and thereby the development and awareness of mechanization, is closely related to the introduction of computers into Ethiopia by foreign suppliers. In this report an attempt is therefore made to show how computer usage started in Ethiopia in relation to the major suppliers, namely IBM, NCR, SERIC Ethiopia, and Burroughs. As a result of competition between

suppliers in Ethiopia, changes in the technology were brought to the attention of users. Demand for more efficient systems began to be felt.

Coupled with lack of national guidelines, a weak education infrastructure and a restrictive information seeking culture have remained the stumbling blocks to diffusion of information and communication technologies in Ethiopia. On the positive side, international organizations and development aid agencies have played a significant role in information technology diffusion in the country. The existence of many international organizations in the capital city has created opportunities for demonstrations of key information technology, transfer of ideas, sponsoring structural development projects and a potential market segment for emerging small and medium enterprises in the field. The number of international organizations recognizing the importance of information technology for the development of local capacity has been increasing (Teferi, 2004:13).

The application of information and communication technology does not just encompass technology ± hardware, radios, computers, telephones and software and the content or data, but also needs organization, incentives, procedures and people. Without enabling policies environment for vibrant private sector development, and the human resources, telecommunications, energy and social infrastructure development, ICTs application will remain fragmented. The ability to participate in information and communication technologies requires participation, partnership, understanding of social implication of new technologies and management of changes at national level. As an industrial activity, electronics has yet to start in Ethiopia, though some efforts have been initiated towards assembling radio receiver sets. Sophisticated systems are in operation in the fields of mass media, radio communication, telecommunication, and communication and navigational aids for civil aviation. The data-processing sector, which was practically nonexistent about 30 years ago, is now within reach of many operational areas. The earliest use of electronics in Ethiopia was in the mass communication sub sector, followed by telecommunication and radio communication (Julie.P, 2007:9).

According to Fikre (2005:10) Information Technology strategy of Ethiopian Revenue and Customs Authority is to cope with the latest information technology in line with the international standards for the computerization of Customs. ERCA introduced ASYCUDA 2.7 version in 1998 and has embarked on the change to implement an advanced version of ASYCUDA (Automated System for Customs Data), ASYCUDA++ in all Customs administrations to improve the way Customs carry out its tasks by applying Information Technology. The new system is intended to provide a better working tool and benefits the users by providing an integrated solution for declaration processing, accounting management, customs enforcement (selectivity & risk management), and management information system. An efficient and effective customs is essential to the welfare of the country. It provides the statically information on foreign trade transaction essential for the economic planning.

According to Fikre (2005:11) the main objectives of ASYCUDA++ are to achieve:

- More effective customs control
- More efficient customs clearance
- Uniform applications of customs Law
- More efficient revenue collection
- More effective data analysis and improved data quality
- Efficient production of external trade statistics and enable exchange of information between relevant institutions in the country, Customs administrations in the region and the COMESA centre (Fikre, 2005:11).

2.6 Limitations on Information Communication Technology in Service delivery

Fortunately, there is some overlap between policy issues for IT and for computer technology which only a few years back was a preoccupation of many African countries.

The prospect of a technology with such potential impact as IT evolving totally unchecked within our country is disquieting. Although there are many successful instances of IT introduction, a few bad examples are sufficient to give the industry a bad name, particularly with potential users who are not fully committed to the idea. The rational transfer and application of this technology requires that some guidelines be set down for service providers, distributors of equipment, and end users alike.

Such guidelines must have the backing of government in order to be effective, and should cover:

- Acquisition of information technology,
- Use and application of the technology,
- Human resource development, and
- Regulation/deregulation and management.

The most pressing needs are for:

- Government policies and legislation to support IT development;
- Informatics policy and management infrastructure;
- Establishment of financing mechanisms, with adequate financial analysis, controls, and accounting;
- A clear position on the level of control to be exercised locally and a desired level of dependency on foreign sources; and
- Coordination and integration of the needs of the public and private sectors' continuing awareness of the state of the art in IT.

According to Fine (2003:3) measurement of the impact of an IT investment is problematic for a number of reasons:

- 7KHUH XVXDOO\ LVQ¶W DQ\ EDVHOLQH DJDLQVW ZKLFK WR DVVHVV QHZ LPSU
- The process of planning for IT upgrades or installation²discussing how things are done, what the bottlenecks are within an organization²can, in and of itself,

free up sticking points and improve efficiency, even without the implementation of new IT systems.

- New technology can be so intimidating for staff that an organization actually becomes less efficient in the first few months following a technology upgrade²so DQ HYDOXDWLRQ GRQH WRR VRRQ PLJKW UHVXOW LQ D ³IDOVH QHJDWLYH´_ inefficiencies that would be resolved with time.
- SometLPHV QHZ WHFKQRORJLHV DUHQ¶W XVHG DW DOO _IRU H[DPSOH_ ZKHQ WUDLQLQJ LVQ¶W DYDLODEOH RU ZKHQ RUJDQL]DWLRQDO FXOWXUH SUHVHQWV RVVLI\LQJ an anti-technology mindset and causing long term reductions in efficiency and impact. Correctly attributing improvements to proximate causes can be a challenge: at what point does the technology stop having an impact and other factors (that may be out of the hands of the service provider) come into play?

Faced with such challenges, many nonprofits find the evaluation of technology an intimidating task. How can nonprofits effectively evaluate the impact of technology on WKHLU ZRUN" ,QQRYDWLRQ 1HWZRUN¶V LQIRUPDWLRQ WHFKQRORJ\ HYDOXDWLRQ H WKH SDVW five years have provided some key lessons for improving the use and measuring the impact of information technology within nonprofit organizations.

2.7 Development of Information Technology in Ethiopian Revenue and Customs Authority (ERCA)

Customs plays a key role in international trade. Every international trade transaction involves at least two customs intervention, one at export and one at import. It is clear, therefore, that the manner in which customs conducts its business has a substantial impact on the movement of goods across international borders.

Customs, as an agency of government, has as its primary function the execution of government policy. Accordingly, although the responsibilities of customs are basically

the same in every country, it would be wrong to assume that there is uniformity or consistency in the emphasis, which is placed on the discharge of these responsibilities. Different governments expect different things from their customs authorities. For some governments, especially those in developing countries, customs are the principal revenue collectors. For others, customs form the front line in the fight against drugs or are key implementers of trade policy.

When we come to Ethiopia, as the country is listed in developing countries, revenue collecting is one of the main objectives of the customs authority, as any other developing countries do. However, the role of implementing trade policy of the country is not totally neglected. In this regard, we can mention the vital role of Ethiopian Customs Authority that plays an important role in implementing export duty incentive schemes which is one of export trade promotion policy instruments of the government.

Under the civil service reform program, Ethiopian customs authority recently has made an effort to introduce the new customs transit and clearance control manual to meet its establishment objectives. But this is not an end by itself; rather, customs has always to be in reform. In reforming existing customs practices to farther facilitate the movement of goods, customs should adopt modern business process re-engineering (BPR) techniques to identify inefficient and/or redundant activities for streamlining or elimination.

The main objective of the new manual is to enable customs authority render efficient and effective service to importers and exporters and ensuring effective customs control in line with national, regional and international laws and, conventions by shortening both transit and clearance time of imported and exported goods and reducing document requirement.

Delays in the release of goods are caused by a number of factors including inefficiency and lack of professionalism on the part of some shipping agents, freight forwarders and customs clearing agents/brokers. According to the recommendation given by Customs Co-operation Council on draft guideline on key sectors for trade efficiency, to overcome this program, government should set minimum standards for these professions and closely regulate performance (www.erca. gov.et accessed on 19 /02/2010).

2.8 Implementation of ASYCUDA in Ethiopian Revenue and Customs Authority

Delays in the release of goods are caused by a number of factors including inefficiency and lack of professionalism. In order to facilitate its operation the Ethiopian Customs Authority started to implement ASYCUDA (Automated System for Customs Data) in 1998 which is developed by UNCTAD (United Nation Conference on Trade and Development) and implemented by over 80 countries. The ECUA has implemented ASYCUDA 2.7 in seven clearance offices and one transit office which is located in another country, Djibouti. Except the two sites in the capital city, all other sites are working on Local Area Network (LAN). The two sites located in the capital city are connected to the Automation and Data Processing Department through Telecommunication line with 64KB Digital Data Network (DDN). The effects of implementing ASYCUDA in ERCA are;

- Improves clearance conditions for trade
- Provides timely external trade statistics

(Mesfin, 2005:12)

To meet the demands of modern international trade with the change in technology and advancement and be in line with internationally accepted standards the ECUA has started implementing the advanced system ASYCUDA++. The business people users of the customs computer system are more interested in being served expect to save time

and reduce costs. Therefore the main changes and benefits that come with this ASYCUDA++ implementation are aimed at meeting these objectives. The main features and benefits expected with ASYCUDA++ migration are:

- Direct Trader Input (DTI)
- Selectivity
- Transit
- Flexibility in report generation
- Connectivity with other systems

2.8.1 Direct Trader Input (DTI)

Under the ASYCUDA 2.7 DTI was not used; so, declarants (customers) prepare declarations written by hand and presented to customs for data input on the computer system. This often leads to loss of time and data captures as declaration get rejected at various stages before they can finally be accepted on customs computer system.

The Direct Trader Input is a facility that provides for the declarant to input declaration data to the ASYCUDA++ module designed for this purpose and then transfer the data directly to Customs Systems. This is achieved by connection to the customs system with the telecommunications infrastructure. Effectively DTI will remove the aspect of data entry from customs responsibility to the declarant. Therefore, a declarant with DTI facility may prepare, view or check and print a declaration at any time, even outside normal working hours from their premises. The system requires the declarants to be equipped with a personal computer, printers and connected to the customs server through telecommunication line (leased line or dialup line) (UNCTAD.2009:23).

Advantages to Customs

i) DTI reduces the cost of declaration processing (since printing of declarations copies goes to the declarant)

ii) Rationalizes on manpower utilization as personnel initially deployed for face examine and data capture can be re-assigned to other needy areas of important customs work.

iii) Help customs in realizing the objectives of quicker clearance for trade facilitation.

Advantages to the Traders

i) Traders have full control on the information entered on the customs system as they enter and counter check declarations against customs control files. The possibility of having someone else key different information from that declared the hardcopy is greatly minimized.

ii) Time loss is reduced as face vet and data input and their accompanying rejection stages of are removed. The system provides for this through the check stages of a declaration before registration. Once a declaration has been registered it means that data elements have been accepted.

iii) The facility allows immediate access to declaration information. From their premises or some other location where the DTI facility can be located, the declarant is able to check the status of an entry in customs. For example the declarant can know if an entry has been assessed or queried, requires physical or document examination or if it has been released. Further, some summary reports on declarations and accounts can be seen with out necessarily going to Customs offices.

iv) DTI work can be carried out according to GHFODUDQWV¶ schedules as entries can be prepared and stored on the client. This is possible as all the necessary control tables and the tariff are available on the PC to facilitate this. Depending on local arrangements if the customs server is available (left on to accept data) after

normal working hours, the declarants can register declarations anytime even when the customs office is not open.

2.8 2.Selectivity in ASYCUDA++

The introduction of ASYCUDA selectivity is an important component in the package of procedural reorganizations that should be included in the introduction of ASYCUDA++. The concept and practice of risk based controls is already in practice and seems to be well emphasized in the revision of procedures currently going on. At the previous system due to the limitations of ASYCUDA version 2, these processes are performed manually with little or no formal risk profiling being used. This approach is not sustainable if the use of the ASYCUDA++ selectivity module is to be successfully introduced. At present a structure exists in the Ethiopian Customs Authority (ERCA) that could take up the responsibility of managing selectivity at a national level. However, its effectiveness in this area has yet been established as the unit is said to be in its infancy and the team members have not yet acquired the necessary skills required for this task (UNCTAD.2009:23)

Using MODSEL many different pieces of data, input as declaration details, can be used by Customs to select particular declarations for special treatment before any assessment is made. This provides the means of implementing decisions on processing channels, which are named 'Red', 'Yellow', 'Blue' and 'Green'. Control over WKH UDWHV RI UDQGRP VHOHFWLRQV DQG µH[SHFWHG UDWHV¶ PHDQV WKDW WKH RIILFH KDV the means to match daily workload, the numbers and levels of declarations selected for check to the capacity of the office to cope with those checks bearing in mind the existing priorities.

The various lanes can be described briefly as follows;

Red Lane- Goods described within the selected declaration are to be physically examined before assessment is permitted.

Yellow Lane-All documents relevant to the selected declaration are subjected to a full documentary check, before assessment proceeds

Blue Lane- Post clearance audit. This provides flexibility, and can allow Customs to make more efficient use of their resources, such as allowing release of 'low risk' goods, subject to some check at a later date.

Green Lane- All declarations other than those selected Red, Yellow or Blue. This contains an option to 'delay' the automatic assessment of Green Lane declarations. A delay can be set to allow Customs time to 'manually' examine details of the declaration, with the option to re-route to Red, Yellow or Blue if a higher level of check is thought necessary for those particular goods.

2.8.3 Transit

The system has a facility that manages the transit risks and enforces adequate controls. The main problems of transit that are related to lack to timely information and system controls for intervention are adequately addressed. This facility will be deployed between Djibouti and Inland offices in Ethiopia to facilitate the quick movement of transit data and goods. This is expected to help in trade facilitation.

2.8.4 Flexibility in report generation

There are a number of standard reports that come with the system to help users in managing customs operational and making decision. In addition to that the system has flexibility for the user countries to develop additional reports to meet their national demands. The data managed by ASYCUDA++ is handled by an Oracle database

containing the entire transactions and references table, the user-define report data can retrieve from the database by SQL statement (UNCTAD.2009:24).

2.8.5. Connectivity with Other Systems

The ASYCUDA++ is based on modern technology and can easily interface with other systems used by Banks, Airline and shipping lines, Federal Inland revenue (FIRA) & Ministry of Trade and Industry.

These lead to revised procedures that will result in quicker clearance & promote efficiency in the conduct of trade.

To ensure the effective use of IT and delivery of good service to meet the demands of modern trade, the Ethiopian Customs Authority (ECuA) has taken the following measures:

Formation of Revenue Net

a) This encompasses the key sectors of tax collection that is the Banks, Federal Inland Revenue, Ministry of Trade and Industry, the Ethiopian Telecommunication Corporation. The main aim is to use the technical expertise in all these sectors and interconnect the systems to exchange information thereby maximizing the use of resources and offer improved service

b) Implementation of the Wide Area Network (WAN) to interconnect all the computerized customs sites to ensure timely availability of data at the central point and simplified system support for distant areas form the capital city.

Adoption of modern system:

The ERCA has embarked on the use of modern systems that meet demands of modern trade. Therefore the system that is being put in place has flexibility to interconnect with

commercial systems used in Banks, Airlines, and FIRA etc to facilitate easy exchange of information for speedy administration of customs clearance (Fikre , 2005:11).

Chapter Three

Data Presentation and Analysis

3.1 Introduction

This chapter primarily deals with the presentations of the detail analysis of primary and secondary data gathered from the distributed questionnaires to customers and employees of the ERCA, the interview conducted to officials from different relevant institutions as well as the observation of available documents concerning the back ground, objectives, missions and values of ERCA and applications of ASYCUDA by the ERCA. For the purpose of obtaining data in this study, semi structured questionnaires were distributed to customers and officers of ERCA in the airport branch office and kality branch office. The other technique for collecting data is interviews from relevant offices like private and government owned banks, the MOFED, the Information Technology (IT) department and the Head office of ERCA. In connection with this, the chapter explains the opinion of customers and officers concerning the efficiency of ASYCUDA, the problems of ERCA is facing while applying the ASYCUDA, the over all efficiency of ASYCUDA. Moreover, the analysis of this chapter provides the ground to safely forward recommendations for implementation where ERCA can improve the efficiency of the ASYCUDA.

3.2 Background of Ethiopian Revenue and Customs Authority (ERCA)

It is commonly understood that every government seeks to raise revenue, mainly through taxation, in order to cover its expenditure on public welfare. In Ethiopia, the responsibility to collect revenue for the federal government rests with the Ethiopian Revenue and Customs Authority. In addition to raising revenue, the Authority is responsible to facilitate the legitimate movement of people and goods across the border. Simultaneously, the Authority focuses on those people and vehicles that may

involve in the act of smuggling i.e. the act of bringing into or taking out or the country goods on which customs duty and taxes are not paid and goods the importation or exportation of which are prohibited by law. The Authority conducts investigation, audit and prosecutes offenders. In the attempt to discharge its responsibility, the Authority closely works with the Federal Police, Standardization Authority, Ministry of Health and Immigration Service and with other stakeholders (www.erca.gov.et, accessed on 15 /04/ 2010).

3.2.1 Objectives of the Authority are:

- Establishing modern revenue assessment and collection system; and providing customers with equitable, efficient and quality service
- Causing taxpayers voluntarily discharge their tax obligations
- Enforcing tax and customs laws by preventing and controlling contraband as well as tax fraud and evasion
- Collecting timely and effectively tax revenues generated by the economy
- Providing the necessary support to regions with a view to harmonizing federal and regional tax administration systems.

3.2.2 Vision

The Authority's vision is to effect ³IDLU DQG PRGHUQ WD[HV DQG FXVWRPV DGPLQLVWUDW
V\VWHP WKDW HQKDQFHV WKH SURSHU DQG HIIHFWLYH UHYHQXH FROOHFWLRQ´_

3.2.3 Mission

The ERCA shall promote the voluntary compliance of taxpayers, ensure integrity and develop the skill of the employees, support the modernization and harmonization of the taxes and customs administration system, contribute to economic development and social welfare through effective revenue collection.

3.2.4 Values

- Customer focused service delivery (trust, respect, protect, support)
- Protect the well-being of the society
- Integrity and transparency
- Professionalism
- Collaborative working

Ethiopian Revenue and Customs Authority (ERCA) having its own vision, mission, and objectives as stated above, adopted the ASYCUDA for better facilitation of its performances. Having such background information about the organization, the next sub-section of this chapter deals with the general overview of ASYCUDA implementation in ERCA.

3.2.5 Over views on ASYCUDA and its implementation in ERCA

ASYCUDA is a computerized customs management system, which covers most foreign trade procedures. The system handles and manifests all customs declarations, accounting, transit and suspense procedures. ASYCUDA provides Electronic Data Interchange (EDI) between traders and customs using EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) rules. Besides, it generates trade data that can be used for statistical economic analysis. The ASYCUDA software is developed in Geneva by UNCTAD, taking into account the international codes and standards developed by ISO (International Standardization Organization), WCO (World Customs Organization) and the United Nations. What is more than ASYCUDA can be configured to suit the national characteristics of individual customs regimes, National Tariff, legislation etc (UNCTAD, 2004).

A successful implementation of an ASYCUDA program in close collaboration with, and IXOO VXSSRUW RI_ QDWLRQDO DXWKRULWLHV¶ EHOLHYHG WR results in a modern, auto administration with substantial cost savings in trade, transport and logistics. The

electronic lodging of customs declarations, document processing and goods clearance brings substantial time savings and predictability to all aspects of cross border trade. The collection of taxes and duties is enhanced as will the statistical data base for fiscal and economic policy purposes. The Government and the trading community alike benefit from efficiency gains inherent to automated customs procedures, the ancillary trade facilitation activities and reforms of working relationships (UNCTAD, 2004).

The Ethiopian Customs Authority (ECuA) started implementing version 2 of ASYCUDA in 1997 with two offices. In 2001, six offices started implementing ASYCUDA version 2. UNDP assisted ECuA with the migration to ASYCUDA++ and, three years later; more than 95 per cent of the trade is managed by ASYCUDA++ in 23 offices linked via a national network. The ECuA is planning to implement ASYCUDA++ in the port of Djibouti, where ECuA handles the transit operations to Ethiopia. ECuA has integrated a valuation database in ASYCUDA++ and is now planning to migrate to ASYCUDA World. In addition, UNCTAD provides special technical support, beyond the duration of the project, in troubleshooting and upgrading the software applications of the ASYCUDA. The costs of implementing the ASYCUDA system vary according to the size and complexity of the country (number and accessibility of border posts and Customs houses); the volume of foreign trade; the condition of its physical infrastructure; the skill level of Customs and government staff; and whether it is a transit, landlocked or island country. The implementation of ASYCUDA or migration to its latest version is most often financed by the country itself, sometimes with the assistance of international grants or loans, as part of a development project (ECuA: 2004).

Automation contributes to customs modernization, standardization and harmonization program. Though the adoption of ASYCUDA is the major component of customs automation, it has to be supplemented by computerized manual workflows and procedures as there is a change from manual declaration processing to electronic processing due to customs automation .The objectives of automation are trade facilitation mainly focusing on shortening clearance time, electronic calculations of

revenue, production of reliable and timely import and export data, harmonization and work flows standardization of different offices.

3.3 Characteristic of Respondents

3.3.1 Customers of ERCA

Customers responded to 97 percent (126) of the total 130 questionnaires. The major customers of ERCA are importers, exporters and both importers and exporters of different kinds of goods, required for commercial, Investment, project and diplomatic purposes. As the collected data (Table 3.1) from the customers shows, 46 percent of customers import or export commercial goods while 27 percent of customers import project goods, about 20 percent import investment goods and the remaining 7 percent import diplomatic goods.

Table.3.1 Type of Goods declared by customers

Responses	Frequency			Percent
	Import	Export	Total	
Commercial goods	40	18	58	46
Project goods	34	-	34	27
Investment goods	25	-	25	20
Diplomatic goods	9	-	9	7
Total	98	18	126	100

Source: Own survey 2010

According to this survey, as shown in Table 3.2, it is known that 38 out of 126 (30 percent) of customers are importers, while 12 out of 126 (9 percent) are exporters and 76 out of 126 (61 percent) are both importers and exporters. Since these customers have working experience in relation to importing and exporting from 2 years up to 10

years it is safe to conclude that , they have the ability to explain concerning the study at hand as well as to have a say on the performance of ASYCUDA as comparing to the manual practices of the offices.

Table .3.2 Customers of the Organization

Response	Frequency	Percent
Importers	38	30
Exporters	12	9
Both	76	61
Total	126	100

Source: Own survey 2010

3.3.2 The Staff of ERCA

Respondents of the questionnaires from staff members were selected purposely because only few of them have the detailed relevant information concerning the implementation of the ASYCUDA in the office. From 1200 employees of the agency 60 (5 percent) of respondents in kaliti and Bole offices were taken as representative sample and semi structured questionnaires were distributed to them but the returned questionnaires were 58 which is 97 percent of the total questionnaires distributed. The employees have working experience from one year to ten years in ERCA.

3.3.3 Interviewed Officials

Supplementary to questionnaires distributed to customers and employees, interviews were conducted with relevant officers who are directly related to the application of ASYCUDA driven data which they use as an input as well as in reports. A total of 12 officials from Commercial Bank of Ethiopia, National Bank of Ethiopia, NIB Bank, Dashen Bank and Ministry of Finance and Economics Development and the ERCA are

selected (2 from each organization) and interviewed. Generally from 200 targeted sample respondents of the written questionnaires and interviews, only 184 of them were returned and 12 officers were interviewed. Hence, the analysis deals with the opinions of 196 out of 200 (98 percent) respondents.

3.4 Data Analysis

3.4.1 Challenges in goods clearance activities

3.4.1.1 Delay in goods clearance

Delay in goods clearance can be because of many reasons. Respondents were asked whether goods clearances are delayed or not and what is the reason for delay. As long as the ASYCUDA system works well and every necessary document is ready, the clearance process takes very short time.

Table 3.3 Reasons for delay of goods clearance

Responses	Frequency	Percent
Less working habit of workers	9	7
Frequent system failure	35	28
Time taking price checking	16	13
Less transparency	8	6
Un updated database	16	13
Shortage of cargo space	12	9
Electric power failure	20	16
Network failure	10	8
Total	126	100

Source: Own survey, 2010

However, as table 3.3 shows ,customers give many reasons for delay of clearance of goods about 9 out of 126 (7 percent) customers associated the reason for delay with less working habit of workers, while 35 out of 126 (28 percent) stated that with frequent system failures cause the delay, 16 out of 126 (13 percent) associated the delay with

extended price checking and 8 out of 126 (6 percent) agreed that less transparency in work process of the organization is the reason for delay, the other 16 out of 126 (13 percent) associated the reason for delay with un updated database while about 12 out of 126 (9 percent) of customers associated the delay in goods clearance with shortage of cargo space, 20 out of 126 (16 percent) related the delay with electric power failure, while 10 out of 126 (8 percent) attributed with network failure as the cause for delay. This implies that, different reasons cause the delay in goods clearance and the existence of delay in goods clearance by itself is an indication of a gap to which the organization has to respond.

3.4.1.2 Frequent system failure

The other challenge in goods clearance process is frequent system failure, and respondents from customers as well as employees were asked about the occurrences and the reasons of frequent failure of ASYCUDA.

Table.3.4 Reasons for system failure

Responses	Frequency	Percent
Network failure	31	28
Electric power interruption	31	28
Unskilled manpower and low competency of worker	19	17
Server problems	11	11
Absence of system supervisor	17	16
Total	109	100

Source: Own survey 2010

As Table 3.4 shows, with regard to the reasons why the system fails, 31 out 109 (28 percent) of customers stated that it is due to network connections problems , 31 out 109 (28 percent) said the reason for system failure is frequent electric power interruptions,

19 out 109 (17 percent) of customers associated the reason with unskilled manpower and low competency of employees for the work, 11 out 109 (11 percent) associates the reason of system failures as server problem while 17 out 109 (16 percent) of them associated the reason of system failure as absence of system supervisor. In relation to this, most of the respondents stated that when ever system failure happen, it is not customary that the organization immediately takes corrective measures to maintain the system and ensure its operational continuity.

3.4.2 Performance efficiency of ASYCUDA

The main objective of the implementation of ASYCUDA is to improve the delivery of service to the public and thereby to attain an efficient revenue collection mechanism. Intending to assess the materialization of this objective, the researcher asked the customers as well as the employees of the organization to express their opinion regarding the service quality improvement as a result of the adoption of ASYCUDA.

Table 3.5 ASYCUDA brings quality service

Responses	Frequency	Percent
Yes	95	75
No	31	25
Total	126	100

Source: Own survey 2010

As shown in Table 3.5, most of the respondents 95 out of 126 (75 percent) agreed that there exist service improvement on quality of service delivery system after adoption of ASYCUDA, while the remaining respondents 31 out of 126 (25 percent) did not agreed that there exist service improvement as a result of the adoption of ASYCUDA. There is of course a change towards bringing quality service delivery process in the organization , even if the system has big potential to bring more efficiency and quality service system to the organization the complaint given by 25 percent of the respondents is significant enough to retard the move of the organization for efficiency and can be a sign for some correction at some point of the clearance process .The

study implies that the ERCA is not in a position to provide full quality and efficient service delivery system because the reasons explained above and this in return hinder its overall efficiency of the service delivery process of ASYCUDA.

Automation of service delivery in customs is part and parcel of creating conducive customs environments which involves decreasing prerequisites to get service, simplification of work processes, setting of clear and complete directives and clear and simple insurance system. It also involves making the control trade based on risk assessment, creation of work information provision system for clients and most importantly automation of activities. It is known that automation has a major role to play in setting the conducive environment.

Table.3.6 Work facilitation of ASYCUDA

Responses	Frequency	Percent	Rank
Minimize time	12	13	III
Increased speed	37	39	I
Reduce procedure	27	29	II
Reduce cost	3	3	VI
Reduce paper work	4	4	V
Facilitate paper work	9	9	IV
High accuracy	3	3	VI
Total	95	100	-------

Source: Own survey 2010

Customers were requested to explain how ASYCUDA brings quality service delivery system and as Table 3.6, shows, respondents mention different reasons, 12 out of 95 (13 percent) of customers indicated that the ASYCUDA facilitates work and minimize processing time , 37 out of 95 (39 percent) of respondents stated that ASYCUDA increased processing speed, 27 out of 95 (29 percent) of them agreed that it reduced procedure, while 3 out of 95 (3 percent) indicated that ASYCUDA reduced cost, 4 out of 95 (4 percent) of respondents confirmed that the system reduced paper works, 9

out of 95 (9 percent) of them stated that ASYCUDA facilitate paper works and the remaining 3 out of 95 (3 percent) of them indicated that high accuracy was achieved as a result of the application of the ASYCUDA . Efficiency is composed of speed of activities, reduced service delivery cost, decreased in human involvement and shortening of work process. The adoption of ASYCUDA in Ethiopia Revenue and Customs Authority service delivery has yielded these benefits at least partly to users. Customers are able to declare their goods within short period of time, enjoy the benefit from the speed of activities in the comparison to the manual custom service delivery system.

As the Table 3.6 shows, ASYCUDA has brought quality service delivery system, when comparing the rating of customers ASYCUDA has brought quality service delivery system minimizing processing and service delivery time ranks III, increasing speed of all the process of goods clearance ranks I, reducing cost of goods clearance process ranks II, Reduce cost ranks VI, Reduce paper work ranks V, facilitating paper work ranks IV and by bringing high accuracy in the process of goods clearance generally ranks VI.

3.4.3 Comparison of ASYCUDA from the Manual System

Comparing the manual system with ASYCUDA, the later reduced human involvement as well as unnecessary extended procedures that would have been inevitable in the manual system and increase processing speed and efficiency. However, the increased processing speed and efficiency as a result of the ASYCUDA has not yet reached its optimal level, given the fact that the system frequent fails. The fact that, most of the respondents agreed on the existence of frequent failure of ASYCUDA for different reasons. While the respondents agreed to the frequent failure of ASYCUDA because of different reasons, almost half of the respondents agree on there are no immediate maintenances of system failure in the organization which stakes the overall process of goods clearances.

The study on Table 3.7 shows that, most of the respondents 95 out of 126 (75 percent) indicated that the adoption of ASYCUDA brought more flexible workflows in goods clearance while the remaining 31 out of 126 (25 percent) of the respondents not agree on the work flexibility because of the adoption of ASYCUDA because there still high work procedures in ERCA in process of goods clearances and the officers at the front desk are not flexible enough to facilitate works.

Table 3.7 Flexibility of workflows

Responses	**Frequency**	**Percent**
Yes	95	75
No	31	25
Total	126	100

Source: Own survey 2010

In addition to this, respondents were requested about the ease of access to information about their status of goods; and 50 percent of the respondents agree that they receive immediate information about status of their goods and if there is no system failure they received timely service from the organization. Since there is frequent system failure and there is no immediate correction and maintenance of the system. Then it implies that mostly there is no immediate access to information by the customers as per their request which reduce the efficiency of the work process generally.

Table 3.8 ASYCUDA use less time than the manual

Responses	**Frequency**	**Percent**
Yes	106	84
No	20	16
Total	126	100

Source: Own survey 2010

According to the report issued by Ethiopian Customs Authority (ECuA: 2004), the introduction of ASYCUDA brought a remarkable improvement by reducing the number of time consuming steps. What is more is that, as Table 3.8 shows, 84 percent of the respondents agreed that ASYCUDA uses less time than the manual system .For instance before the adoption of the system import process was taking from 3 to 8 day while export was taking from 2 to 4 days. After adoption of ASYCUDA import process takes from1 to 3 days while export takes from half day to maximum 2 days. Even though there is progress after adoption of the system still there will be delay when system fails because of different reasons. In the previous manual system, collection and work process of duty and taxes and other controlling activities were carried out one after the other .In the new system, after adoption of each activity can be undertaken simultaneously without waiting for the completion of the preceding tasks.

Table 3.9 Differences of ASYCUDA from the manual system

Response	Frequency	Percent
Poor performance in clearance process	17	29
Slow processing of documents	12	21
Manual operation	19	33
Procedures	8	14
Work loads	2	3
Total	58	100

Source: Own survey 2010

In relation to this, 58 employees were requested to differentiate (see Table 3.11) about the difference of ASYCUDA from the manual system, 17 of 58 (29 percent) said ASYCUDA is different from the manual, the manual has poor performance compared to ASYCUDA while12 of 58 (21 percent) of employees related the difference with slow

processing of documents by the manual system, about 19 of 58 (33) percent of employees believed the manual operation and computerized operation of ASYCUDA is the main difference while about 8 of 58 (14 percent) related the difference of as the manual is very procedural while ASYCUDA is not procedural compared to the manual system and about 2 of 58 (3 percent) related with the work load on the manual system while in ASYCUDA works are more easy because it is helped by the computerized system.

The ASYCUDA is far better than the manual system in that it is easier to use, generate and share information. Furthermore, ASYCUDA is very fast and very accurate comparing to the manual system. Generally, it achieves better performance of the organization. Most of the respondents agree that, there was need to change from the manual to IT based system ASYCUDA.

As the data shows, where the organization is in good progress after the implementation of ASYCUDA. However, ERCA is not in the position to maximize the benefits of ASYCUDA. The research shows, there are fluctuations in perceiving of the changes brought by the adoption of ASYCUDA by the organization but most of the data gathered from the respondents implies, the organization is not efficient enough in maximizing the benefits expected from the adoption of ASYCUDA.

3.4.4 Assessment of service delivering quality in ERCA

In order to bring organizational efficiency in service delivery, the biggest constituent is the quality of the service delivering process. Service quality is one of the main outcomes which brings efficiency to the organization and satisfies the expectation of its customers. The SERVQUAL model compares the quality of service delivery ZLWK WKH FXVWRPHUV¶ expectation and perception of service in terms of tangible assets, reliability, responsiveness, assurance, and empathy (Shah, 2005:121-122). In this part the researcher tried to assess the service quality delivered by ERCA in the process of

import and export process after adoption of ASYCUDA based on the above methodology.

It has been reflected that the main objective of implementation of ASYCUDA is to improve the service delivery processes in ERCA as well as to improve the revenue collection system from import and export process, based on this objective the researcher asked the customers of the organization to express their agreements or disagreements with respect to different dimensions of service efficiency as well as quality of service delivery of the organization. Hence, customers have indicated the following responses as the factors that contributes to the efficiency and reliability of service delivery in the organization; Reliability, Responsiveness, Competency of employees, Courtesy, Credibility, Tangibility and accessibility of service.

Table 3.10 Reliability of Service delivering process

Service of the organization after adoption of ASUCUDA is improved in	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
Accuracy in performance	4	3	51	40	6	5	65	52	126	100
Consistency in performance	4	3	42	33	22	18	58	46	126	100
Keeping records correctly	13	10	35	28	9	7	69	55	126	100
Service is dependable	4	3	41	33	9	7	72	57	126	100

Source: Own survey 2010

Customers were requested to give options about service by the organization improvement, while customers requested accuracy in performance 55 out of 126 (43

percent) of the respondents were strongly agreed and agreed about the accuracy in performance of the organization but 71 out of 126 respondents (57 percent) strongly disagreed and disagreed the accuracy in performance.

While customers were requested about consistency in performance 44 out of 126 (36 percent) of the respondents strongly agreed and agreed about the consistency in performance in the organization but 82 out of 126 respondents (64 percent) of customers were strongly disagreed and disagreed on the consistency in performance in the organization. Customers were also requested about keeping records correctly 48 out of 126 (38 percent) of the respondents strongly agreed and agreed about keeping records correctly in the organization but 78 out of 126 respondents (62 percent) of customers strongly disagreed and disagreed on keeping records correctly in the organization. Form this data more than 57 percent of respondents strongly disagreed and disagreed on service delivery improvement in the organization and reliability of the service, which is given by the organization.

Table 3.11 Responsiveness of employees

Responsiveness of employees	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
Employees are supportive	31	25	84	67	4	3	7	5	126	100
Service provided immediately	2	2	47	37	9	9	68	54	126	100
Service is given on time	2	2	43	34	12	129	69	55	126	100
Information is given immediately	20	16	95	75	6	5	5	4	126	100

Source: Own survey 2010

Customers were requested about responsiveness of employees to customers requested HPSOR\HHV¶ supportiveness 112 out of 126 (92 percent) of the respondents strongly agreed and agreed about HPSOR\HHV¶ VXSSRUWLYHQHVV IRU FXVWRPHU Zhile 14 out of 1 8 percent of them strongly disagreed and disagreed. While customers were requested about immediate and on time delivery of service 49 out of 126 (40 percent) of the respondents were strongly agreed and agreed about immediate and on time delivery of service and 77 out of 126 (60 percent) of customers were strongly disagreed and disagreed on immediate and on time delivery of service. Customers were also requested about immediate delivery of information by employees when requested 115 out of 126 (91 percent) of the respondents were strongly agreed and agreed about immediate delivery of information in the organization and 11 out of 126 (9 percent) of customers were strongly disagreed and disagreed on immediate delivery of information in the organization.

Table 3.12 Courtesy by employees

	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
Employees have good manner	2	2	19	15	13	10	92	73	126	100
They respect customers	2	2	15	12	18	14	91	72	126	100
Employees are friendly	2	2	15	12	26	21	83	65	126	100
They Care for customers property	6	5	17	13	14	11	89	71	126	100

Source: Own survey 2010

As the data shows in Table 3.12 customers rated very low the courtesy of employees of the organization and they rate more than 73 percent to strongly disagreed and disagreed regarding the questions requested about the employees have good manner, whether they are caring and polite, whether employees respect customers, whether they care for customers property ,whether they are friends to customers .This implies customer are not happy or not satisfied by the care given by the employees of front desk officers who are at front desk are not friendly to customer. Thus the organization has a gap on the employee and customer relations who show the customers who are more than 70 percent of the respondent are not happy with the front desk officer which works in the goods clearance processes.

Table 3.13 Credibility of Employees

	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
ERCA is trustworthy	7	6	4	3	42	33	73	58	126	100
Honest to customer	6	5	5	4	32	25	83	66	126	100
loyal to customers	7	6	2	2	32	25	84	67	126	100

Source: Own Survey 2010

Respondents were requested to speak about credibility of ERCA and 115 out of 126 (91 percent) of the respondents ZHUH VWURQJO\ GLVDJUHHG RU GLVDJUHHG RQ WKH RUJDQ trustworttness, honesty and loyalty to customers. While 11 out of 126 (9 percent) of the respondents were strongly DJUHHG RU DJUHHG RQ WKH RUJDQL]DWLRQ¶ WUXVWZRUW

honesty and loyalty to customers .This implies that the organization do not have a very good image which is a very big problem for the organization.

Table 3.14 Tangibility of the organization

	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
Organization has best facilities	7	6	2	2	35	28	82	64	126	100
It has modern technology	7	6	15	12	35	28	69	54	126	100
It has skill full employees	7	6	15	12	33	26	71	55	126	100
The office is convenient	7	6	8	6	33	26	78	61	126	100

Source: Own Survey 2010

The respondents were requested to rate the organization on its facilities, technologies on use, skill of employees as well as the convenient of the office, accordingly 92 percent respondents were strongly disagreed or disagree on the organization having the good facilities, in addition 82 percent of the respondents strongly disagreed or disagreed on the organization having modern technologies as well as having skillful employees. 87 percent of the respondents were strongly disagree or disagree on convince of the office to customers. The organizations tangibility is very important matter which make the customer to feel comfortable towards requesting service as well as to stay in the office in addition the moderns facilities and technologies the organization acquired made the customers to trust the organization and believed their works are made at the maximum best technologies as well as best efforts .The respondents show, except the adoption of ASYCUDA, the organization do not have best facilities, modern technologies, skill full

employees and the office is not convenient to the customers. Thus the organization do not has good image in the eyes of the customers.

Table 3.15 Accessibility of service

	Responses									
	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	FR	%	FR	%	FR	%	FR	%	FR	%
The service is easily accessible	7	6	2	2	32	25	85	67	126	100
Waiting time for service is short	9	7	13	10	30	24	74	59	126	100
Convenient working hours	7	6	14	11	30	24	75	59	126	100
Convenient locations of service facility	7	6	5	4	34	27	80	63	126	100

Source: Own survey 2010

Facilitating easy access gives better opportunity to all service users to benefits from the available services. These promote equity and enhance effectiveness by widening coverage of the service. The service is easily accessible 97 percent of the respondents were strongly disagreed or disagreed on the waiting time for service is short 86 percent of the respondents were strongly disagreed or disagreed on the convenient working hours 87 percent of the respondents were strongly disagree or disagree on the, Convenient locations of service facility 94 percent of the respondents were strongly disagree or disagree. Service users with full, accurate and up to date information about the public institutions will have better understanding of what and where service is provided and thus will be a better position to benefit from the available services. This could also contribute to gains in efficiency by minimizing the cost (time, effort and

resources) of dealing with uninformed service users as well as it enables stakeholders to hold institutions accountable in case of failures.

As the above, Table 15. Shows the accessibility of service in the organization is not easy and as we see about 97 percent of the respondent of this study believed that accessibility of service is very difficult because of many reasons. The effect of ASYCUDA to maintain up- to- date data is considered to be very low. Close to 97 percent of the respondents is disagreed as to whether the implementation of ASYCUDA resulted in the availability of updated information. Similarly around 86 percent officers in WKLV VWXG\ DOVR IHOW WKDW $6<&8'$¶V LPSDFW RQ UHGXFLQJ waiting time for service is minimal. .Given the status of the ICT infrastructure availability in Ethiopia ,it is not surprising to note that access and communication for service delivery received the lowest ranking in agreement of customers while requiring about the service delivery of ERCA.

It has been pointed out that flexibility on generation of reports as one of the benefits of adopting ASYCUDA data entered into a computerized system not only be easily connected but also in different formats at any point of the work process help to be accessed and can be used. There is no need to wait for summation, accumulation or clearing to get a data about transaction. The data storing mechanism enables to access information perpetually

3.4.5 Assessment of Competency of public service delivery in ERCA After adoption of ASYCUDA

It is very difficult to measure the competency of public service delivery because it is very difficult to know the value of public goods and service. Shah (2005:121-122) explain more on justification for the difficulties of performance measurement in public organizations and reasoned as the challenge to analyze output of service and even very difficult to measure the outcomes of the given services. To evaluate the role for these

bodies and how they should be structured, it needs a set of criteria. Some of them can be efficiency, effectiveness, accountability, transparency, timely and ease of administration.

Implementation of ICT- based service instead of manual service delivery does not necessarily mean that everything is smooth. Adopting ICTs in the service delivery industry brings machines in to use of furnishing service to the service seekers, the machines are diligent. They can perform as long as they are maintained up to the capacity they can serve. And it is known that ERCA adopted the ICT based service delivery process in order to facilitate the import and export process and in goods clearance activities to bring organizational efficiency but without maximizing the potentials of ASYCUDA it is very difficult to ERCA to achieve its objectives.

In this part, the researcher tried to assess the competency of public service delivery in ERCA in the process of import and export processes after adoption of ASYCUDA based on the efficiency, effectiveness, accountability, transparency, timely and ease of administration bases of service delivery process of the organization.

Table 3.16 Efficiency in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	35	28	22	38
Agree	7	5	28	48
Disagree	55	44	8	14
Strongly Disagree	29	23	-	-
Total	126	100	58	100

Source: Own survey 2010

As can it be shown from Table 3.16, 42 out of 126 (33 percent) of the respondents from customers were strongly agreed and agreed about the efficiency of ERCA after adoption of ASYCUDA but most of the respondents form customers express their disagreement which were 84 out of 126 (67 percent) of the them were strongly disagreed and disagreed the efficiency of ERCA after adoption of ASYCUDA. In relation to this, about 50 out of 58 (86 percent) of employees were strongly agreed and agreed about the efficiency of the performance the organization because of the adoption of AYCUDA while 8 out of 58 (14 percent) of them were disagreed and disagreed of these ideas.

This implies, regardless of the respondents inconsistency above 60 percent of the respondents from customers and 14 percent employees agreed on the inefficiency of the performances of ERCA after adoption of ASYCUDA. Thus, though it may have different reasons, this study show the organization is not efficient enough to exploit the potential of ASYCUDA in bringing performances efficiency and process facilitation of the revenue collection and goods clearance processes.

Efficiency is composed of speed of activities, reduce service delivery cost, decreased in human involvement and shortening of work processes. The adoption of ASYCUDA in customs service delivery has yielded these benefits at least partly to users, dramatic decrease in the time taken for the service delivery was achieved due to the decreased in human involvement and shortening of work flow process (steps).

Efficiency is a joint effect system of the operation of different parts of a system .The excelling of service provision in few parts the whole institutions might hinder the right functioning of the other. The efficiency aspect is satisfactory only if it is compared to the manual system otherwise, the failure of computers printers and internet connection as well as electric power failures are persisting after implementation of ASYCUDA in to use in providing customs service. As a result, it becomes impossible to commutate with the

server of ASYCUDA in to use in providing up to four days in a week on average indicated by many of the respondents including customs officer, the discontinuity causes an accumulation of unprocessed document and created backlog of jobs. Therefore the general ICT aided customs service delivery will not work better while each its subsystems are not working in proper conditions.

Table .3.17 Effectiveness in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	35	28	22	40
Agree	15	12	26	44
Disagree	44	35	8	13
Strongly Disagree	32	25	2	3
Total	126	100	58	100

Source: Own survey 2010

As the above data shows from Table 3.17, more than half of the respondents of customers express their disagreement on the effectiveness of the performance of ASYUDA, 60 percent of the respondent from customers strongly disagreed and disagreed about the effectiveness of the performance the organization because of the adoption of ASYCUDA while 49 percent of the respondent from customers strongly agreed and agreed about the effectiveness of the performance the organization because of the adoption of ASYCUDA .In relation to this, 84 percent of the respondent from employees strongly agreed or agreed about the efficiency of the performance the organization because of the adoption of AYCUDA while 13 percent of the respondent from employees strongly disagreed and disagreed about the effectiveness of the performance the organization because of the adoption of ASYCUDA while 3 percent employees donot know whether effectiveness of the performance the organization increased because of the adoption of ASYCUDA or not.

Table .3.18 Accountability in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	30	24	18	31
Agree	46	37	26	45
Disagree	9	6	6	10
Strongly Disagree	41	33	8	14
Total	126	100	58	100.

Source: Own survey 2010

As can be seen in table 3.18, Most of the respondents which are customers express their disagreement on the accountability of the organization, 76 out of 126 (61 percent) of the respondent from customers strongly disagreed and disagreed about the accountability of the performance the organization while 50 out of 126 (39 percent) of the respondent from customers strongly agreed and agreed about the accountability of the performance the organization, .In the opposite to this, 44 out of 58 (76 percent) of the respondent from employees strongly agreed or agreed about the accountability of the performance the organization, while 14 out of 58 (24 percent) the remaining of the respondent from employees strongly disagreed or disagreed about the effectiveness of the performance the organization because of the adoption of ASYCUDA .

This implies, regardless of the respondents inconsistency above 60 percent of the respondents from customers as well as 24 percent employees agreed on the inefficiency of the performances of ERCA after adoption of ASYCUDA. Thus, though it may have different reasons, this study show the organization is not effective to exploit the potential of AYCUDA in bringing performances efficiency and process facilitation of the revenue collection and goods clearance processes.

Table .3.19 Transparency in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	29	23	16	28
Agree	14	11	21	36
Disagree	43	34	6	10
Strongly Disagree	40	32	15	26
Total	126	100	58	100

Source: Own survey 2010

Besides, Table 3.19 also shows, more than half of the respondents which are customers express their disagreement on the transparency of the organization, 66 percent of the respondent from customers strongly disagreed or disagreed about the increase in transparency of the performance the organization after the adoption of ASYCUDA by ERCA but 34 percent of the respondent from customers strongly agreed or agreed about the transparency of the performance the organization because of ASYCUDA. In this relation, 64 percent of the respondent from employees strongly agreed or agreed about the transparency of the performance the organization, while about 36 percent the remaining of the respondent from employees strongly disagreed or disagreed about the transparency of the performance the organization because of the adoption of ASYCUDA.

This implies, regardless of the respondents inconsistency above 60 percent of the respondents from customers as well as employees agreed on the transparency of the performances of ERCA after adoption of ASYCUDA. Thus, though it may have different reasons, this study show the organization is not effective to exploit the potential of AYCUDA in bringing performances efficiency and process facilitation of the revenue collection and goods clearance processes.

The level of transparency that ought to be reflected in public service delivery has not yet been achieved in customs. The means to follow the route of documents once the declaration is submitted to declaration receiving and data capture section is hardly transparent. In case, the declaration and /or its accommodating documents are missed. There is no enough means to find them back .The degree of transparency in the classification of goods for tariff payment is also very much low, the duty that should be paid on the same goods differs from one offers assessment to another.

Table.3.20. ERCA is less procedural after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	38	31	10	17
Agree	7	5	24	41
Disagree	30	24	4	7
Strongly Disagree	51	40	20	35
Total	126	100	58	100

Source: Own survey 2010

This implies, regardless of the respondents inconsistency above 60 percent of the respondents from customers as well as employees agreed on the less procedural of the performances of ERCA after adoption of ASYCUDA. Thus, though it may have different reasons, this study show the organization is not effective to exploit the potential of AYCUDA in bringing performances efficiency and process facilitation of the revenue collection and goods clearance processes.

As Table 3.21 shows, respondents who are 51 percent of customers respond as strongly disagreed and disagreed for the question whether the company is consistent or not while 49 percent of them were strongly agreed and agreed. In this relation 52 percent of employees were strongly agreed or agreed for the consistency of the

organization while 48 percent of the employees were strongly disagreed and disagreed about the consistency of ERCA in its performances. Unavailability of precise and up-to-date duty paying value and tariff for goods of different country origin and for newly innovated products worldwide also hampered the smooth operation of the customs and big inconsistency in performance of the organization. So experts must have knowledge and up -to -date information about the working of ASYCUDA.

Table.3.21. Consistency in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	10	8	9	16
Agree	52	41	21	36
Disagree	9	7	3	5
Strongly Disagree	55	44	25	43
Total	126	100	58	100

Source: Own survey 2010

ASYCUDA is too rigid to accommodate the ever needed changing information and correction of errors .Every decisions concerning correction should be approved by both the supervisor and branch manager. Unless some kind of flexibility is available for the desk officers, the ICTs are not to facilitate the efficient service rendering by themselves because ITC and centralization of authority could not go side by side, hence requiring the approval of the authorities to each of the changes in the service delivery system. The case would become deterring for customs officers who are required to attend many other tasks.

Table .3.22. Responsiveness in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	13	10	8	14
Agree	37	30	20	34
Disagree	13	10	8	14
Strongly Disagree	63	50	22	38
Total	126	100	58	100

Source: survey 2010

As per Table 3.22, the proportion of respondents for customers as well as employees for their strongly to agreed and agreed for responsiveness of the organizations on the work performances is 40 percent while 60 percent of customers gave a response strongly disagreed or disagreed .In this relation about 48 percent respondent form employees were strongly agreed and agreed about the increased in responsiveness of the organizations after adoption of ASYCUDA while 52 percent of employees were strongly disagreed or disagreed about the responsiveness of the performance the organization.

Table.3.23. Timely performance of ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	28	22	12	21
Agree	18	14	15	26
Disagree	11	9	7	12
Strongly Disagree	69	55	24	41
Total	126	100	58	100

Source: Own survey 2010

Table 3.23, shows, more than half of the respondents who are customers express their disagreement on the timely response of the organization on its work performances , 36 percent of the respondent from customers strongly agreed or agreed about the timely performance the organization, while about 64 percent of the respondent from customers strongly disagreed or disagreed about the timely performance the organization .On respecting time, 47 percent of the responding employees strongly agreed or agreed about the timely performance of the organization ,while about 53 percent of the remaining respondent of the employees strongly disagreed or disagreed about the timely performance of the organization because of the adoption of ASYCUDA .

This implies, regardless of the respondents inconsistency more than 50 percent of the respondents from customers as well as employees agreed that ERCA is less timely in its performance after adoption of ASYCUDA. Thus, though it may have different reasons, this study show is that the organization is not timely to exploit the potential of AYCUDA in bringing performances efficiency and process facilitation of the revenue collection and goods clearance processes.

Table.3.24. Concern about customers in ERCA after adoption of ASYCUDA

	Responses			
	Customers		Employees	
	FR	%	FR	%
Strongly agree	26	20	7	12
Agree	20	16	16	28
Disagree	40	32	6	10
Strongly Disagree	40	32	29	50
Total	126	100	58	100

Source: Own survey 2010

Table 3.24. shows, that more than half (64 percent) of the respondents who are customers express their disagreement on the concern about customers of the

organization , 36 percent of the respondent from customers strongly agreed or agreed about the concern of ERCA for it customers after adoption of ASYCUDA , while 66 percent of the respondent from customers strongly disagreed or disagreed about the concern about customers of the performance the organization .In relation to this, 40 percent of the respondent from employees strongly agreed or agreed about the concern about customers of the performance the organization , while 60 percent the remaining of the respondent from employees strongly disagreed or disagreed about the Concern about customers of the performance the organization because of the adoption of ASYCUDA

This implies, regardless of the UHVSRQGHQWV¶ inconsistency 60 percent of the respondents from customers as well as employees agreed on the performances of ERCA after adoption of ASYCUDA. Thus, this study show that, the organization has not been effective in exploiting the technological potential of ASYCUDA to bring performance efficiency to its customers on revenue collection and goods clearance processes.

Chapter Four
Conclusions and Recommendations

4.1 Introduction

This study investigates the adoption and efficiency of ASYCUDA in ERCA. The primary and secondary data collected from 126 customers and 58 employees at ERCA and 12 officials form six relevant organizations as well as studying the available documents and observations on the practice are the basis for my conclusions and recommendations for the performance of ASYCUDA in ERCA.

In addition, the study explores the application of ASYCUDA compared to the manual system that has been used by ERCA. Consequently, based on the theoretical frame work discussed in chapter two, the study attempts to describe and analyze the performance efficiency of ASYCUDA and suggests possible solutions by which ERCA can improve the performance of ASYCUDA.

4.2 Conclusions of the Findings

In general, based on the findings of the study, it is safe to conclude the following:

1. From the findings of this study, ASYCUDA improves the goods clearance activities by reducing waiting time for service delivery even though the stoppage of the system due to system failure has taken more time to maintain and start the work process again.

2. ASYCUDA brought changes in service provision mechanisms like improved quality of service as well as changes in reduction of cost and procedures which are very important to achieve the efficiency of the organization.

3. There is a delay in goods clearance even though the reasons given for goods clearance are different among respondents. The study found out that; less working habits of the employees of the organization, frequent system failure because of network failure as well as electric power failure, less transparency and un updated data bases are the most common reasons for the occurrence of delay in goods clearance.

4. The study explores the major problems ERCA is facing with regard to its way of service delivery.

- **Clearance and Inspection**: Inadequate automation of Information exchange, inefficient use of Customs resources (ASYCUDA), added time consuming, extra steps in clearance process like the use of physical forms and signatures.

- **Facilities**: The cargo places are crowded and in adequate that creates delays in over all processing of goods clearance.

- **Information Technology**: There is lack of interfaces among internal systems, poor data flow and integrity**,** effective use of ASYCUDA software, integration with outside agencies having IT links and there is no expanded/ continuous training available for efficient use of ASYCUDA

- **Impacts**: Clearance processes remained manual while ASYCUDA and commercial system capabilities exist. As a result of this, ERCA cannot produce benefits of automation to reduce transaction costs and increase capacities. In addition ,it is very difficult to efficiently forecast trade and revenue transaction as well as efficiently to plan for staffing with no workflow processing which have very significant negative influence on an efficient clearance process .In addition to this Customs do not have pre-knowledge of

upcoming inspection workload, no real-time visibility of clearance status and inability to determine work patterns and flows

- **Quality of inspections** is compromised on slow trade facilitation because integration of systems does not exist in developed systems. This creates, inefficient processing of clearance declarations and sometimes duplicate processes adding to inefficiency

- **Lack of automation and integration** are the major obstacles to the implementation of ASYCUDA and still after adoption of ASYCUDA inspections are slow, time consuming, and costly

- **Man power**: According to the study, there is no adequate skilled manpower that immediately maintain whenever the system fails .As a result of this, delay in service delivery process is occurring which makes the customers to lose a lot of business opportunity. Besides, this will make it difficult for ERCA to efficiently collect tax from its customers.

5. While processing on ASYCUDA ++ system, ERCA does not consider the interest of banks because it evaluates all information from the point of view of revenue generation. Moreover other important information like invoice number is likely to be forgotten while registering in the declaration. The assessment must be from different angles and it must consider the interests of other interrelated organizations like Banks and MOFED.

6. The study found out that to control private importers who intentionally submit lower value to their goods to gain tax reduction, ERCA has a tendency of assessing and estimating goods by assigning exaggerated money value which private importers or exporters could not afford. This is creating a difficult situation for the customers of ERCA while they may be reserving small amount of foreign currency from banks and it damages the import process and creates

big problems to facilitate the process and make ERCA to delay import and export.

7. It is very difficult to amend errors from ASYCUDA++ system, if error is committed in using the foreign exchange permit number, all of the processes for those goods in the whole system will encounter problems and it is very difficult to correct the error easily because the system does not allow any correction. Mostly replacements of foreign exchange permit numbers are given by banks to customers and this creates a delay in goods clearance process.

8. The ASYCUDA ++ system is excellent in tracing information and security for the system in the cross checking but still there are some gaps in checking and correcting some un given numbers used by some importers and exporter intentionally to cheat (take advantage of) the system and pass the banking processes but generally ASYCUDA brings efficiency and security

9. The ASYCUDA ++ frequently encounter errors and interruptions for different reasons due to many reasons like electric power failure, network failure, the lack of additional features of ASYCUDA ++ system which create inefficiency in ERCA in exploiting the potentials of ASYCUDA.

4.3 Suggestions and Recommendations

From the above discussions, the following suggestions and recommendation are outlined.

1. Hard ware and infrastructure facilities such as high capacity printers, computers telephones, fax machines as well as good internet connection and uninterrupted electric power by using other means like generators have to be availed /equipped/, so that unnecessary delay due to the unavailability of these facilities can be eliminated

2. The level or degree of transparency must be increased by giving clear and complete information about the status of every document that is lodged and assessed in customs to eliminate corruption, manipulation and intentional bias

3. Customs Authority should be equipped with a flexible tariff system which can fix the repeated increase and decrease of rates

4. The lack of adequate electricity and telecommunication facilities not only make the system fail which create very big problem in goods declaration process but also it deprived the organization to maximize the full potential of ASYCUDA. Hence, ERCA must create a mechanism by which electricity and telecommunication facilities can be available.

The study has shown both the strength and weakness concerning the application ASYCUDA by ERCA. To improve the performance of ASYCUDA, it will be useful to implement the interventions listed below:

1. As this study showed an effort has not been made to fully exploit the potential of the ASYCUDA ++ system by ERCA and there is no consistency in goods clearance process in the organization. These shows there are incorrect records which are mostly kept that reduce the reliability of tasks performed in the organization. Hence, ERCA must work for the organizational efficiency by making the work process very consistent and accurate. In addition, ERCA must make the necessary modification and adoption of **ASYCUDA world** which is the latest versions of the customs system than using ASYCUDA ++ system.

2. Continuous training opportunity must be available to employees to update them so that they can work efficiently with the system. As this study shows, the customers complaining about frequent changes of employees**.** Hence, ERCA

should take the following measures to have competent and capable employees working in the implementation of the system:

i. Develop and implement a standard training program for all customs personnel and expand the skill sets of the customs officers, continuously schedule training, develop and implement a communications process to provide up-to-date information.

ii. Eliminate paper-based processing, restructure the present units into a workflow process, structure centers into more efficient workflow environments, incorporate the efficiencies of workflow queues, and develop standardized processes in the organization.

iii. Supervisors and front line officers should undergo mandatory training on how to operate computers and track operations on them

iv. Organization policies, directives and regulations have to be reviewed in line with the changes that have been taking place due to the implementations of ITC.

v. Most importantly, every civil servant in Customs Authority has to be enlightened to facilitate the smooth operation of the service delivery as the ultimate objectives of utilizing ICT is service enhancement.

3. This study showed that there is poor compliant management system in ERCA and the customers do not know where to go if they face problems. Hence, ERCA must establish independent compliant management system, which in turn provides an input for further service improvement mechanisms.

4. ERCA faces electric power interruption frequently which made the work process of ASYCUDA to stack and very slow .Hence ERCA must work with Ethiopian Electric Power Authority to solve the problem and also must arrange other means of

power supply like availing generator to solve the power interruption in working hours of the organization

5. Using appropriate/high/ technology the organization must use the latest technologies to use ASYCUDA at its full potential**.** Critical technology requirements for successful implementation of the system are very important. Thus, ERCA Implement a simplified and standardized process model, eliminate redundant and manual processes, eliminate unnecessary steps, and develop a more automated processing model. Incorporate existing systems into ASYCUDA software, Review existing systems functionality in ASYCUDA and develop interfaces or incorporate functionality.

6. Work for efficiency, the organization is not efficiently working with ASYCUDA, and it must give timely service to its customers. If ERCA is to continue to give the service, it must give proper concern to serve its FXVWRPHUV¶. Hence, ERCA must change its service delivery system so as to provide timely and efficient service for its customers.

7. The ASYCUDA ++ system needs to be linked to the system of Banks especially with the National Bank of Ethiopia as it reduces some problems that will be created in the clearance process. The process needs networking, to speeding up the process and sharing the information to the relevant office. ASYCUDA must be user friendly and ERCA has to work for that goal.

8. The organization must work for the development of skill of employees specially who are implementing ASYCUDA and should given related training that can help them to cope with the service delivery system.

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Appendix One: Interview Guide

1. Does your organization require information from Ethiopian Revenue and Customs Authority (ERCA) for your work? Do you use Automated Systems for Customs Data (ASYCUDA) processed data (declaration)
2. For what purpose are you using the information you received form ERCA?
3. Do you get immediate and correct information as you request from ERCA?
4. Do you face a delay in receiving any information from ERCA? What do you think is reason of the delay?
5. Do you think ASYCUDA facilities the speed of information received form ERCA? What about your organization?
6. Do you think ASYCUDA reduced the procedure to received information from ERCA than the manual system?
7. Do you think ASYCUDA brings efficiency generally for the import and export process?
8. Are there any constraints that you face in using ASYCUDA data? Please mention major Constrains? What do you think as reasons for those problems? What are the possible solutions/Recommendations/ for those problems?
9. What do you want to add on the performance of ASYCUDA?

Appendix Two: Questions prepared for Employees

1. How many years you have worked at this position?

   I. From 0 to 2 years II. From 3 to 5 Years

   III. From 6 to 10 Years IV. Above 10 Years

2. Does your work relate directly to Automated System for Customs Data ASYCUDA?

   I. Yes II. No

3. If your answer is YES, how many years do you work on implementation?

   of ASYCUDA? ----------

4. Do you think there is a delay in clearance of goods in your organization before adoption of the system?

   I. Yes II .No

5. What are the reasons /factors/ of delay in clearance of goods if your answer for No.4 is YES? ----------

   ----

6. What are the difference between the new system and the old procedure for you?

   ----

7. Do you think ASYCUDA is facilitating workflows in clearance of goods?

   I. Yes II. No

8. How ASYCUDA is facilitating workflows if your answer for No.7 is YES?

   ----

9. Do you think there was importance to change form manual to IT based system (ASYCUDA)?

   I. Yes II. No

10. Do you ever face system failure the implementation of ASYCUDA?

    I. Yes II. No

11. Does the system fail frequently at high working time?

    I. Yes II. No

12.Do you inform the customers the reasons of the delay of their goods?

I. Yes II. No

13. What is the reason if your answer is NO for No. 11?

_____

_____

14. Is there a place to go for to customers compliant about a delay of their goods?

I. Yes II. No

15. Do you think ASYCUDA reduce the bureaucratic procedures required for goods clearance?

I. Yes II. No

16. Do you think quality service is given for customers?

I. Yes II.N o

17. Do you think ASYCUDA brings quality service delivery system?

I. Yes II. No

__ 'R \RX KDYH FRPSOLDQFH PDQDJHPHQW V\VWHP IRU FXVWRPHUV¶ SUREOHP"

I. Yes II.N o

19. What are the reasons for system failure if your answer is Yes?

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20. Do you think ASYCUDA uses less time than the manual system?

I. Yes II. No

21. Do you think ASYCUDA is efficient than the manual system?

I. Yes II .No

22. Do you think ASYCUDA reduce the cost involved in the transaction than the manual system?

I. Yes II. No

23. Do you think the need from manual to IT based system was important (from Manual system to ASYCUDA)?

I. Yes II. No

24. The adoption of ASYCUDA has brought changes in the following? (Please put

- ✓ marks as per your perception of the service delivery system on ERCA.)

S.No.	Description	Strongly Agree	Agree	I don know	Disagree	Strongly Disagree
1.	Efficiency					
2.	Effectiveness					
3.	Accountability					
4.	Transparency					
5.	Less bureaucratic					
6.	Consistency					
7.	Responsiveness					
8.	Timely					
9.	Concern about customers					

25. If your answer is YES why?----------

---

26. Do you think ASYCUDA make the work flow of goods clearances more flexible?

I. Yes II.No

27. Does the organization has trained man power to facilitate the new system?

I. Yes II.No

28. Do you think the failure in the system immediately maintained?

I. Yes II.No

29. Do you have any experience of immediate correction of system failure in clearance of goods?

I. Yes II. No

0. If your answer is No how long it take them to maintain the system? ----------

---

32. Any thing you want to add about the ASYCUDA performance?

_____

_____

_____

Appendix Three: Questions prepared for customers

1. What kind of business are you engaged in now?
   I. Importer II. Exporter III. Both

2. What kind of goods do you declare? ----------

---

3. For how many years have you been engaged on this work?

   I. Up to 2 years II. From 3 to 5 years

   III. From 6 to 10 years IV. Above 10 years

4. Do you face delay for clearance of goods because of Ethiopian Revenue and Customs Authority (ERCA)?

   I. Yes II .No

5. If your answer is yes for No. 4, what do you think are the reasons of delay for clearance of goods?----------

---

6. Do you know about the Automated System for Customs Data (ASYCUDA)?

   I. Yes II .No

7. What is the difference between the ASYCUDA based system and the manual system for you?

---

8. Do you think ASYCUDA is facilitating the workflows in clearance of goods?

   I. Yes II. No

9. If your answer for the No.8 is YES how? ----------

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10. Is there a place to go and ask about the delay of your goods?

    I. Yes II .No

11. Do you think ASYCUDA reduces the procedures required for goods clearance?

    I. Yes II. No

12. Do you think quality service is given for customers by the organization?

    I. Yes II. No

13. Do you think ASYCUDA brings quality service delivery system?

I. Yes II. No

14. If your answer for No.13 is YES, how ASYCUDA brings quality service delivery system?

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15. Does the ASYCUDA system fail sometimes?

I. Yes II. No

16 What are the reasons of the system failure? If your answer is YES for No.15

---

17. How frequently the system fails, if your answer is YES for No.15?

---

18. The adoption of ASYCUDA has brought changes in the following? (Please put

- ✓ Marks as per your perception of the service delivery system on ERCA.)

S.No.	Description	Strongly Agree	Agree	I don know	Disagree	Strongly Disagree
1.	Efficiency					
2.	Effectiveness					
3.	Accountability					
4.	Transparency					
5.	Less bureaucratic					
6.	Consistency					
7.	Responsiveness					
8.	Timely					
9.	Concern about customers					

19. Do you think ASYCUDA requires less time than the manual system?

I. Yes II .No

20 How much time do you take on average to clear the goods before adoption of ASYCUDA?

I. Import----------

II. Export----------

21. How much time do you take on average to clear the goods after adoption of ASYCUDA?

I. Import----------

II. Export----------

22. Does ASYCUDA make the work flow more flexible?

I. Yes II. No

23. Do you get information immediately about the status of your goods when you requested?

I. Yes II. No

24. Does Staff provide timely service to you?

I. Yes II .No

25. Is there a place to go to complain about a delay of you goods?

I. Yes II. No

26. Do you think the need from manual to ASYCUDA IT based system was important?

I. Yes II. No

27. Does the organization has trained man power who facilitate the new system?

I. Yes II. No

28. Do you think the failure in the ASYCUDA system immediately maintained?

I. Yes II. No

29. Do you have any experience of immediate correction of ASYCUDA system failure in clearance of goods?

I. Yes II. No

30. How do you rate the following as per the service delivery of ERCA? Put

- ✓ marks as per your perception.

S.No	Description	Strongly Agreed	Agreed	I do not know	Disagreed	Strongly Disagreed
1.	Reliability					
	Accuracy in performance					
	Consistency in performance					
	Keeping records correctly					
	The service is dependable					
2.	Responsiveness					
	Employees are very supportive					
	Service is provided immediately					
	Giving on time service					
	Consistency in performance					
	Information is given immediately					
3.	Competency					
	Employees possess required skills					
	They have required knowledge					
	They are experienced					
	They are qualified					
4.	Courtesy					
	Employees have good manner					
	They are caring and polite					
	They care for customers property					
	Employees are friendly					
	They respect customers					

S.No	Descriptions	Strongly Agree	Agree	I do not know	Disagree	Strongly Disagree
5.	Credibility					
	ERCA is trustworthy					
	It is always honest to customers					
	It is always loyalty to customer					
6.	Tangibility					
	The organization has best facilities					
	It has most modern technology					
	It has skill full employees					
	The office is convenient for service delivery					
7.	Access					
	The service is easily accessibility					
	Waiting time for service short					
	Convenient hours of operation					
	Convenient location of service facility					

31. Any thing you want to add about ASYCUDA performance *in ERCA*?

_____