THE IMPORTANCE OF INFORMATION AND COMMUNICATION TECHNOLOGY POLICIES ON TAX ADMINISTRATION.

A CASE STUDY OF GHANA CUSTOMS EXCISE AND PREVENTIVE SERVICE.

by

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DECLARATION

I hereby declare that the submission is my own work towards the CEMBA and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

To my dear wife Grace Ama Agboado and my lovely children, Franklin Norklpim and Franklina Nayram for their prayers and moral support and also to all who in diverse ways helped in making this research work a sućcess.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ASYCUDA	-	Automated System of Customs Data
CD	-	Compact Disc
CEPS	-	Customs Excise and Preventive Service
CMS	-	Customs Management Systems
DIS	-	Destination Inspection Service
DOS	-	Disc Operating System
DSS	-	Decision Support System
ECOWAS	-	Economic Commission of West African States
EDI	-	Electronic Data Interchange
EDIFACT	-	Electronic Data Interchange for Administration, Commerce and Transport
EIS	-	Executive Information Systems
EPA	-	Environmental Protection Authority
FCVR	-	Final Classification and Valuation Report
FDB	-	Food and Drugs Board
GCMS	-	Ghana Customs Management Systems
GCNet	-	Ghana Community Network
ICT	-	Information and Communication Technology
ICT4D		Information and Communication Technology for Development
IDF	-	Import Declaration Form
IRS	-	Internal Revenue service
IT	-	Information Technology
KIA	-	Kotoka International Airport
MIS	-	Management Information Systems
MOTI	-	Ministry of Trade and Industry
PC	-	Personal Computer

PNDC	-	Provisional National Defence Council
RDBMS	-	Relational Data Base Management System
SAD	-	Single Administrative Document
STU	-	Satellite Tracking System
TIDD	-	Timber Industry Development Division
TVI	-	Temporary Vehicle Import
UN/CEFACT	-	United Nations Centre for Trade Facilitation and Electronic Business
UNCTAD	-	United Nations Conference on Trade and Development
URA	-	Uganda Revenue Authority
VAT	-	Value Added Tax
WCO	-	World Customs Organisation
WTO	-	World Trade Organisation

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The challenges of nations in the contemporary world put enormous responsibilities on governments all over the world. In historic eras, emphasis were placed on providing security for kingdoms' or nations' citizens but in modern governance, apart from providing security, various government are burdened with the provision of an array of responsibilities ranging from national security, social, economic, political and infrastructure needs.

Governments in efforts to achieve good governance and promote socio-economic developments must harness financial, material and human resources in order to accelerate growth in all sectors of the economies. In order to accomplish the objectives of good governance and promoting socio-economic development, revenue generation becomes an imperative in providing the needed funds. Governments raise the needed funds from various sources of the economy. Some sources through which government could raise revenues to fund expenditures of nation building are through taxes, fees and fines, special assessments, revenue from government's productive concerns, national and international borrowings. Among these sources, taxes constitute the major revenue source for all governments all over the world. (Lee, Johnson and Philip, 2007). Taxation as a percentage of GDP in 2003 was 56.1% in Denmark, 54.5% in France, 49.0% in the Euro area, 42.6% in the United Kingdom, 35.7% in the United

States, 35.2% in The Republic of Ireland, and among all OECD members an average of 40.7%. (http://www.oecd.org/topicstatsportal/.html).

In view of these, revenue maximization and optimization from taxes became as important as the identification of its source. As governments are trying at all times to identify various sources of taxes, focus is not lost on how to maximize and optimize revenue from the sources identified, in order to ripe the optimum benefits. As such several policies were formulated and implemented in order to achieve revenue maximization. These policies impacted differently on tax revenues and those impacts were assessed and the best options adopted to enhance tax administration.

In view of the importance of taxation, national revenue bodies were set up with responsibilities for collecting revenues required to fund the services governments are expected to deliver. Tax administration has therefore become an imperative element in the sustenance of socio-economic structures of the nation. Tax administration is defined as the machinery for achieving the desired and stated objectives of tax policy. (Akakpo, 2007). It involves three broad terms:

- Facilitating Compliance: This involves identifying taxpayers (be it individuals or legal entities), the base of the tax and providing laws, rules, regulations and procedures for exacting the tax.
- Monitoring Compliance: This involves the activities of levying the tax, collecting and paying into the Government's coffers.
- Dealing with non-compliance: This involves the application of laws, rules and regulations as regards tax penalties, tax reviews and settlement of tax disputes. (Akakpo, 2007)

In recent years, as the emergence of Information and Communication Technology (ICT) becomes an essential enabler and driver in businesses and organizations (Burn, 2007), revenue collecting agencies and for that matter tax administrations globally formulated and/or adopted various ICT policies in their efforts to maximize revenue. As such governments and tax authorities embarked on ambitious ICT projects in order to leverage the various institutional structures to derive maximum benefits. It is important therefore to assess the effects of such policies on tax administrations, identify their shortcomings and formulate remedies to these policies.

In Ghana like other countries, effective tax administration has become a vital tool for efficient revenue mobilization. As implementation of tax policies in an increasingly globalised world is becoming more challenging for tax administrators, the use of Information and Communication Technology (ICT) in enhancing and harnessing revenue in achieving the purpose of taxation is also becoming increasingly more imperative. It is said that 'Technology is no longer an afterthought in forming business strategy, but the actual cause and driver' (Ravi and Robinson, 1999).

The government of Ghana by Acts of Parliament established three institutions responsible for tax administration; The Internal Revenue Service (which was formally Central Revenue Department) by PNDCL 143 of 1986, Customs, Excise and Preventive Service (formally Customs and Excise Department) by PNDCL 330 of 1993 and Value Added Tax by Act 546 of 1998. The contribution of CEPS to the economy in terms of revenue over the years has been tremendous. Between 1957 and 1998 CEPS collected about 70% of the total National Tax Revenue. Even with the introduction of VAT,

CEPS still collects on the average about 50% of the national revenue (CEPS News, April 2007). (Appendix 1).

In view of this, effective uses of ICT to aid efficient tax administration are crucial elements in achieving the nation's goals in revenue generation. Customs, Excise and Preventive Service (CEPS), thus adopted various ICT policies in conjunction with structural reforms in tax administration in order to enhance revenue collection. The first major ICT policy of CEPS was in 1990 when Automated System for Customs Data (ASYCUDA), a customs management system developed by UN Conference on Trade and Development (UNCTAD) was adopted. This was later replaced with the Ghana TradeNet, made up of the Ghana Community Network (GCNET) and the Ghana Customs Management System (GCMS) in line with the development of Ghana's Vision 2020. Such policies needed to be assessed in term of their effects and reviewed to make tax administration of CEPS more efficient and effective.

1.2 Statement of the Problem

The research project explored the importance ICT in tax administration and its effect on CEPS' operation. Tax and revenue agencies are constantly under enormous pressure to find ways to maximize tax revenue and efficiently improve constituent services. The agencies are faced with the challenge of increasing tax revenue while at the same time not having to levy new tax. It is therefore necessary to determine the best practice to increase tax revenue and this could be done through efficient and effective deployment of ICT in facilitating and monitoring tax compliance.

The research focused on;

- The importance of ICT and its effect on revenue generation of CEPS.
- The effect of ICT policies on Tax compliance, Trade facilitation, Human Resource, Trader Relation and Corruption.
- What benefits are derived from ICT policy implementation in CEPS.
- What challenges are associated with ICT implementation of CEPS.
- What is the future direction of ICT in tax administration of CEPS.

1.3 Objectives/Purpose of the Study

1.3.1 General Objectives

The general objectives of the study were to:

- Clearly understand the efficiency and the effectiveness of ICT as a driving tool in tax administration of CEPS.
- Identify the usefulness of ICT in driving and assisting tax administration and increasing taxpayer compliance.

1.3.2 Specific

The specific objectives were to:

- Understand the effectiveness of ICT deployment in improving tax revenue and tax administration in CEPS.
- Understand the necessities of ICT becoming the driving force for tax revenue and revenue generation of CEPS.

- Determine and recommend measures which can be taken to improve on Tax Administration in CEPS.

1.4 Hypothesis

The study would test the correlation between ICT policy implementation and successful tax administration of CEPS. The purpose is to establish an association between ICT deployment or implementation and how it impacted on tax administration of CEPS.

Null Hypothesis: There is a positive correlation between ICT policy implementation and a successful tax administration of CEPS.

Alternative Hypothesis: There is a negative correlation between ICT policy implementation and successful tax administration of CEPS.

1.5 Relevance of Study

The relevance of the study is:

- To delve into and emphasize what is involved in the concept of tax administration.
- To promote a better understanding of ICT in tax administration.
- To present knowledge of the benefits of ICT in CEPS' tax administration.
- To serve as knowledge based document of reference for tax administrators.

- To determine the shortcomings of ICT implementation in the administration of CEPS.
- To determine possible solutions to the shortcomings.

1.6 Scope of study

The study covered the period 1990 to the early part of 2009. Within this period, there has been a determined effort on the part of CEPS and the government under the supervision and the direction of international bodies like the World Trade Organisation (WTO) and the World Customs Organisation (WCO) to implement ICT policies in facilitating trade. However references were made to historical antecedent in the course of the study. The study was limited to the operations and mandate of CEPS. It focused on Collections/Stations where ICT policy is being implemented.

1.7 Limitation

The limitations to this study were:

- Not being able to lay hand on all relevant secondary data
- Some respondents did not answer the questionnaire
- Some respondents did not agree to grant the interview
- Lack of funds to travel to meet as many stakeholders as possible.
- The study is expected to be completed by the end of the second semester, a short period for a very comprehensive analysis.

1.8 Organisation of the thesis

The study was organized into five chapters. Chapter One looked at the introduction of the study, the problem statement, research questions, aims and objectives of the study. It was followed by Chapter Two which reviewed, discussed and synthesized detailed literature on taxation and ICT as a tool in tax administration and CEPS. Chapter Three outlined detailed methodology and instruments of data that were used. Chapter four dealt with the analysis and presentation of findings. Chapter five contained the summary of the research findings, the conclusions and recommendations. The fifth chapter was followed by References which relate to sources of literature cited in the thesis and then the Appendices, which gave some extra information on some illustrations.

In the research report, the chapter one was preceded by Declaration which declared the authenticity of the study. It stated that the study is my personal work apart from the literature cited. This was followed by Abstract, which gave the summary of the research work done and then the Dedication to those who the study is dedicated to. Then came Abbreviations, where abbreviations and acronyms used in the study report were explained. Finally, was Acknowledgement where my supervisor and all others who contributed in diverse ways to the study were acknowledged and gratitude expressed.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

Governments are faced with a myriad of political, socio-economic and infrastructural problems. They are confronted with enormous responsibilities of providing better living conditions for their citizenry, and also regulating activities which would lead to the economic development of the respective countries. For these courses, governments will need to raise funds towards the execution of these responsibilities.

Governments through various instruments raise revenues in order to accomplish these responsibilities imposed on them. Some of these instruments are identified as follows:

- Taxes
- Rates
- Fees and Fines
- Revenues from government owned enterprises.
- Borrowing – from the public (Treasury Bills, Bonds)
- International loans and Grants
- Printing of Currency by Government

Out of these sources of revenue, taxation is one of the major instruments used in raising revenue for expenditures incurred by government. (Lee, Johnson and Philip,

2007). As such, the effectiveness and the efficiency in the collection of taxes would be greatly effectual in the delivery of the mandates of the governments.

2.2 Objectives of Taxation

Nations' authorities have two broad objectives for raising revenues through taxation. These are revenue objectives and non-revenue objectives. Revenue or fiscal objectives of taxation are where revenue is purposely raised to finance government expenditure in relation to the obligations of governments towards the citizens. Non-revenue or non-fiscal objectives of taxation are to control the behavioural attitude of the society or companies which may be harmful to persons or/and the society. For example, a tax imposed on a commodity like liquor or cigarette not to raise revenue but to restrain consumption and at times revenues raised used to rehabilitate addicts of alcohol or cigarette.

Therefore through taxation, governments are obligated to:

- Provide economic infrastructure which are basic for economic system to operate.
- Provide various collective goods and services like sewerage disposal, roads and bridges, public security, health facilities, education and the likes.
- The resolution and adjustment of group conflicts, that is ensuring law, social justice and security.
- Governments are also supposed to enact regulations to maintain healthy competition in the productive sectors so as not to hinder production.

- The protection of natural resources is also under the ambit of the state.
- Governments also regulate market forces.
- Stabilizing the economy and control of inflation.
- Regulate the behavior/attitude of the citizens.
- Income redistribution or equitable redistribution of income.
- Promotion of exports through granting of tax concessions.
- Protection of local and infant industries. (Nightingale, 1997), (Hanson, 1977), (Akoto, 2008) and (www.rateempire.com/tax/purpoe.html).

2.3 Theoretical and Conceptual Framework of Taxation and Tax Administration

"Taxes are what we pay for a civilized society." (An inscription on the Internal Revenue Service building in Washington, DC, USA.)

Taxation is defined as the imposition of a mandatory levy on the citizen and/or the business of a country by their government. "Taxation is the process whereby a state or government exacts contributions from its citizens or from the residents of its territory for the maintenance of the state machinery" (Seltzer, Goldsmith and Kendrick, 1951).

Other definitions of taxation by an author and a publication are as follow: "The impositions on the people by sovereign powers are nothing else but the wages due to them that hold the sword to defend private men in the exercise of their several trades and calling." (Nicholars, 1955).

"A tax may be defined as a "pecuniary burden laid upon individuals or property to support the government, a payment exacted by legislative authority." A tax "is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is "any contribution imposed by government, whether under the name of toll, tribute, tallage, gabel, impost, duty, custom, excise, subsidy, aid, supply, or other name." (Black's Law Dictionary, 1979)

2.4 Forms of Taxes

Taxes may be classified in two broad categories. These are Direct Taxes and Indirect Taxes. The distinction between these forms of taxes depends on who bares the burden of the tax. With direct tax, the burden or impact or incidence rest on the initial payer of the tax whilst with indirect taxes, the incidence of the tax does not rest on the initial payer but rest finally on the final consumer. Examples of direct taxes include personal and corporate income taxes, capital gains and gift tax among others. Indirect taxes consist of customs and excise duties, sales and purchase taxes among others. (Begg, Fischer and Dornbusch, 1994), (Akakpo, 2007), (Hancock 1998/1999)

2.5 Principles of Taxation

A good tax system works on the four basic principles of equity/equality, certainty, convenience and economy. Adam Smith (1776) enunciated in his book "An Inquiry into the Nature and Causes of the Wealth of Nations" which was abbreviated as

"The Wealth of Nations" postulated these principles or cannons of taxation. The principle of equity/equality indicates that the citizens of the nations must contribute towards government revenue in equal proportions to their respective abilities. A good system of taxation ought to distribute the tax burden on the community as equitable as possible. Each citizen expected to contribute according to his or her capability.

The principle of certainty indicates that the tax payer ought to be aware of the actual amount to be paid, the mode of payment and the time of payment. Others must also be aware of the tax. The tax paid by each individual should be certain but not arbitrary.

The cannon of convenience states that, every tax ought to be levied at the time and in the manner in which it is most likely to be convenient for the contributor to pay it. It relates to the simplicity of the tax laws and must be easily understood by all tax payers. The tax must be readily and easily assessed, collected and administered.

Finally the cannon of economy dictates that compliance and administration of a tax should be minimal in terms of cost. The cost of collecting the tax must not exceed the tax revenue obtained from the administration of the tax.

Later, some economists added some cannons or principle to the four postulated by Adam Smith. The principle of neutrality means a tax does not encourage inefficient allocation of resources by being so extreme that taxpayers make counterproductive economic decisions. The principle of adequacy is where a tax system has the ability to produce a sufficient and desired amount of revenue to the taxing authority. (http:/www.answerbag.com/q-view). Simplicity principle of taxation means that the

system ought to be simple and plain, easy to comprehend and clear to the understanding of the ordinary person. With the elasticity principle, a system of taxation ought to respond automatically to changes in the community's wealth, population and other needs and the productivity principle meant that the system of tax ought to produce enough net yield or revenue but not so high as to damage the source of that revenue. (Danquah, 2007)

2.6 History of Taxation

The first known system of taxation was in Ancient Egypt around 3000 BC - 2800 BC in the first dynasty when the Pharaoh collected tax revenues from the people, a fifth of the harvest during his biennial tour of the Kingdom. (www.upenn.edu/almanac/v48/n28/ancientTaxes.html)

In the era of Greek civilization, in times of war the Athenians imposed a tax referred to as *eisphora* used to pay for special wartime expenditures but rescinded once the emergency was over. They also imposed a monthly poll tax called *metoikion* on foreigners, people who did not have both an Athenian Mother and Father. Likewise in the Roman civilization, the earliest taxes were customs duties on imports and exports called *portoria.* The English and Dutch referred to the inheritance tax of Augustus in developing their own inheritance taxes. (www.taxworld.org/History/TaxHistory.htm)

The first tax assessed in England was during occupation by the Roman Empire. When Rome fell, the Saxon kings imposed taxes, referred to as *Danegeld*, on land and

property. The kings also imposed substantial customs duties. In England, under the earliest taxing schemes an income tax was imposed on the wealthy, office holders, and the clergy. A tax on movable property was imposed on merchants. The poor paid little or no taxes. The King's Writ stated that individuals should be taxed according to status and means, the birth of the idea of progressive tax.

(www.taxworld.org/History/Tax/History.htm)

To pay for the army commanded by Oliver Cromwell, Parliament, in 1643, imposed excise taxes on essential commodities (grain, meat, etc.). This led to Smithfield riots in 1647 due to the regressive nature of the tax. A precursor to the modern income tax as known today was invented by the British in 1800 to finance their engagement in the war with Napoleon and repealed in 1816.

(www.taxworld.org/History/TaxHistory.htm)

The continent of the Americans also had their share of the tax history. The Colonists were paying taxes under the Molasses Act which was modified in 1764 to include import duties on foreign molasses, sugar, wine and other commodities. When the new act known as the Sugar Act was not able to raise substantial revenue amounts, the Stamp Act was added in 1765.

(www.en.wikipia.org/wiki/Taxation_history_of_the United States)

After the American Revolution, in 1794 Settlers west of the Alleghenies, in opposition to Alexander Hamilton's excise tax of 1791, started what is now known as the "Whiskey Rebellion". The excise tax was considered discriminatory and the settlers

rioted against the tax collectors. (Rehnquist, 1992). In 1798, Congress enacted the Federal Property Tax to pay for the expansion of the Army and Navy in the event of possible war with France. In the same year, John Fries began what is referred to as the "Fries Rebellion," in opposition to the new tax. The first income tax suggested in the United States was during the War of 1812. The Tax Act of 1864 was modified after the war and repealed in 1872 and in its place were installed significant tariff restrictions that served as the major revenue source for the United States until 1913. In 1913, an amendment was passed, which allowed Congress the authority to tax the citizenry on income from whatever source derived.

(www.en.wikipia.org/wiki/Taxation_history_of_the United States)

2.7 History of Taxation and Tax Administration in Ghana

Literature revealed that the very first form of taxation in Ghana, the then Gold Coast, was when the payment of local duty from shipping at the sub-ports was exacted. This led to the establishment of the Department of Customs in 1839 to enforce the payment of this Indirect Tax. (CEPS News, 2007).

In 1852, the poll tax, a tax of a fixed amount collected from every citizen of the country, was introduced by Governor Major S. J. Hill after arriving in the Gold Coast. It was to be used in providing health facilities, education and other amenities to the communities and also the chiefs would be paid stipends of allowances if they approved the imposition of the tax. However, when the promises of paying the chiefs stipends

and the provision of the amenities were not fulfilled, the chiefs became incorporative and the collection of the tax ceased. (Akoto, 2008).

In September 1931, Governor Sir Ransford Slater made an attempt to introduce the income tax but failed. After assessing the situation, the tax was rather imposed on cocoa exports. Income tax was introduced due to a fall in cocoa price during the governorship of Sir Allan Burns. Though there were protestations, the Tax Bill went through the various stages in the Council and become law, passed as The Income Tax Ordinance (No. 27) in September 1943. (Akoto, 2008)

In 1943, the Income Tax Department was established to collect the Income tax. In addition, other taxes collected include Mineral Duty (1952), Betting (1955) and Casino (1959). (Akoto, 2008)

The Department was renamed Central Revenue Department when other taxes and duties were introduced in 1961, to take effect from July 1, 1963. The taxes introduced include Property tax (1961), Entertainment Duty (1962), Airport Tax (1963), Excess Profit Tax (1963), Hotel Customers' Tax (1963) and Standard Assessment (1963). (Akoto, 2008)

The year 1986 marked a major milestone in the history of the tax colleting institutions. The Central Revenue Department was reorganized and the name changed to Internal Revenue Service, effective July 1, 1986 by PNDCL 143 (the Internal Revenue Service Law, 1986) alongside with others. The institution was re-structured to administer the Income Tax (Employees, Self Employed and Companies), Capital gain Tax, Mineral Royalties, Stamp Duty, Hotel and Restaurant Tax.

All this while, the customs department was also going through various transformations as the years roll by. Eventually, in 1986, The Customs, Excise and Preventive Service was also created as a semi-autonomous institution out of the Civil Service under the PNDCL 144 of 1986. Presently, the Customs, Excise and Preventive Service operates under the CEPS Management Law, PNDCL 330, 1993.

In 1995, the Value Added Service Act, ACT 546 was enacted to administer Value Added Tax (VAT). The Value Added Tax (VAT) is levied on the 'value added' created at the various stages of production and distribution of the commodities which are taxable. Though the enactment of the Act witnessed it ugly side, in 1998 the Value Added Act, ACT 546 was promulgated and became chargeable on value added at importation, manufacturing, wholesale and retail levels, as well as on provision of services, except those specifically exempted.

2.8 Theoretical and Conceptual Framework of ICT

Information and Communications Technology (ICT) is an umbrella term that includes all technologies for the manipulation and communication of information. The term is sometimes used in preference to Information Technology (IT). (www. searchciomidmarket.techtarget.com/sDefinition). ICT encompasses any medium to record information, flash memory, technology for broadcasting information and technology for communicating through voice and sound or images. It includes the wide variety of computing hardware, personal computer hardware market and application software from the smallest home-developed spreadsheet to the largest enterprise

packages and online software services; and the hardware and software needed to operate networks for transmission of information ranging from a home network to the largest global private networks operated by major commercial enterprises and the Internet. (www.ict-tutor.co.uk/)

ICT involves organized combination of people, hardware, software, communications networks and data resources that collects, transforms and disseminates information in an organization. People has relied on information systems to communicate with each other using a variety of physical devices (hardware), information processing instructions and procedures (software), communication channels (networks) and stored data (data resources). It depends on the resources of people (end users and IS specialists), hardware (machines and media), software (programs and procedures), data (data and knowledge bases) and networks (communications media and network support) to perform input, processing, output, storage and control activities that convert data resources into information products. (www.ict-tutor.co.uk/)

The emergence of advance ICT has charged the face of business and organizational processes and operations. It allows information flow throughout the organization, improve coordination, efficiency and decision making. It also brought about the provision of information and support for effective decision making by managers called management support systems. These are (i) management information systems (MIS), (ii) decision support systems and (iii) executive information systems. (O'Brien, 2003)

Management information systems provide information in the form of reports and displays to managers and business professionals. Decision support systems give direct computer support to managers during the decision-managers process. Executive information systems provide critical information from a wide variety of internal and external sources in easy-to-use displays to executives and managers. (O'Brien, 2003)

Other information systems used to support either the operations or management applications are mainly knowledge management information systems and strategic information systems. Knowledge information systems are knowledge-based information systems that support the creation, organization, and dissemination of business knowledge to employees and managers throughout the organization. Strategic information systems apply information technology to a firm's products, services, or business process to help it gain a strategic advantage over its competitors. (O'Brien, 2003) Therefore the information systems required by an organization greatly influenced the type of ICT the organization chooses and deployed in order to achieve its strategic advantages.

2.9 ICT as a Strategic Tool in Organisations

ICT has become one of the principal forces in the global economy (Melody 1985). ICT is today recognised as a form of technological development that is transforming the economics of the Western world. (Castells 1996, 2001, Dabinett 2000).

The evolution in ICT leads to the fundamental changes in the way work is being done. ICT is playing a vital and expanding role in businesses and organizations. ICT is helping all kinds of businesses improve the efficiency and effectiveness of their business process, managerial decision making and workgroup collaboration and strengthening their competitive positions in a rapid marketplace. Internet-based information technologies and systems are fast becoming a necessary ingredient for business success in today's dynamic global environment leading to the development of Strategic Information Systems (SIS), information systems.

2.10 The perspective of ICT in Tax Administration

The World Customs Organisation (WCO) stipulated in its charter framework, Articles 4 and 5 of the Revised Arusha Declaration (The Declaration of the Customs Co-operation Council Concerning Good Governance and Integrity in Customs, ratified in Arusha, Tanzania, July 1993 and revised in June 2003), the need for automation, reform and modernization in Customs Administrations. (The Revised Arusha Declaration)

Article 4 of the Revised Arusha Declaration indicated that automation or computerization of Customs functions can improve efficiency and effectiveness, reduce official discretion, remove face-to-face contact between Customs personnel and clients, and reduce physical handling, transfer of funds and many opportunities for corruption. Automation can also increase the level of accountability and provide an audit trail for later monitoring and review of administrative decisions.

Article 5 of the declaration also indicated that reform and modernization must be undertaken by all Customs Administrations belonging to the WCO in efforts to facilitate trade. Customs administrations should reform and modernize their systems and procedures to eliminate any perceived advantages which might be obtained through circumventing official requirements. Such reform and modernization initiatives should be comprehensive in nature and focus on all aspects of Customs operations and performance.

Again, Chapter 7 of the Revised Kyoto Convention, a convention ratified by the member countries of the World Trade Organisation (WTO) laid in on its members the use of Information Technology. Members of the organization were to revise their national legislation to provide for:

- e-commerce alternatives to paper-based documentation requirements; electronic as well as paper-based authentication methods; the right of Customs administrations to retain information and share it with other Customs administrations through e-commerce.
- Customs administrations to develop information technology in consultation with all relevant parties.
- Customs administrations to apply information technology to support operations, in order to attain cost-effective and efficient for Customs and the trade. (The Revised Kyoto Convention)

The perspective of ICT in Tax Administration is therefore not only in the benefits that countries may derived from ICT policies but that it is in the mandate of

Customs Administrations of all countries which ratified these international protocols, declarations and conventions to implement ICT policies to facilitate trade.

2.11 Benefits of ICT in Tax Administration

It is realized that in many Tax Administrations, ICT was instrumental in bringing transparency and efficiency in their operations. It helped the organization to increase the compliance level. ICT has also contributed to achieving following organizational objectives:

- ICT has brought down the time taken to process the taxpayer's registration application
- ICT has been effective in monitoring the performance of the employees.
- ICT has brought transparency in the tax administration. Taxpayers can track the status of their application through tax portal.
- ICT has enabled the tax officials to take timely and accurate decisions. The cost of assembling, categorizing and summarizing relevant information for decision making has been reduced to a considerable extent.
- ICT has facilitated the organization to send the compliance notices timely to defaulting taxpayers. This has increased the compliance level amongst the taxpayers.
- ICT has helped tax organizations to identify the cases of tax evasion.

- Through the use of ICT, tax organizations have been able to exercise greater control over the movement of goods and integrated view of the taxpayer's profile has helped recovering the dues faster.
- ICT has also facilitated the taxpayers for filing their returns online, submitting their application and making online tax payments. (www.stockholmchallenge.se/data/2324)

2.12 Importance of ICT on Tax Administration

The deployment of ICT has brought a lot of benefits to organizations the world over though ICT is not a panacea for tax administrations. However, effect of ICT on tax administration is felt primarily on the following areas:

2.12.1 Revenue Collection

Tax Administrations in the world over are traditionally concerned with rising revenue for the state. Though ICT policies are not ends in themselves, they are recognized as means towards achieving maximum revenue generation. The policies are such designed to aid maximization and optimization of tax revenue. ICT must make tax collection simple, elastic and productive as postulated in the cannons of taxations. Therefore, for an effective ICT policy, it must have a positive effect on revenue generation in any tax administration.

2.12.2 Trade Facilitation

Trade facilitation is a concept that considers the simplification, harmonization, standardization and modernization of trade procedures. Its principle aim is to reduce

transaction costs in international trade, especially those between business and government actors at the national border. This concept is closely linked with a successful implementation of ICT policies.

For this reason, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) aid governments to facilitate the development of e-business standards that can cross all international boundaries and help lower transaction costs, simplify data flow and reduce bureaucracy.(http://en.wikipedia.org/wiki/UN/CEFACT). ICT is also to help in time-release measures, risk management and trader authorizations, standardization of documents and electronic data requirements and international electronic exchange of trade data.

2.12.3 Human Resource Development

Tax administrations need to define the profile of its desired staff. The general educational background of all the staff should be sufficiently high to ensure that they can acquire and maintain the skills required by the organisations. The various functional areas in organizations require extensive use of technology. Staff's knowledgeable in ICT are required in intelligence gathering techniques to facilitate trade, interfacing with the trading community, and collection and dissemination of international trade statistics.

Staffs need to be trained in the use of the new technology to exploit the data that will become available for policy and enforcement purposes. Recruitment should be geared towards obtaining manpower which is knowledgeable in ICT. All these must positively affect human resource capacity needed in Customs Administration.

2.12.4 Trader Relation

Effective ICT policy implementation in tax administration leads to improved communication between tax authorities and the trading public. It enhances communication through the use of interfacing, intranet and internet facilities. Tax Authorities and traders are able to communicate electronically, increasing the speed in communication, harmonizing their relationship and reducing bureaucracies.

2.12.5 Corruption Perception

The Revised Arusha Declaration (Articles 5 and 6) indicated that corruption typically occurs in situations where outdated and inefficient practices are employed and where clients have an incentive to attempt to avoid slow or burdensome procedures by offering bribes and paying facilitation fees. Computerization of core customs processes is observed to improve the efficiency and effectiveness and remove opportunities for corruption by minimizing unnecessary face-to-face contact between officials and clients and reduce opportunities for the improper exercise of discretion.

2.13 Tax Administration of CEPS

2.13.1 The Establishment of CEPS

The establishment of Customs, Excise and Preventive Service dated back to 1839 as the Department of Customs, when it became necessary for the country then the Gold Coast to enforce the payment of local duty from shipping at the sub-ports in Accra. The department evolved through the century as being responsible from primarily collecting the local duty from shipping and secondarily handling Money courts and

Police courts, determining cases of minor nature, exercising authority within respective localities as magistrates to collection of indirect taxes presently. (CEPS News, April 2007).

In 1897, the preventive protection aspect of the Service, the Customs Preventive Service, a semi-military organisation was created. In 1947, the Customs and Excise Department was created and in 1960, the Customs Preventive Service once again became a civilian organization. During the changing faces of the establishment, it served under various Ministries namely Interior, Trade and Finance at various periods until a major transformation took place in September 1986. This transformation led to the creation of the Customs, Excise and Preventive Service (CEPS), as a semi-autonomous institution outside the Civil Service under CEPS Law, PNDCL 144 of 1986. This move was part of Ghana government's programme aimed at restructuring and rationalizing the major revenue agencies. (CEPS News, April 2007). Presently, CEPS operates under the CEPS Management Law, PNDCL 330 of 1993.

The law charges CEPS with the collection of Import Duty, Import VAT, Export Duty, Petroleum Tax, Import Excise and other taxes and levies and excise duty which is now ceded to the VAT Service. CEPS also ensures the protection of revenue by preventing smuggling by physically patrolling the borders and other strategic points and maintaining the territorial integrity of the country. CEPS also performs agency duties on behalf of other government organizations and ministries by enforcing the laws on import and export restriction and prohibition.

2.13.2 Vision

Out of the objectives and the functions, a vision was couched for CEPS. This vision as stated in the strategic plan is *TO PROVIDE A WORLD CLASS CUSTOMS SERVICE.* (CEPS Corporate Strategic Plan)

2.13.3 Mission Statement

In order to achieve the vision as stated, the Service has carved a mission statement for itself. The mission statement reads, "*It is to design and implement effective strategies and programmes to collect, account and protect Customs, Excise and other assigned tax revenue at minimum cost, while facilitating trade, investment and the movement of people across the borders of Ghana through effective and transparent service delivery.*" (CEPS Corporate Strategic Plan)

2.13.4 Core Activities of CEPS

The primary activities of CEPS consist of (a) Assessment (b) Collection and (c) Protection of revenue.

Assessment is made up of Examination, Classification and Valuation. Examination involves critical examination of traders'/importers' documents and goods to ensure that genuine document, exact or actual items/goods are presented in the right quantities and at the right time. Classification involves categorizing goods into various classes as determined by the nomenclature of the WCO regulations. Valuation is the process by which values are assigned to the consignments which form the base of the tax.

Collecting of Revenue is the physical collection of/and accounting for the monies. These activities consist of i) collection of monies (ii) issuance of receipts (iii) entry of amounts into the cash book (iv) lodgments at the banks (v) preparation of revenue returns (iv) Bank reconciliation statements.

Protection of Revenue ensures that the revenue law as well as the revenue is not evaded. It comprises auditing procedures to ensure adherence and/or compliance to prevent revenue linkages and anti-smuggling activities aiming at safeguarding potential revenue. Bond systems are other forms of protecting the potential revenues. These consist of securing bonds for Warehousing, goods in transit and temporary imports.

2.13.5 Supporting Activities

These activities are made of Administration and Human Resource, Finance and Corporate Planning, Research, Monitoring and Information Technology, Legal, Audits, Procurement and Suppliers. (PNDCL 330). The performance of the CEPS is seen not only in the efficient performance of individual functional areas of the organization, but integrated functional units of the organization.

2.13.6 Non-Revenue Functions

CEPS also performs non-revenue functions on behalf of other governmental agencies and ministries. It involves the enforcement of laws regarding facilitation of international trade, imports and exports restrictions, exchange control, public safety and other interests of the State.

2.14 INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) POLICY IN CEPS

2.14.1 ASYCUDA Project

In 1990, CEPS started automation by the introduction of a computer based system called the Automated System for Customs Data (ASYCUDA version 2.7), with Project Number GHA/88/006. (www.asycuda.org/dispcountry.asp?name=Ghana)

The ASYCUDA system is developed in Geneva by UNCTAD and made available to member countries to assist their Customs Administrations in improving revenue collection, providing uniform application of legislation and procedures, control of illicit traffic and production of timely and reliable statistics. However, ASYCUDA is usually configured to suit the national characteristics of individual Customs regimes, National Tariff, legislation and cultural inclinations. ASYCUDA is a computerized customs management system which covers most foreign trade procedures. The system handles manifests and customs declarations, accounting procedures, and transit and suspense procedures and generates trade data that can be used for statistical economic analysis. (www.asycuda.org/aboutas.asp).

ASYCUDA also takes into account the international codes and standards developed by ISO (International Organisation for Standardisation), WCO (World Customs Organization) and the United Nations. It provides for Electronic Data Interchange (EDI) between traders and Customs using EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) rules. (www.asycuda.org/aboutas.asp)

2.14.2 Benefits and Advantages of Using ASYCUDA

ASYCUDA accelerates Customs clearance and simplifies procedures through computerization. It cuts costs for businesses and shortens the time it takes to process goods. Governments gain from improved control of Customs, increased revenue and availability of reliable and timely statistical information. It reduces the work required to produce statistical information.

ASYCUDA operates an open system which reacts with external applications via message handlings. It also uses client-server architecture and it is modular designed and flexible and easy to maintain. Though it uses international standards and data, it is locally tailored to each country's needs. It also has Server-to-Serve Communications and Data Integration and Access modules. (www.asycuda.org/aboutas.asp)

2.14.3 ASYCUDA in Ghana

The adoption of ASYCUDA version 2.7 by Ghana however did not meet the aspirations of CEPS and the country. It became purely an ICT system for capturing data on imports and exports. Micro computers were linked to a server in a local environment, which is the port/station, serving as storage equipment for data, limiting the scope to each port level. Only, three (3) stations benefits from the ASYCUDA Project, namely Tema, Takoradi and Kotoka International Airport. In order to obtain a national data or information on international trade or any statistics, various data must be collated to arrive at the required information. Management information was difficult to retrieve where individual or several servers were involved.

The complex nature of Customs operations in a multi user environment and the mode of implementation of ASYCUDA version 2.7 in Ghana made it unsuitable in the

context of expanded international trade and globalization. Due to the bottlenecks of retrieving data, the format of the software, and its limitation in scope in information management, and not keeping pace with the world's technological advancement, CEPS was to migrate to ASYCUDA++, a technological advanced system which uses object oriented tools in a client/server architecture and is based on a relational data base management system (RDBMS).

2.14.4 ASYCUDA in Uganda, Jordan and Saint Lucia

While Ghana was going through the difficulties, other countries like Uganda, Kenya, Jordan, Saint Lucia and Afghanistan were also implementing various versions of the ASYCUDA. Uganda introduced ASYCUDA version 2.6 in 1996 and later in 1999 upgraded it to version 2.7. The Uganda Revenue Authority (URA) management now migrated to the newer ASYCUDA ++ version on November 2002, which consists of several modules, including Declaration, Accounts, Statistics, Manifest, Transit Broker (Agent), ASY Gate (for communication between servers) and Risk management, compared to version 2.7 which did not provide the Warehousing/Bonds and Risk management modules. (www.ugrevenue.com/regulations/asycuda.htm)

One more successful country in the implementation of ASYCUDA++ is Jordan. There are several indicators which showed that the Project was successful, and the expected impacts were attained. The successes achieved by Jordon were reduction in time of release, revenue has stayed constant despite significant reductions in duty rates, trade statistics are more complete, accurate, and up-to- date. There is simplification and increased transparency in procedures and capacity building in terms of training and transfer of technology and know-how was achieved. (www.unctad.org/Templates/Page)

Saint Lucia, Kenya also achieved some successes in the implementation of the ASYCUDA. In the case on Saint Lucia, its success indicators are impact/benefits of its implementation. Some of these indicators are:

- Reduced Processing and Clearance Times
- Increased Revenue Collection increased by approximately 30%.
- Procedures, Forms and processes have been simplified along with greater transparency:
- Trade statistics is more complete, accessible, reliable and up-to- date.
- Capacity Building in comprehensive training of staff, brokers, Government departments and traders has facilitated a transfer of technology and knowledge in state-of-the-art software and hardware. (WTO Trade Facilitation Measure. CASE STUDY 2005)

The decision of Ghana to migrate from ASYCUDA version 2.7 to ASYCUDA++ however did not materialize, so the country went to shop for an alternative. This led to adoption of Customs Management System (CMS) as an alternative. As a result, the Ghana TradeNet was introduced in 2002 to replace the introduction of ASYCUDA++.

2.15 GHANA TRADENET

2.15.1 Singapore Network Services

In 1990, the Government of Singapore created Singapore Network Services (later known as Crimson Logic in 2002) to own and operate the TradeNet system, with the Singapore Trade Development Board, the port and civil aviation authorities and the international airport as stakeholders. (De Wulf, 2004). Singapore's achievements of

speeding up trade transaction and linking most members of the trading community or stakeholders by means of a single data network known as TradeNet have attracted the attention of a number of observers and countries.

The main achievements of the Singapore TradeNet are as follows: (De Wulf, 2004)

- The processing time for cargo clearance was reduced from two to four days to only minutes.
- The number of documents required for cargo clearance fell from a range of 3 to 35, depending on the transaction, to 1.
- The number of trade transactions processed per day rose from 10,000 to 30,000.
- The freight forwarders estimate that their costs of handling trade documentation have fallen by 20 to 35 percent.
- The customs service receives customs duties payments much faster than before.
- The compilation of trade statistics has improved substantially, benefiting both the trading community and the national authorities responsible for trade policy and economic surveillance.

2.15.2 Ghana TradeNet System

Through the evaluation of the benefits and shortcoming of the ASYCUDA ++ as against the TradeNet, Ghana decided to adopt and implement the TradeNet System. In November 2000 the Ghana Community Network (GCNet) was created as a joint venture company with foreign shareholders (Societe Generale de Surveillance with 60 percent, customs with 20 percent, the Ghana Shipping Council with 10 percent, and two local banks, each with 5 percent). It operates under a service contract with the Ministry

of Trade and Industry. It instructs GCNet to install the electronic commerce–based system and a new customs management system.

The main operational features of Ghana TradeNet Community were that Crimson-Logic would provide the software for the electronic commerce-based community and adopting the Customs Management System (CMS) that was designed for Mauritius and was successfully interfaced with the initial TradeNet from Singapore. (De Wulf and Sokol, 2005). The system is composed of fully integrated customs management software connected over a network to various operators who interact with Customs in processing import and export consignments to and from Ghana.

The Ghana TradeNet system is made up of two components:

- Ghana Customs Management Systems (GCMS) which is intended to provide the Customs Excise and Preventive Service with a fully integrated computerized system for the processing and management of Customs Declarations and related activities. This system is designed to work in an EDI (Electronic Data Interchange) environment, where Manifests and Single Administrative Documents (SADs) are electronically received and automatically processed.
- Ghana Community Network (GCNet) the platform which enables GCMS to share data with all the parties involved in the processing of trade documents and customs clearances. (GCNet/GCMS Training Manual)

Ghana TradeNet allows for the following activities

- Electronic submission of Manifest by Shipping and Clearing Agents
- Electronic submission of SADs that is the declarations by Declarants
- Payment of Duties confirmed electronically by the banks
- Integrated system for the sharing of files between Customs officers

- Transfer of electronic messages or data between Customs and Trade Operators
- Import, Export, Warehousing, Free Zone and Transit Operations are done electronically. (GCNet/GCMS Training Manual)

Also the implementation of Ghana TradeNet enables Customs and the trading Community to perform the following tasks electronically.

- Submission of declarations takes place any time of the day
- Validation of declarations are performed automatically
- Front-End Software (FES) for declarants enables record keeping and internal statistics
- Integrated Risk Assessment Module (Selectivity Module) enables Customs to select and filter declarations for expedited action.
- Payment of Duties and taxes made at the participating banks' branches and transmitted electronically
- Serves as a database that generates accurate trade and revenue statistics and for monitoring. (GCNet/GCMS Training Manual)

2.15.3 GCNET/GCMS Operations

It interfaces the user and the computer system. All parties are connected to the Network via GCNet thus all parties except CEPS and the Banks are interfaced directly without going through GCNet. The system is Windows-based software installed on the user's Personal Computer which enables him to capture data, and send EDI messages to and from GCNet and GCMS.

Since the inception of the Ghana TradeNet project in 2002, several modules had been added in order to make more versatile and universal in dealing with all the regimes in Customs administration. Some of these additions and modifications to the

GCNet/GCMS are: GCMS i-Transit system, Food and Drug Boards (FDB) e-Permit, Electronic FCVR from Destination Inspection Companies, Environmental Protection Agency (EPA) e-Permit, Warehouse Connectivity Project to connect all Warehouses, Satellite Tracking Units (STUs) to transit vehicles.

The rest are electronic IDF by Ministry of Trade and Industry, IRS Withholding Tax integrated, Electronic Export permit by Timber Industry Development Division, (TIDD) of the Ghana Forestry Commission and e-return on petroleum product lifted from Bulk Oil Storage and Transportation (BOST) and GCNet/GCMS and CEPS migrated to GCMS 2 on 6th April, 2009.

Currently, the ports of Tema, Kotoka International Airport (KIA), James Town, Takoradi, Elubo, Kumasi, Paga, Aflao, Kpoglo and the Head Office are linked to the system. The government of Ghana has since implemented the GCNet/GCMS project for almost 8 years. The effects of implementation are mixed in the face of benefits anticipated. There is the need to critically assess the important roles played by ICT policies in CEPS in order to assess their effects on the operations of the organisation.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Background to the Methodology

This chapter of the study explained how the research was conducted and the systematic process used in carrying out the research, in order to make an assessment of the theories and observations about the effectiveness of ICT in changing the structures of business performance of CEPS and arriving at conclusions and recommendations which are applicable to CEPS' in the face of the implementation of ICT policies.

It explained the data that would be needed in analyzing the impact of ICT in CEPS, how this information was collected and the methods which were employed to achieve the purpose of the study. It demonstrated an awareness of the methodological tools available to the researcher and showed some understandings of which were suitable for the research. (IRIS, 2009) This is to ensure that study results obtained are systematic, objective, controllable, viable, reliable and replicative.

3.2 Problem Identification

As the fundamental principle of a research is a purposeful investigation into a problem or a phenomenon for decision making, the first and foremost inclination was to identify the problem or the phenomenon which agitated the mind and informed a study be conducted into the problem. The study tried to identify how important ICT is in tax administration of CEPS and how ICT policy implementation affected CEPS' operation.

3.3 Research Design

Research design provides the glue that holds the research project together. It is the blue print of the research. A design is used to structure the research, to show how all of the major parts of the research project, the samples or groups, measures, treatments or programs, and methods of assignment, work together to try to address the central research questions. (Trochim, 2006).

It is the detailed plan for collecting data in order to answer the research question. Specific data analysis techniques or methods the researcher intends to use are outlined in the design. The research project focused on CEPS, in studying the effect of ICT on the organization through gathering of qualitative data via questionnaire, observation and documentary analysis and interviews.

Though, qualitative techniques were used extensively in the research, the nature of the study in relationship with the hypotheses of finding a relationship between ICT as an independent variable and Tax Administration, a dependent variable necessitated the use of some quantitative techniques in arriving at the conclusions.

3.4 Sampling Procedures/Techniques

The term "sampling" indicates the selection of a part of a group or an aggregate known as the "population" with a view to obtaining information about the whole. The selected part which is needed to ascertain the characteristics of the population is called sample. In this study, the population consist of Customs officials and members of stakeholder organizations like clearing and forwarding agents, importers, shipping

lines/airlines, banks, and other agencies involved like the Ministries of Finance and Trade to mention but a few, the Port Authorities, Inspection Companies.

The sample size made up of sample units was constructed with convenience, time constraint, ease of gathering data and limitation of cost in mind.

The sample consisted of:

- Selection of Collections/Stations which are hooked to the GCNet/GCMS system. As stated earlier, the Collections/Stations which operate the GCNet/GCMS system are CEPS Headquarters, KIA, Tema, Takoradi, Kumasi, Aflao, Elubo, James Town (Accra), Paga and Kpoglo Stations. Out of these, KIA, Tema, Headquarters and Aflao were selected due the proximity and convenience. The population of CEPS is of about 4000 staff strength (CEPS Annual Report, 2007) and the staff strength of the nine (9) stations where GCNet/GCMS operates is about 2500 personnel, working in various departments. Out of the stations and various departments, 120 staff representing about 3.0 percent of the total staff of CEPS and 4.8 percent of staff selected from the four stations was randomly selected to respond to the questionnaires.
- The second set of sixty (60) questionnaires were administered to the stakeholders selected at random from organizations which partner CEPS.
- Twenty-five (25) persons were specifically selected to respond to questions in an interview.

3.5 Sources of Data

This research work made use of both primary and secondary data. The primary data for the study was collected by the use of questionnaires and interviews. These formed data observed or collected directly from firsthand experience or data gathered for the first time. Published data and the data collected in the past or by other parties or data taken by the researcher from secondary sources, whether internal or external are called the secondary data. The secondary data was obtained through the review of existing literature from books, journals, annual reports, quarterly reports, newsletters, newspapers, and unpublished works as well as extensive use of the internet. (www.citeman.com/primary-and-secondary data)

3.6 Data Collection Procedure

Data collection methods involved various techniques aimed at gathering information that would be adequate, accurate, precise, reliable and convenient. The method adopted in the collection of data must be able to provide the most adequate data for the study. The study used Convenience Sampling method in selecting the stations and stakeholder organizations. Convenience sampling is mostly used to obtain a large number of completed questionnaires quickly and economically. (Arvind and Hiamnshu 2007).

The selection of clearing and forwarding agencies and departments within CEPS for the administration of the questionnaires were based on the researcher's existing knowledge and experience. Therefore, the concept of Purposive Sampling or

Judgement Sampling was applied, bearing in mind the departments in CEPS and the various agencies which are in the forefront of ICT implementation.

However, the selection of individual respondents in the Collections/Stations and stakeholder organizations were done using a simple random sampling method.

The questionnaires were personally administered to the respondents. Some of the respondents who needed some assistance were guided where the need arose. Some of the respondents completed the questionnaires in the presence of the researcher where possible and some were left to be completed and collected at a later period. Data collected was reviewed with the respondents immediately after the collection to check the completeness and the consistency of the data. Reviewing of the data was to ensure maximum accuracy and reduce ambiguity in the data collected. The data collected were coded for analysis.

The interviews among others involving the Assistant Commissioner (IT), Assistant Commissioner (Research and Monitoring), Assistant Commissioner (Budget), and CC (IT) were conducted. The interview duration was between 30 minutes to 1 hour on predetermined questions and the responses written down.

3.7 Data Analysis/Presentation Procedure

Both qualitative and quantitative procedures were used to analyse data gathered from the questionnaires and the interviews. Quantitative Analysis provides data-driven analytical services for a range of data collected from secondary sources through the use of specialized statistical models. The SSPS for Windows (Version II), analytical

software was used to analyse the quantitative data generated with the questionnaire and the data from the interview was analysed qualitatively by content analysis.

The Microsoft Office Excel 2007 was used in analyzing some of the secondary data for graphical presentation in tables and charts for more clarity because Excel provides a clearer pictorial presentation.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter examined the data collected from the field and the analysis of the information obtained in order to make sufficient deductions based on the responses from the respondents to the questionnaires in respect to the objectives of the study. The responses from CEPS officials were analysed under one grouping and that of CEPS' stakeholders analysed under another grouping. In case where the questions asked are the same, a combined analysis is done. There were interviews of CEPS officials and stakeholders on the subject matter and secondary data from the Research and Monitoring Department of CEPS were also studied. Some of the results were presented in the form of tables, charts and graphs to give a quick overview of the study.

4.2 Structure of Responses

The CEPS officials responded to questions on knowledge in ICT, the ability to use ICT in the performance of duties, knowledge in ICT policy implementation with particular reference to ASYCUDA and GCMS. The impact of ICT on official duties or schedules and the impact on CEPS' administration and stakeholders in the performance of their duties in respect to import/export trade were other issues in the questionnaire. The stakeholders responded to questions on the knowledge in ICT, the ability to use ICT, knowledge in CEPS' ICT implementation particularly ASYCUDA and GCMS, the impact of ICT on the activities of the stakeholders' establishment and relationship

with CEPS' operation. Other issues were obtained through interviews and secondary data. The interviewees responded to questions on advantages of implementing ICT policies.

4.3 Background of Respondents

A total of 180 questionnaires were administered to CEPS officials and stakeholders. Out of these, 120 of "Type A" questionnaires (Appendix 6) were administered to CEPS officials and 60 of the "Type B" (Appendix 7) were administered to other stakeholders. The questionnaires and its imports were clearly explained to the respondents. The questionnaires which were completed and collected came to 160 questionnaires and 20 questionnaires left uncollected due to time constraints.

The total of 160 persons who responded to the questionnaire consist of 102 CEPS officials and 58 persons from import and export clearing houses, stevedore companies, importers, inspection companies, Internal Revenue Service and Ministry of Trade and Industry, all of whom are referred to as the Stakeholders.

Out of the 160 respondents, 92 (57.5%) were males and 68 (42.5%) were females. The selection of gender was not deliberate however it shows a fair representation, showing gender involvement in the ICT policy of CEPS, though the distribution is slightly skewed towards the males especially respondents from CEPS.

In all a total of 25 persons were interviewed. This included both junior and senior officials of CEPS as well as CEPS stakeholders. Some of the officials interviewed are Assistant Commissioner, IT, Assistant Commissioner, Research and

Monitoring, Assistant Commissioner, Budget and Chief Collector, IT. Table 2 below shows sex/age cross tabulation of the respondents in the study.

TABLE 2. SEX/AGE CROSSTABULATION OF RESPONDENTS

Age / Sex	20 – 29	30 - 39	40 – 49	50 – 59	TOTAL
Male	8	18	34	32	92
Female	12	20	30	6	68
TOTAL	20	38	64	39	160

The ages of the respondents range from 20 to 59 years with an average age of 44.3 years for males, 38.9 years for the females and the combined average age of 42 years for the 160 respondents, though the modal age group is 40 – 50 years for both males and females.

The respondents of various positions were selected from various departments in CEPS and the stakeholders from various organisations with various designations. It was therefore necessary to look at the academic levels of the respondents to determine its impact on the implementation and success of the ICT policy. The results in Table 3 show the educational levels of the respondents.

TABLE 3: EDUCATIONAL LEVEL OF THE RESPONDENTS

Educational Background	CEPS		Stakeholders		TOTAL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
GCE 'O' Level/SSSCE	4	3.9	16	27.6	20	12.5
GCE 'A' Level	10	9.8	13	22.4	23	14.3
Diploma/HND	20	19.6	10	17.2	30	18.8
First Degree	44	43.1	12	20.7	56	35.0
Second Degree	24	23.6	7	12.1	31	19.4
TOTAL	102	100	58	100	160	100

The educational levels of the respondents in CEPS are heavily tilted towards the first degree holders with 44 (43.1%) respondents, followed by 24 (23.5%) respondents with second degree, then the diploma/HND holders with 20(13.7%) respondents. The rest were made of 10 (9.8%) with GCE 'A' Levels and 4 (3.9%) with GCE 'O' Level/SSSCE. The distribution shows the availability of qualified personnel to handle an ICT policy of CEPS if appropriate training is given.

The stakeholder educational background statistics also shows a considerable level of first degree holder with 12 (20.7%), whilst 7 (12.1%) holds second degree, 10 (17.2%) holds diploma/HND, 13 (22.4%) holds GCE 'A' Levels and 16 (27.6%) holds GCE 'O' Level/SSSCE. It is noted that the high percentage of GCE 'O' Level/SSSCE came from the freight forwarders, importers and the agents, who are involved in the

physical aspect of clearing and not with the technical issues which needs more understanding of the working processes some of which includes computer systems.

The responses revealed that the respondents from CEPS have working years from 1 to 30 years and that of the stakeholders ranges from 1 to 35 years. The average working years of the respondents from CEPS is 16.8 years and that of the stakeholders is 10.6 years. Majority of respondents from CEPS have their working period between 11 to 20 years that is 68 (66.7%) respondents, followed by those over 20 years, 24 (23.5%) respondents and those below 10 years, 10 (9.9%) respondents.

Likewise the stakeholder respondents also have majority of their working years from 11 to 20 years of service, 30 (51.7%) respondents. The rest are respondents with less than one year with 2 (3.4%), 1 to 2 years and 3 to 6 years with 10 (17.2%) respondents respectively, 7 to 10 years with 4 (6.9%) and lastly over 20 years with 2 (3.4%) respondents. Table 4 depicts the number of years of service of the respondents.

TABLE 4: NUMBER OF YEARS OF SERVICE OF THE RESPONDENTS

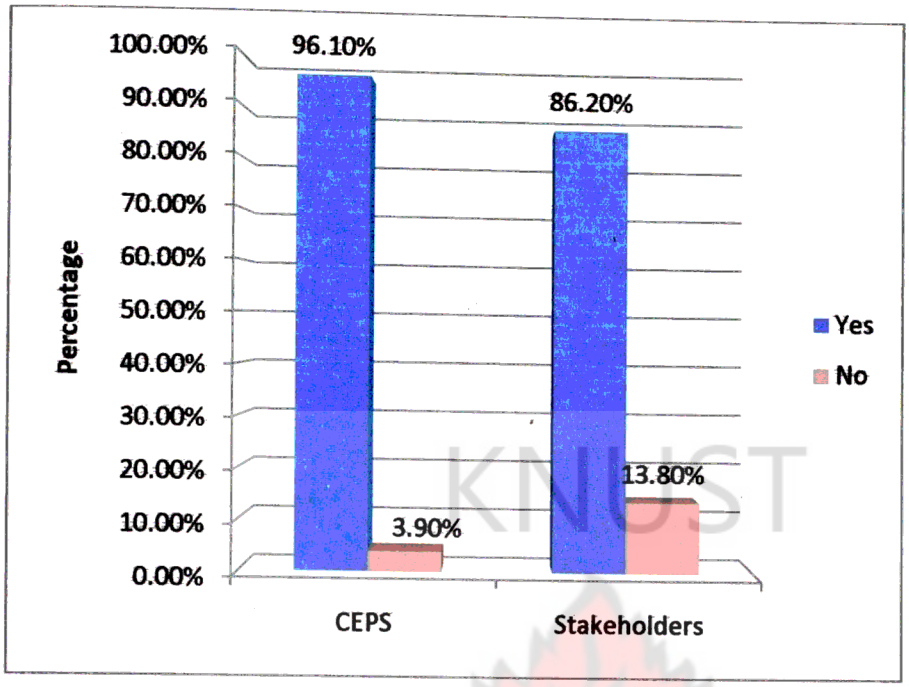
No. of Years of Service	CEPS		STAKEHOLDERS		TOTAL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
< 1 year	2	2.0	2	3.4	4	2.5
1 – 2 years	2	2.0	10	17.2	12	7.5
3 – 6 years	2	2.0	10	17.2	12	7.5
7 – 10 years	4	3.9	4	6.9	8	5.0
11 – 20 years	68	66.7	30	51.7	98	61.2
>20 years	24	23.5	2	3.4	26	16.3
TOTAL	102	100.1	58	100	160	100

From table 3, the modal age group of the respondents is 11 to 20 years representing 98 (61.2%) respondents. The average year of service of the respondents is 14.6 years. This may be beneficial to the organizations in terms of staff immobility. After spending this number of years with the various organizations, the staff may find it difficult to vacate post after being trained to implement a policy unless there is a better alternative available.

4.4 Knowledge and Ability in ICT

One Hundred and forty eight representing 92.5% of the respondents are computer literate while 12 (7.5%) are not. In the CEPS community, the responses showed that out of 102 respondents, 98 (96.1%) are computer literates and 4 (3.9%) of the respondents are not. The responses by the stakeholders also indicated that 50 (86.2%) of the respondents are computer literates and 8 (13.8%) are not. This shows a strong indication that the respondents have the capacity to appreciate the importance of implementing ICT policies. Figure 1 below shows the percentage distribution of computer literacy in the two groups.

FIGURE 1: PERCENTAGE DISTRIBUTION OF COMPUTER LITERACY AMONG THE RESPONDENTS.



On the mode of acquisition of computer knowledge, the responses from CEPS indicated that 30 (30.6%) respondents acquired computer knowledge from Computer Training Schools, 24 (24.5%) respondents acquired knowledge on the job so also were those who acquired it through personal training. Also 6 (6.1%) respondents acquired knowledge through tutorials from other persons and lastly, 14 (14.3%) acquired it through University Education. From stakeholder responses, 24 (48.0%) respondents obtained computer knowledge through Computer Training Schools. On the job and personal training took 16% each and University Education took 20%. Table 5 shows the number of years a respondent has been a computer literate.

TABLE 5: NUMBER OF YEARS OF COMPUTER LITERACY.

No. of Year	CEPS		STAKEHOLDERS		TOTAL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1 – 2 years	6	6.12	8	16.0	14	9.5
3 – 6 years	30	30.6	18	36.0	48	32.4
7 – 10 years	30	30.6	14	28.0	44	29.7
11 – 20 years	30	30.6	10	20.0	40	27.0
> 20 years	2	2.1	-	-	2	1.4
TOTAL	98	100	50	100	148	100

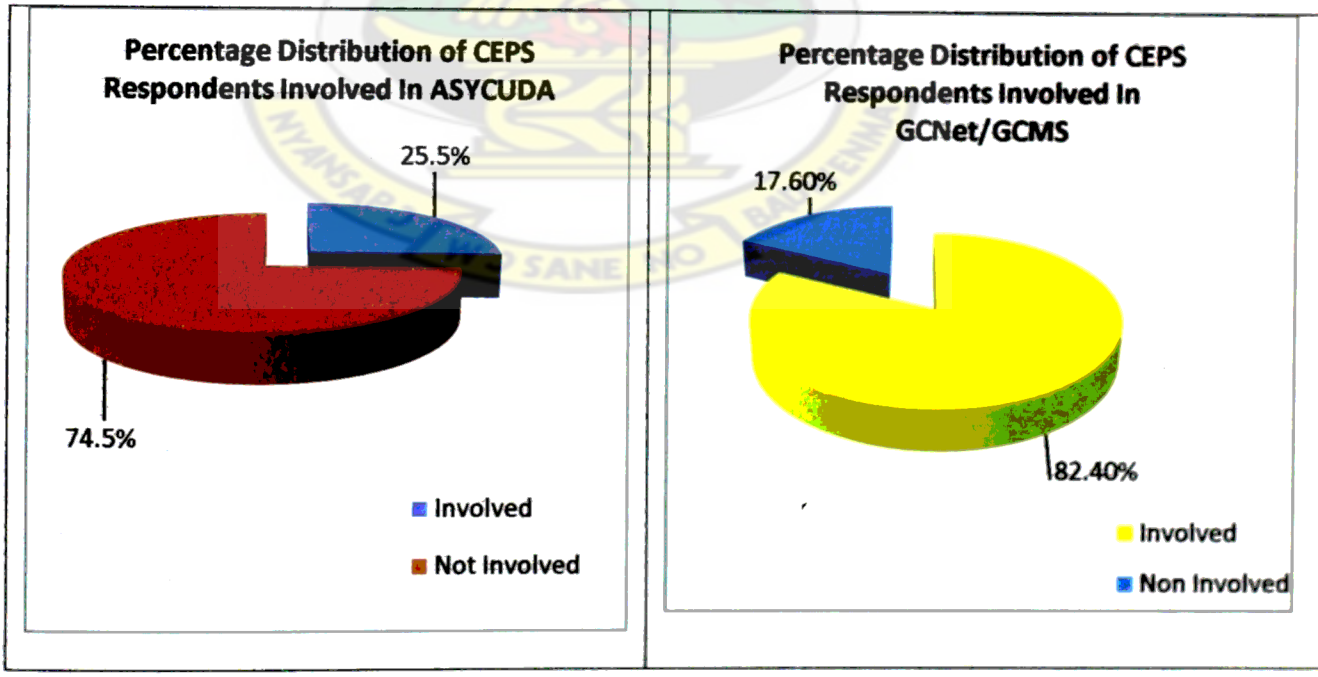
The modal group of computer literates is 3 to 6 years. This is an indication that a lot more people acquired computer knowledge in recent years. The distribution also shows the average number of years of being computer literate as 8.7 years.

The respondents again were asked whether they use computers in the performance of their duties, 94 (92.2%) of CEPS' respondents said 'Yes' and 8 (7.8%) responded in the negative. This shows that out of the 98 respondents who are computer literates, 4 respondents do not use computers in the performance of their duties. Forty eight (82.7%) respondents from the stakeholders indicated the use of computers in their work; implying 2 (4%) respondents with computer knowledge do not use computers in their work.

4.5 Awareness, understanding and implementation of CEPS ICT Polices.

The frequency from the responses shows that 70 (68.6%) of the respondents from CEPS are conversant with ICT policies of CEPS while 32 (31.4%) are not. Out of the 102 respondents, 84 (82.4%) of the respondents are involved in the implementation of GCNet/GCMS and 18 (17.6%) are not involved in the implementation. On the other hand, only 26 (25.5%) of the respondents were involved in the implementation of the ASYCUDA Project. This revealed that the implementation of the ASYCUDA programme did not involve a lot of CEPS officials. Interviews also revealed that ASYCUDA programme was not implemented in full. It was restricted to the IT department and capturing of data at what was called the Computer Room. Figure 2 shows the percentage distribution of CEPS officials involved in the implementation of ASYCUDA and GCMS.

FIGURE 2: CEPS OFFICIALS' INVOLVEMENT IN ASYCUDA AND GCMS IMPLEMENTATION.



On the question of whether the respondent had received enough training to enable him/her work efficiently, 60 (58.8%) respondents indicated that the training they had on ICT is enough to make them efficient and effective in their work and 42 (41.2%) said their training was not enough to make them efficient in their job and that they would need more training to make them efficient.

4.6 The Stakeholders and GCNet/GCMS

Asked whether a respondent became computer literate because CEPS operations were computerized, 16 (27.6%) of the respondents said "Yes' and 42 (72.4%) said 'No'. This shows that the computerization of CEPS' operations was not a strong compelling factor for respondents to become computer literates.

The stakeholders also indicated that the ICT policy of CEPS was not considered when recruiting personnel. Whilst 26 (44.8%) of respondents asserted that knowledge in ICT is a prerequisite for recruitment, 55.2% said knowledge in ICT is not a determining factor. Again, out of the 58 respondents of the stakeholders, 36 (62.1%) were trained in GCNet/GCMS whilst 22 (37.9%) had no training on the operations of the GCNet/GCMS.

4.7 The Effect of ICT on CEPS' Operations

4.7.1 Comparing the Time of Clearance in Manual, ASYCUDA and GCMS.

The time of clearance is an important consideration in any policy implementation in Customs Administration. One of the parameters for measuring the success of Customs trade facilitation policy is the ability to reduce the time of clearance in order to reduce congestion at the ports. The high turnaround time for imports may lead to increased revenue. Tables 6a, 6b and 6c show comparison between the time of clearance in the Manual, ASYCUDA and GCMS.

TABLE 6a: TIME OF CLEARANCE UNDER MANUAL SYSTEM (STAKEHOLDERS)

Time Period	Frequency	Percent
30 min – 1 hours	4	6.9
2 hours – 6 hours	6	10.3
7 hours – 1 day	8	13.8
2 days – 6 days	28	48.3
> 7 days	12	20.7
TOTAL	58	100

In the manual system, the modal time of clearance is 2 – 6 days and an average time computed `from the distribution is 3.5 days.

Table 6b below also shows that the modal time of clearance in ASYCUDA as given by the CEPS respondents is 2 – 7days as indicated by 78 (76.5%) respondents. The time of

clearance in the GMCS system is 7 hours – 1 day as the modal time. The average time of clearance for ASYCUDA and GCMS are 3.7 day and 1 day respectively.

TABLE 6b: TIME OF CLEARANCE RESPONSES FROM CEPS RESPONDENTS

Time Period	ASYCUDA		GCMS	
	Frequency	Percent	Frequency	Percent
30 min – 1 hour	-	-	8	7.8
2 hours – 6 hours	2	2.0	14	13.7
7 hours – 1 day	14	13.7	68	66.7
2 – 6 days	78	76.5	10	9.8
> 7 day	8	7.8	2	2.0
TOTAL	102	100	102	100

TABLE 6c: TIME OF CLEARANCE RESPONSES FROM STAKEHOLDER RESPONDENTS

Time Period	ASYCUDA		GCMS	
	Frequency	Percent	Frequency	Percent
30 min – 1 hour	-	-	2	3.4
2 hours – 6 hours	4	6.9	21	36.2
7 hours – 1 day	16	27.6	24	41.4
2 – 6 days	30	51.7	11	19.0
> 7 day	8	13.8	-	-
TOTAL	58	100	58	100

Table 6c shows the time of clearance in ASYCUDA and GMCS as indicated by the stakeholder respondents. The respondents intimated that it takes 2 – 6 days to clear a declaration in ASYCUDA while in the GCMS; it takes 7 hours – 1 day to work on a declaration. The stakeholder average time of clearance is 3.2 days for ASYCUDA and 1.08 days approximately 1 day for GCMS.

From tables 6a, 6b and 6c, there is an indication that the time of clearance is reduced from a modal time of 2 to 6 days in the Manual, ASYCUDA systems to a modal time of 7 hours to 1 day by the implementation of GCMS.

The responses indicated that 40 (69.0%) of the respondents from the stakeholders had the view that GCNET/GCMS has reduced the cost of transacting business with CEPS whilst 14 (24.1%) respondents said nothing has changed and 4 (6.9%) of respondent were indifferent that is were not able to give a response. On the trade facilitation 56 (96.6%) of stakeholders respondents said GCNET/GCMS is facilitating trade and 2 (3.4%) were indifferent.

Again, when CEPS respondents were asked whether clearance of goods is much easier and fastest under the GCNet/GCMS, all the 102 respondents answered in the affirmative. When stakeholder respondents were asked the same question, 50 (86.2%) said clearance is much easier and faster under the GCNet/GCMS whilst 8 (13.8%) responded in the negative. A combined statistics showed that 152 respondents were of the opinion that clearance is easier and faster under GCMS.

4.7.2 CEPS Revenue Mobilization

All the 102 respondents from CEPS agreed that revenue mobilization under the GCNet/GCMS is easier and more efficient. During the inception of the TradeNet, KIA' (airport traffic) revenue for July to September 2003 was conservatively estimated to have increased by 30 percent than during the same period in 2002 due GCNet operatios. (De Wulf, 2004.) CEPS revenue has grown over the years from GH¢714.63 million in 2003 to GH¢1,903.03 million in 2008, a 166.30 percentage increase over the revenue of 2003. (Appendix 1).

Appendices 2 and 3 show the linear regression equations of revenues collected from 1997 to 2002 during ASYCUDA and revenues collected from 2003 to 2008 during GCMS. The linear regression equations are given as $y = 47.75x + 92.68$ with regression coefficient of 47.75 for the period 1997 to 2002 for ASYCUDA and $y = 239.8x + 433.7$ with regression coefficient of 239.8 for the period 2003 to 2008 for GCMS.

Comparing the two equations, the regression coefficient for the ASYCUDA with 47.75 indicates that revenue was increasing by a multiple factor of 47.55 over the ASYCUDA period and during the GCMS, the regression coefficient with 239.8 indicates that revenue is increasing by a multiple factor of 239.8. This indicates that GCMS is able to enhance revenue collection fastest than in ASYCUDA. It is an indication that ICT has a positive impact on revenue generation of CEPS. Volume of imports has increased from GH¢1,461.67 million in 2001 to GH¢8,674.74 million in 2008 and number of declarations also went up by 171.48 percent. ICT implementation enables CEPS to deal with these volumes of imports and other transactions, not mentioning export transactions.

4.7.3 GCMS and Paper Work in CEPS' Operations

One of the objectives of automation of CEPS operations is to reduce the bureaucracy and the paper work involved in transactions. The statistics from the study revealed that 84.3% of the CEPS officials were of the opinion that GCMS has reduced the paperwork and 15.7% said paper work has not reduced. The stakeholder responses had 50(86.2%) said paper work has reduced under the GCNet/GCMS and 6 (10.4%) were of the view that paper work has not reduced whilst 2(3.4%) could not make a decision. Table 7 shows the respondents percentage reduction rating in paper work under GCMS.

TABLE 7: PERCENTAGE REDUCTION IN PAPER WORK

Percentage Reduction	CEPS		STAKEHOLDERS		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
1 – 10	4	3.9	4	6.9	8	5.0
11 – 30	18	17.6	10	17.2	28	17.5
31 – 60	46	45.1	24	41.4	70	43.8
61 - 90	14	13.7	12	20.7	26	16.2
90^{+}	4	3.9	-	-	4	2.5
No Responses	16	15.7	8	13.8	24	15.0
TOTAL	102	100	58	100	160	100

From the table above, the modal percentage reduction in paper work is 31 to 60% for the respondents of CEPS and Stakeholders and also for the combined statistics. The average percentage reduction in paper work is 45.2 percent. Table 8 shows the percentage cost reduction due to reduction in paper work.

TABLE 8: PERCENTAGE COST REDUCTION DUE TO REDUCTION IN PAPER WORK

Percentage Cost Reduction Due to reduction in Paper Work	STAKEHOLDERS	
	Frequency	Percent
1 – 10	51	87.9
11 – 30	4	6.9
31 – 60	3	5.2
61 - 90	-	-
90^{+}	-	-
TOTAL	58	100

On reduction in cost 51 (87.9%) respondents revealed that the cost of transactions has been reduced to between 1 to 10% due to the reduction in paper work. From the distribution, the average percentage cost reduction due to the reduction in paper work is 8.6 percent. The implementation of the GCMS has therefore brought about reduction in costs and the volume of paper work associated with business transactions between CEPS and its stakeholders, an indication of a positive ICT effect on tax administration.

4.7.4 GCMS and the Efficiency of CEPS Official

The implementation of an ICT programme is also to improve on the effectiveness of the worker and enhance the efficient performance of his/her job. It is supposed to help the worker perform better on the job and deliver quality products or services. From the responses, 96 (94.1%) of the respondents agreed that ICT has improved the efficiency of the CEPS officer but 6 (5.9%) disagreed.

When asked to rate on how efficient the CEPS officer has become due to GCMS, 8 (7.8%) of the respondents rated efficiency as very high, 58 (56.9%) of respondents rated efficiency as high and 34 (33.3%) rated the officer becoming more efficient as average whilst 2 (2.0%) were indifferent. There was no rating for low and very low. This is an indication that there has been improvement of work performance showing a positive effect of ICT policy on the efficiency of the Staff of CEPS.

4.7.5 GCMS and Communication

Any ICT policy which is not able to improve on communication internally between functional departments of an organization and externally between various stakeholders may be said to be deficient. The statistics show that 74 (72.5%) of the respondents were of the view that communication between the departments of CEPS has improved through the implementation of the ICT policy whilst 28 (27.5%) were in disagreement.

Again, 98 (96.1%) of the respondents indicated that there has been improved communication between CEPS and her stakeholders but 4 (3.9%) respondents said there has been no improvement in communication. From the data, it is evident that,

there is much improvement in communication between CEPS and other stakeholders than among the departments of CEPS. This is due to emphasis on linkages between CEPS and the stakeholders and not much among functional departments of CEPS.

Stakeholder responses on communication indicate that 50 (86.2%) of the respondents were of the view that GCNet/GCMS facilitates communication between their organization and CEPS and 6 (10.3%) were of the negative view and 2 (3.4%) respondents could not give any response.

4.7.6 GCMS and Corruption

One of the cardinal arguments advanced for ICT implementation is that the perceived corruption of the CEPS officials would be brought to the barest minimum. It is observed that if the face to face contact could be reduced, corruption would also be reduced.

When the opinions of the respondents were sought on these issues, 72 (70.6%) of CEPS respondents answered in the affirmative that the face to face contact has reduced and 28 (27.5%) answered in the negative, whilst 2 (1.9%) could not provide any answer. Among the stakeholders, 34 (58.6%) respondents were of the opinion that the face to face contact between them and CEPS officials has reduced and 22 (37.9%) thought otherwise while 2 (3.4%) were indifferent.

Out of the 102 CEPS respondents, 62 (60.8%) were of the view that ICT policy has minimized the level of corruption in CEPS whilst 40 (39.2%) said nothing has changed. Out of the 58 stakeholder respondents, 32 (55.2%) were of the opinion that corruption in CEPS has been minimized through the implementation on the

GCNet/GCMS whilst 24 (41.4%) respondents were of the view that corruption is still prevalent in CEPS. Table 9 shows the percentage level of minimization of corruption in CEPS as expressed by the stakeholders.

TABLE 9: MINIMIZATION OF CORRUPTION IN CEPS

Percentage Reduction	CEPS	STAKEHOLDERS	TOTAL	PERCENT
1 – 10%	36	6	42	26.3
11 – 30%	12	28	40	25.0
31 – 60%	36	8	44	27.5
61 – 90%	18	14	32	20.0
Non Response	-	2	2	1.2
TOTAL	102	58	160	100

Table 9 above indicated that modal frequency of 44 respondents though not conspicuously skewed were of the belief that corruption has been reduced by 31 to 60%. The rest of the distributions are, 42 (26.3%) of the respondents were of the opinion that corruption has been reduced by 1 to 10%, 40 (25.0%) respondents said that corruption has been reduced by 11 to 30% and 32 (20.0%) respondents believed corruption has been reduced by 61 to 90%, whilst 2 (1.2%) respondents could not make up their mind on the percentage minimization.

The average percentage rate of corruption minimization computed from the distribution of responses is 34.6%, indicating that averagely, corruption in CEPS has

been reduce by 34.6% due to the implementation of the GCNet/GCMS. Though corruption has not been eradicated, there has been some level of reduction, indicating that ICT implementation is able to reduce the level of corruption.

4.7.7 GCMS and Tax Compliance

Tax compliance is one of the key elements in Tax Administration and any policy be it ICT must enhance the compliance rate of tax payers.

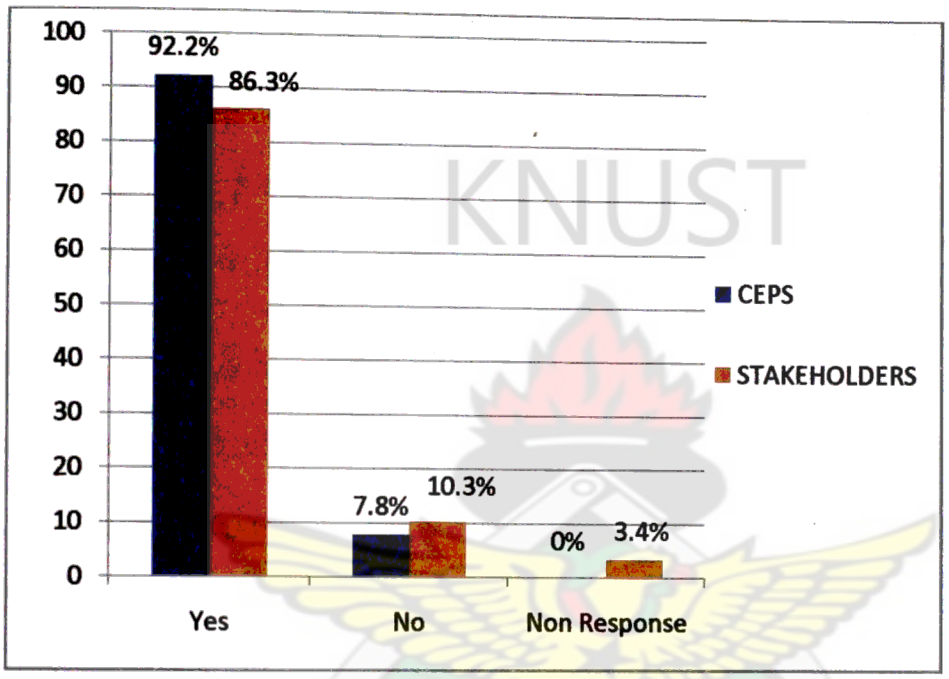
On tax compliance, the responses were that 96 (94.1%) of CEPS respondents were of the view that ICT for that matter the implementation the GCNet/GCMS has increased the compliance level of tax payers whilst 6 (5.9%) were of the view that the compliance levels of the tax payers has not changed. Also 54 (93.1%) of stakeholder respondents were of the opinion that ICT has enabled them to be more compliant with tax regulations and 2 (3.4%) respondents said ICT has nothing to do with compliance to tax regulations while 2 (3.4%) respondents were indifferent. The study indicated that tax payer compliance has increased under GCMS as compared with the previous systems where officers' discretion played a crucial role.

To the question whether it is easier to detect tax infraction under the GCNet/GCMS system, 96 (94.1%) of the CEPS respondents were of the view that tax infractions are easily detectible under GCNet/GCMS but 6 (5.9%) of the respondents disagreed. Therefore the general opinion is that tax compliance is more effective with ICT under GCMS than the manual and ASYCUDA.

4.7.8 Data/Information Management

Data and information management is a vital consideration in automation of any organization. The study thus tried to assess the level of data and information management under the ICT policy of CEPS.

FIGURE 3: DATA/INFORMATION MANAGEMENT IN GCNET/GCMS



The study shows that 94 (92.2%) of CEPS' respondents acknowledged that data and information management is made much easier and efficient under GCNet/GCMS as against 8 (7.8%) of the respondent who were of contrary view. Information management tools for example, Cognos Impromptu software is used for managing data and information in GCMS which were not part of the Manual or the ASYCUDA systems.

Also, out of the 58 responses, 50 (86.2%) of the stakeholders indicated that it is easier to generate data under the GCNet/GCMS whilst 6 (10.3%) were against that claim and 2 (3.4%) were indifferent to the assessment.

The responses show a strong argument for the assertion that ICT has enabled information management to become more efficient as illustrated in Table 3 above.

4.7.9 Adequacy of ICT Policy in CEPS Administration

The responses showed that 54 (52.9%) of the CEPS respondents stated that the current ICT policy is adequate for Tax Administration in CEPS whilst 48 (47.1%) stated that the current system is not adequate for CEPS operations.

Among stakeholder respondents 79.3% indicated that the GCNet/GCMS system is adequate for efficient performance of their duties and 8 (13.8%) said 'No' and 4 (6.9%) were indifferent. The study showed that 62.5% of the respondents agreed that GCNet/GCMS system is adequate for CEPS' tax administration and 35.0% were of the view the GCMS is not adequate and 4 persons were indifferent.

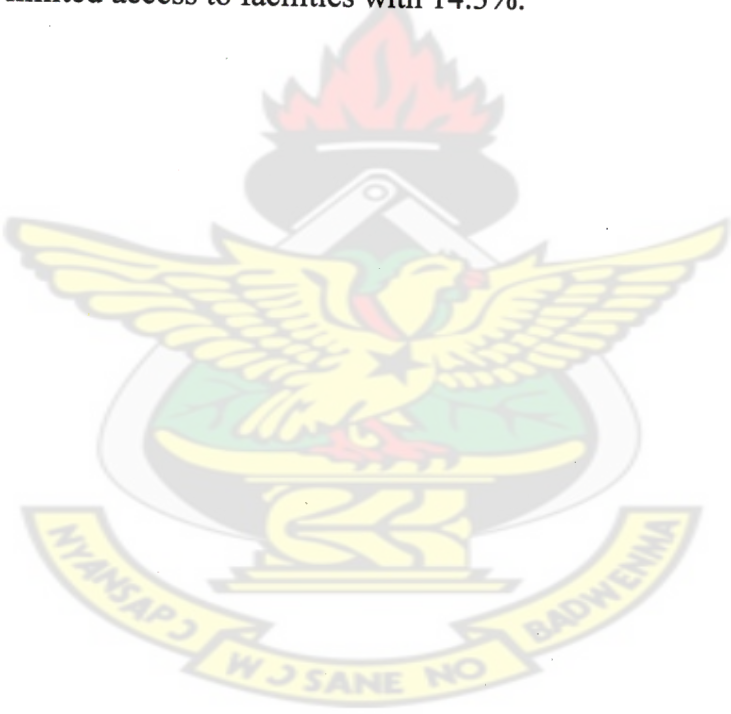
4.7.10 Shortcomings of GCNet/GCMS identified by Respondents

Table 10a and 10b in Appendix 4 show the responses on the limitation of GCNet/GCMS as expressed by respondents. Various factors were enumerated as the shortcomings or limitation to the current ICT policy of CEPS from their view point.

Among the shortcomings identified by the CEPS respondents, 52.2% stated that ICT not being operational at all stations is the most serious setbacks to the current system. The non–existences of GCMS in some stations created the existence of a

parallel system. A system of manual clearance, for example exists most of the frontier stations like Shia, Nyive in the Volta Region. Limited formal training is also considered as a challenge to CEPS ICT policy implementation; 27.8% of the responses hold this view. Another challenge is practical exposure with 16.7%. Other challenges like limited officer supervision, limited resources and limited departmental involvement totalled 3.3% are some of the challenges indicated by CEPS respondents.

The stakeholders identified limited formal training as the strongest challenge to the usage of GCMS/GCNet as indicated by 35.7% of the responses. Limited scope of implementation is next with 28.6% of responses, then limited practical exposure with 21.4% and lastly limited access to facilities with 14.3%.



CHAPTER FIVE

Summary of Findings, Conclusions and Recommendations

5.1 Summary of Findings

The study revealed that ICT project has improved the mode of operations in Tax Administration of CEPS.

- The availability of adequate computer literate human resources for the implementation of the ICT policy was a major factor underlying the success of the ICT policies in CEPS. The human resource available for the implementation of ICT policy have immersed years of experience. This was beneficial in planning and the implementation of CEPS' ICT policy.
- Computer literacy was found to be high in CEPS and also among CEPS' Stakeholders. Most respondents are computer literates, not because of CEPS' ICT policy, indicating that the GCNet/GCMS was not a determinant for CEPS and its stakeholders becoming computer literates. However, the study revealed that knowledge in ICT is becoming a prerequisite for effective functioning of human resource.
- Limitations to the knowledge in ICT as expressed by the respondents are limited training and appreciation of the concepts of ICT. However the GCNet/GCMS gave some CEPS officials the opportunity to be trained in the operations of GCNet/GCMS leading to the acquisition of some computer knowledge.
- Involvement in the ASYCUDA project was low among CEPS' officials because its implementation was limited to data capturing and to what was then known as

the computer room. The participation rate in the ASYCUDA was 25.5 percent as compared with the participation rate of 82.4 percent in GCNet/GCMS. The implementation of GCMS involved a lot more officers through education and training. CEPS officials are more identified with the GCMS and are enthusiastic about its success than the ASYCUDA project due to effective communication.

- The study indicated that 58.8 percent of CEPS' official involved in the implementation of the ICT policies received enough training to equip them in the operations of the GCMS.
- The stakeholders intimated that the cost of transaction has been reduced due to the implementation of GCMS and the high percentage of responses in favour of trade facilitation gave an indication that GCMS is facilitating trade in terms cost and simplification of procedures.
- The implementation of the GCMS resulted in the reduction of time of clearance from 2 - 6 day on the average (in Manual and ASYCUDA) to about 7 hours – 1 day. Clearing of goods was observed to be much easier and faster under GCNet/GCMS. CEPS affirmed that clearing is much easier and faster with GCMS and 72% of CEPS' stakeholders agree to this assertion.

Prior to the implementation of the GCNet/GCMS that is during the Manual and ASYCUDA eras as many as 21 and 23 identified steps were involved in the processing of an import declaration while GCMS has 8 identifiable steps in processing an import declaration. (Appendix 5)

- According to the findings, paper work in GCMS has been reduced between 31–60 percent or on average by 45.5 percent. This is also evident from the comparison of various documentary procedures used during the Manual,

ASYCUDA and GCMS eras. The Import Declaration Form (IDF) previously in 7 copies from now electronically transmitted into the GCNet/GCMS. Final Classification and Verification Report (FCVR) by Destination Inspection Services, Permits by authorizing bodies like Minerals Commission, Environmental Protection, Food and Drugs Board, Parliamentary Exemptions and the shipping manifest by shipping companies in addition to the Customs declaration known as Single Administrative Document (SAD) in 13 copies now automated. These automated activities have greatly reduced the amount of paper work, though the objective of achieving paperless transaction is yet to be achieved. From the study, this translated into a saving of 8.6 percent reduction in transaction cost.

- ICT has also improved the performance of work. From the study, 96.1% of the respondents were of the view that their performance has been enhanced, making them more efficient.
- There has been great improvement in communication which has largely been facilitated by the GCMS. About seventy-three (73%) of respondents were of the view that there is improvement in communication. However, it was observed that communication has improved between CEPS and the stakeholders more than among the departments of CEPS. There is much operational connectivity between CEPS and her stakeholders which is seen as a success factor, that is many stakeholders getting on board, than the focus on inter-departmental communication which is more of internal direction of CEPS.
- It was also observed that face to face contact is reduced through the implementation of the GCMS. The responses showed 70.6 percent of the

respondents indicating a reduction in face to face contact. This led to an average of 34.6 percent decline in corruption.

- Statistics from the study indicated that compliance levels among tax payers have increased. Ninety four (94.1%) were of the opinion that the levels of tax payer compliance has increased under GCNet/GCMS. This is due to the risk assessment module in GCMS. The GCMS does the various checks on the data inputs and profile the transactions for examination according to the risk assessment. Tax payers with high risk profile would have their transactions subjected to 100 percent examination amounting to time delays and increased transaction cost. Low risk profiled transactions go through scanners for image reading and interpretation and clearing leading to speedy transaction and cost minimization. These informed tax payers to comply more with tax regulations and procedures in order to attain low risk status which facilitate their operations.
- The interview revealed that it is easier to detect tax infraction with the implementation of ICT policies. There are internally built checking systems which allow for detecting errors in inputs and flagging them up. At every stage of the process, checks are performed by input mediums. The nature of the system makes much easier for error detection, making the CEPS officer becoming more professional and more confident in their duties.

5.2 Conclusion

The transformational role of ICT in organizations and business entities as the enabler of improved performance is increasingly becoming the focus of every

successful organisation. The study showed that CEPS is also using ICT as a tool to improve on its tax administration.

The advantages of ICT are becoming more and more obvious to tax administrators, governments, importers/agents and other stakeholders. Through the use of ICT, tax administrators (in this case CEPS) are able to considerably reduce the complexity of data and information gathering and analysis using appropriate softwares and infrastructure and making strategic decision possible and timely in order to achieve their missions and visions. Timely and reliable provision of trade statistics is the hallmark of ICT implementation in CEPS.

ICT implementation is able to reduce and simplify the number of documents used in customs transactions. Procedures are now more transparent, clearing time and paper work is reduced leading to reduced transaction cost.

The rate at which revenue generation is increasing attested to the fact that ICT can be an effective tool in increasing revenue if necessary implementation concerns are addressed. This is the difference between the implementation of ASYCUDA and GCMS. The present success of ICT policy is due the commitment of CEPS, government and stakeholders to the programme.

The importance of ICT on tax compliance is evident through the study. It is noted that ICT can be used to influence the behavior of the tax payer through the risk assessment module. It helps in making tax payer conform to the rules and regulations associated to tax administration.

Human resource capacity is also enhanced by ICT implementation in CEPS. CEPS officials and stakeholders benefitted from training programmes and computer appreciation and the operations of the GCMS.

There is not the faintest doubt that ICT has achieved a tremendous success for CEPS. It has changed the outlook of the Service domestically and in the eyes of the international communities, placing the organization at a strategic position to facilitate international trade in the subregion if transport networks are developed to serve the Saharian regions.

The application of ICT in tax administration lightens the burden on its personnel with regards to handling routine tasks, detections and correcting errors. This results in shorter processing times of transactions and a more efficient use of human resources, which ultimately benefits the stakeholders. ICT also allows importers/exporters and other stakeholders have around-the-clock access to CEPS, free of barriers and independent of platform and location.

Implementation of ICT in CEPS has also increased the level of effective communication with her stakeholders. In order to achieve the goals set for GCMS, there were educational seminars, workshops information dissemination to stakeholders and from stakeholders.

ICT has improved the relationship between CEPS and its stakeholders as the performance of the GCMS is also monitored through the performance of the stakeholders.

ICT is also able to reduce the face to face contact between the CEPS officials and the stakeholders leading to the reduction in the level of perceived corruption which has bedeviled Customs as an organization.

Despite these successes, there are challenges associated with the implementation of GCMS which are retarding the attainment of the full benefits of ICT in CEPS. These challenges are the parallel manual system of clearing, limited training and practical exposure of some CEPS officials to GCMS, limited resources and limited departmental involvement and systems failure. These challenges if dealt with expeditiously would greatly enhance the success of the ICT implementation in CEPS.

All the parameters investigated showed that there is strong he study therefore confirms the null hypothesis that there is a positive correlation between ICT policy implementation and a successful tax administration of CEPS.

5.3 Recommendations

Though the study was able to assess the importance of ICT on the tax administration of CEPS, there are some negative aspects and if not addressed can erode the positive gains of ICT implementation in CEPS.

In order to improve and maximize benefits associated with implementation of ICT in CEPS Administration, it is recommended that:

- There must be total automation of operations and procedures of Tax Administration in CEPS. Presently, the parallel manual clearing procedure at

some of the frontier stations and the automated procedures at the ports and other frontiers is a course for concern. In order to derive the maximum benefits from the implementation of the ICT and for that matter GCMS, there is an urgent need to phase out the manual system as quickly as possible. Fortunately, the scope of implementation is being expanded as the years roll by and innovations are being introduced. The recent addition is GCMS being operational at Kpoglo and others are to be connected in the near future. Again within the ports where GCMS is being implemented, sometimes there are semblances of manual activities especially where some decisions are taken and executed outside the confines of the GCMS. For instance, an anomaly may occur within the GCMS needing a decision to be taken, especially where discretion is involved. Most of such decisions are executed outside the GCMS making reconciliation quite labourious. For example, payments of penalties and other charges which are done manually instead of capturing them electronically.

- Training was recognized as the most crucial issue in the implementation of any ICT policies. The efficient functioning of any computer system or computerization requires a high level capacity of the human resource in order to function effectively. The human capacity building is crucial for a successful implementation of GCMS. The training of staff and other stakeholders must be regular and consistent. There must be well structured training policies and education for all officers and the stakeholders instead of the adhoc programmes. Every staff, irrespective of the functions of his/her department must be computer literate.

- The peripheral activities are largely excluded from the automation. Most of the supporting activities like Accounts, Finance and Audit Departments have limited access and limited knowledge in the GCMS. Departments like Administration and Human resource and Legal are excluded from the main automation process. There must be gradual integrat ion of the functions at all levels within the organization. Inter-departmental communication must be improved to allow sharing of information between the various functional departments.
- Top management must drive the whole ICT policy issues in order to give it the maximum support. Some of the top management staff of CEPS considers ICT policies as the responsibility of IT department, where its success or failure rest. It is imperative for members of top management to be conscious of ICT as a tool and what it can be used to achieve. Having a deep appreciation of ICT issues would help in canvassing support for ICT policies and its implementation.
- Total stakeholder participation in the ICT policies of CEPS is crucial if the success achieved is to be maintained and improved upon. It was observed that implementation of GCMS was slow in taking on board other stakeholders. For over six (6) years of implementation, all the stakeholders are yet to get on board. There should be conscious effort to quickly bring on board all other stakeholders.
- An online service cannot be fully interactive without the availability of a modern IT infrastructure and good systems on a modern technology platform. Automation requires heavy capital investment; as such government must be

committed totally in providing the infrastructure and the efficient maintenance of the facilities in order to check the intermittent interruptions of the system due to system failures.

- The Service must carry out periodic operational assessments of the implementation of ICT policies in CEPS. Since the inception of GC Net/GCMS there has been only one review, which was done recently even the report is not yet out. The project must be reviewed constantly in order to identify problems which limit the realization of the full benefits of the GCMS.
- There must be systems integration providing a broad platform from which all relevant functional units can access data and information without any manual or human interruptions.

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APPENDICES

Appendix 1

TABLE I

CEPS CONTRIBUTIONS TOWARDS

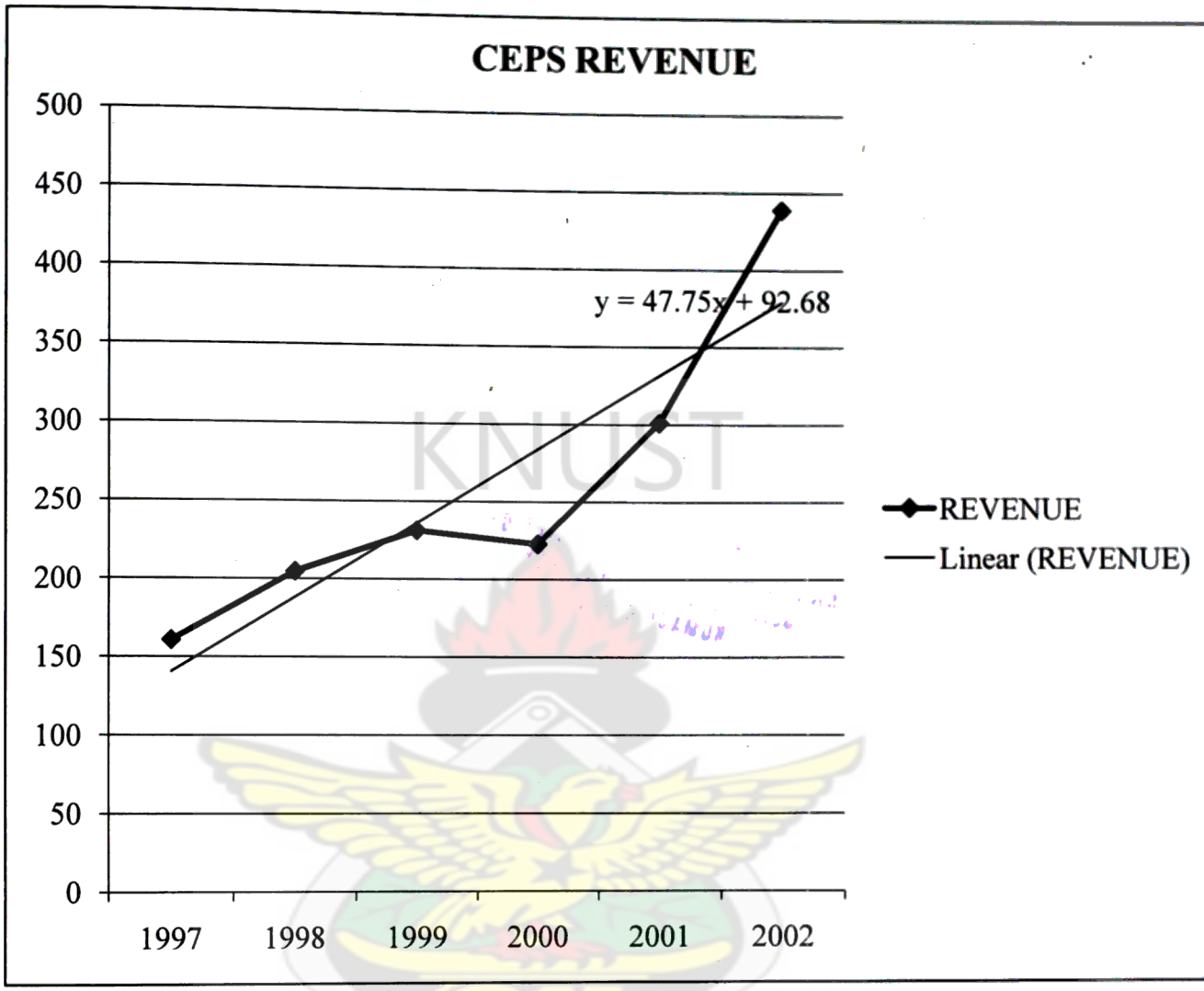
NATIONAL TAX REVENUE 1991-2008

YEAR	NATIONAL TAX REVENUE TARGET (GHc Million)	CEPS' CONTRIBUTION	PERCENTAGE (%) PERFORMANACE
1991	35,440,000	25,370,000	71.6
1992	33,350,000	25,050,000	75.1
1993	57,820,000	43,360,000	75.0
1994	97,580,000	63,760,000	65.3
1995	158,460,000	91,130,000	57.5
1996	199,760,000	126,070,000	63.1
1997	244,670,000	160,610,000	65.6
1998	317,650,000	204,680,000	64.4
1999	336,600,000	231,200,000	68.7
2000	423,300,000	222,660,000	52.6
2001	625,360,000	300,670,000	48.1
2002	818,320,000	438,910,000	53.6
2003	1,258,690,000	714,630,000	56.8
2004	1,642,080,000	929,310,000	56.6
2005	2,208,560,000	1,131,790,000	51.2
2006	2,393,100,000	1,281,910,000	53.3
2007	3,312,658,114	1,651,840,000	49.9
2008	4,299,451,807	1,930,030,000	44.9

Source: Computed from Revenue Data from CEPS, Table 1 in Appendix 1.

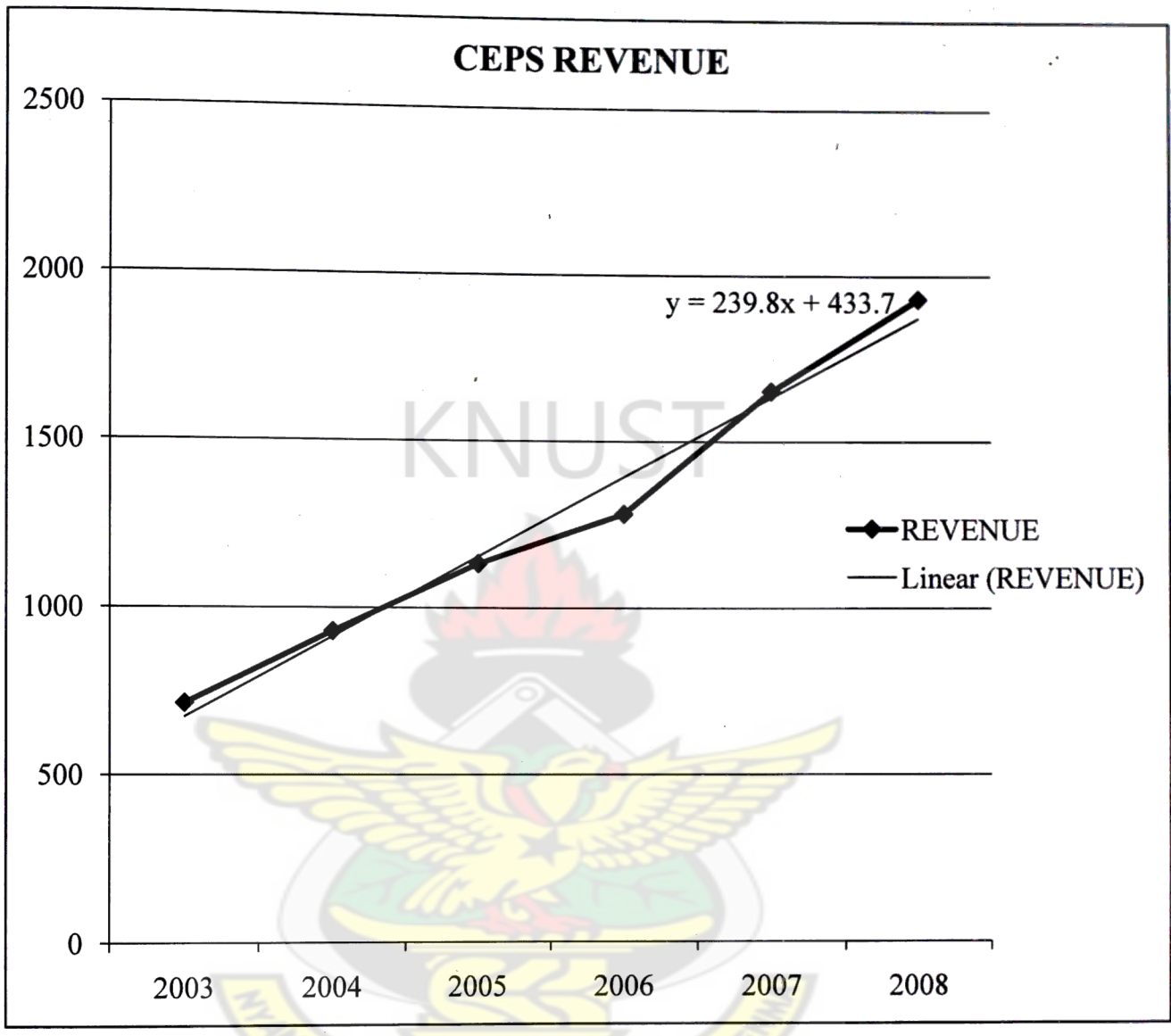
Appendix 2

APPENDIX 2: Linear Graph and Regression Equation of Revenues Collected from 1997-2002



Appendix 3

APPENDIX 3: Linear Graph and Regression Equation of Revenues Collected from 2003 - 2008



Appendix 4

TABLE 10a: LIMITATION AS EXPRESSED BY CEPS RESPONDENTS

Limitations	Frequency	Percent
1. Limited formal training	50	27.8
2. Limited practical exposure	30	16.7
3. ICT not operational at all stations	94	52.2
4. Limited officer supervision	2	1.1
5. Limited resources	2	1.1
6. Limited departmental involvement	2	1.1
TOTAL COUNT	180	100

Source: Responses from Questionnaires

TABLE 10b: LIMITATION AS EXPRESSED BY STAKEHOLDER RESPONDENTS

Limitations	Frequency	Percent
1. Limited access to facilities	8	14.3
2. Limited scope of implementation	16	28.6
3. Limited formal training	20	35.7
4. Limited practical exposure	12	21.4
TOTAL COUNT	56	100

Source: Responses from Questionnaires

Appendix 5

Comparison of Steps in Clearing – Manual, ASYCUDA and GCMS

STEPS-IMPORT DECLARATION IN ASYCUDA

1. The shipping agent submits 12 copies of shipping manifest.
2. The importer or the importer's agent obtains shipment notifications.
3. The declarant purchases an import declaration form
4. The declarant submits documents for Clean Report of Findings (CRF) from SGS.
5. The declarant buys the customs declaration form (in 5 copies).
6. The declarant submits the CRF and valuation report from a SGS company.
7. The declarant submits the declaration with supporting document to CEPS at Acceotance Seat.
8. CEPS reviews the declaration at Checking Seat
9. Payment made at the Bank.
10. Duty payment receipt together with declaration and supporting documents submitted to CEPS for tax confirmation
11. Numbering and perforation done for numbers to be generated.
12. Documents sent to manifest striking to check the authenticity in the manifest.
13. Documents sent to detaching seat for documents to be detached.
14. CEPS detached the copies of declaration and dispatched them to the various recipients.
15. Importer's copy sent to outdoor (Officer-in-Charge Outdoor)
16. An examination officer assigned to the particular shipment.
17. The results of the inspection entered in the landing account book.
18. The entry in the landing account book signed and referred
19. Entry given to the declarant for payment of other charges.
20. The declarant pays handing charges the port authority and the shipping agent as required.
21. The port authority issues a waybill.
22. The goods moved to the gate, where frequently they were again inspected before the release could take place.
23. Shipping report to CEPS on their activities every month.

STEPS-IMPORT DECLARATION IN ASYCUDA

24. The shipping agent submits 12 copies of shipping manifest.
25. The importer or the importer's agent obtains shipment notifications.
26. The declarant purchases an import declaration form

27. The declarant submits documents for DIS.
28. The declarant buys 13 copies of the customs declaration form.
29. The declarant submits the final classification and valuation report from a DIS company.
30. The declarant pays self – assessed duties at the bank. Only one bank accepts payments. This bank is located at the point of entry, which is usually overcrowded and wracked with delays.
31. The bank issues a payment receipt and passes it on to CEPS, which is located at the same point of entry.
32. The declarant submits the declaration with supporting document to CEPS.
33. CEPS reviews the declaration.
34. CEPS enters the declaration into ASYCUDA, which take a minimum of 24 hours.
35. CEPS print the ASYCUDA form and confirms or alters the tax liability.
36. CEPS numbers the declaration and affixes a date and hologram sale.
37. CEPS detaches the 13 copies and dispatches them to the various recipients.
38. CEPS's verification unit receives it copy of the declaration.
39. An examination officer is assigned to the particular shipment.
40. The results of the inspection are entered in the landing account book.
41. The entry in the landing account book is signed and given to the declarant.
42. The declarant pays handing charges the port authority and the shipping agent as required.
43. The port authority issues a waybill.
44. The goods are moved to the gate, where frequently they are again inspected before the release can take place.
45. CEPS checks the manifest.
46. Shipping report to CEPS on their activities every month.

STEPS-IMPORT DECLARATION IN GCMS

1. Declarant buys import declaration form at MOTI.
2. (a) Declarant submits import declaration form, invoice, and bill of lading to destination Services Company.
   (b) Destination inspection services issues report.
3. Declarant electronically validates customs declaration through Ghana Customs Management System (GCMS) and obtains response, consignment manifest is sent electronically from shipping agent to CEPS for electronic checking.
4. (a) Declarant proceeds to bank and settles all duties and taxes.
   (b) Bank confirms payment electronically to GCMS.

5. Delcarant proceeds either to customs verification (green Channel) or customs compliance (yellow or red channels)
6. Compliance routes declaration electronically to examination officer who conducts examination (no examination on green channel)
7. Officer releases consignment electronically.
8. Waybill is issued and consignment is physically cleared.

Appendix 6:

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

INSTITUTE OF DISTANCE LEARNING

COMMONWEALTH EXECUTIVE MBA

QUESTIONNAIRE TYPE A

Dear respondent,

This is a study on the impact of Information and Communication Technology (ICT) on Tax Administration in CEPS.

It is in partial fulfillment of a requirement for the award of a Commonwealth Executive Master of Business Administration Degree. I would be very grateful if you could help answer this questionnaire for me. This is purely for academic purpose and your response will be treated with the strictest confidentiality and anonymity.

Thank you for your time and co-operation.

Yours faithfully,

.....

Victor Kwame Agbakpey

A: Personal Profile of the Respondent

1. Sex: i. Female ii. Male
2. Age: .....
3. Department: .....
4. Rank: .....

5. Highest Educational Level:
   i. MSLC ii. G.C.E.'O'Level/SSSCE iii. G.C.E. 'A' Level iv. Diploma v. HND
   vi. First Degree vii. Second Degree viii. PH.D ix) Other Specify .....

6. Number of Years in the Service: .....

B. Respondent's Knowledge and Ability in ICT

7. Are you a computer literate?
   i) Yes [ ] ii) No [ ]

8. If yes, how did you acquire the knowledge?
   .....

9. For how long have you been a computer literate?
   .....

10. In reference to your duties, do you use computer?
    i) Yes [ ] ii) No [ ]

11. In rating, how do you rate yourself in the use of computers? Tick

    i) Very High ii) High iii) Average iv) Low v) Very Low

12. Are you conversant with the ICT policy of CEPS?

    i) Yes [ ] ii) No [ ]

13. Were you involved in the implementation of the ASYCUDA Project?

    i) Yes [ ] ii) No [ ]

14. Are you involved in the implementation of GCNet/GCMS?

    i) Yes [ ] ii) No [ ]

15. If Yes, What is your level in involvement in the implementation of GCNet/GCMS? Tick

    i) Very High ii) High iii) Average iv) Low v) Very Low

16. Did you receive enough training on the ICT to make you efficient?

i) Yes [ ] ii)No [ ]

17. If No, what is the limitation to your training needs?

.....

18. What do you think can be done to improve on your knowledge and competence in ICT?

.....

C. Impact of ICT on CEPS' Operations

19. What was the time of clearance of goods under the ASYCUDA system? Tick

i) 30min-1hr ii) 2hrs-6hrs iii) 7hrs-1day iv) 2days-6days v) more than 7days

20. Is revenue mobilization under the GCNet/GCMS easier than ASYCUDA system?

i) Yes [ ] ii) No [ ]

21. Would you agree to the assertion that that clearance of goods is much easier and fastest under the GCNet/GCMS? Tick

i) Yes [ ] ii) No [ ]

22. If Yes, in which category would you place the time of clearance from port/station due to GCNet/GCMS? Tick

i) 30min-1hr ii) 2hrs-6hrs iii) 7hrs-1day iv) 2days-6days v) more than 7days

23. Has GCNet/GCMS been able to reduce the paper work involved in CEPS' operation?

i) Yes [ ] ii) No [ ]

24. If Yes, in your estimation, what would be the percentage reduction in paper work? Tick

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) >91%

25. Has implementation of ICT policy been able to enhance the efficient performance of your duties?

i) Yes [ ] ii) No [ ]

26. If Yes, in what ways?

.....
.....

27. Has ICT been able to improve communication between departments in CEPS?

i) Yes [ ] ii) No [ ]

28. Has ICT been able to improve communication between CEPS and the stakeholders?

i) Yes [ ] ii) No [ ]

29. Has implementation of the ICT been able to reduce the face-to-face contacts between CEPS officials and the stakeholders?

i) Yes [ ] ii) No [ ]

30. If Yes, what would be the present rating of the face-to-face contact between the CEPS officials and the stakeholders? Tick

i) Very High ii) High iii) Average iv) Low v) Very Low

31. Has implementation of ICT policy been able to minimize the level of perceived corruption in CEPS?

i) Yes [ ] ii) No [ ]

32. In your opinion, in percentage terms what would be the level of the minimization of corruption? Tick

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) greater than 91%

33. Has ICT been able to increase the compliance level of the taxpayers?

i)Yes [ ] ii) No [ ]

34. Is it easier to detect tax infractions under the GCNet/GCMS system?

i)Yes [ ] ii) No [ ]

35. Has generation of trade statistics and information made more efficient under the present ICT policy?

i) Yes [ ] ii) No [ ]

36. Is the current ICT policy adequate for the CEPS' administration to work efficiently?

i) Yes [ ] ii) No [ ]

37. What would you consider as the shortcomings of the current ICT policy? Tick

i) Limited Access to Facilities

ii) Limited Scope of Implementation

iii) Limited formal training

iv) Limited practical exposure

v)others.....
.....
...

38. What recommendations can you give to improve the efficiency of CEPS administration through the use of ICT?

.....
.....

Thank you.

Appendix 7:

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

INSTITUTE OF DISTANCE LEARNING

COMMONWEALTH EXECUTIVE MBA

QUESTIONNAIRE TYPE B

Dear respondent,

This is a study on the impact of Information and Communication Technology (ICT) on Tax Administration in CEPS.

It is in partial fulfillment of a requirement for the award of an Executive Master of Business Administration Degree. I would be very grateful if you could help answer this questionnaire for me. This is purely for academic purpose and your response will be treated with the strictest confidentiality and anonymity.

Thank you for your time and co-operation.

Yours faithfully,

.....

Victor Kwame Agbakpey

A: Personal Profile of the Respondent

1. Sex: i. Female ii. Male
2. Age: .....
3. Company/Agency: .....
4. Type of Organisation.....
5. Designation: .....
6. Highest Educational Level: Tick

   i. MSLC ii. G.C.E.'O'Level/SSSCE iii. G.C.E. 'A' Level iv. Diploma v. HND

   v. First Degree vi. Second Degree vii. PH.D viii) Other Specify .....

7. Number of Years in the Company: .....

B. Respondent's Knowledge and Ability in ICT

8. Are you a computer literate?
   i) Yes [ ] ii) No [ ]
9. If yes, how did you acquire the knowledge?
   .....
10. For how long have you been a computer literate?
    .....
11. In reference to your duties, do you use computer?
    i) Yes [ ] ii) No [ ]
12. If Yes, how do you rate yourself in the use of computers? Tick

    i) Very High ii) High iii) Average iv) Low v) Very Low

13. Did you become computer literate because CEPS' operations are computerized?

    i) Yes [ ] ii) No [ ]

14. What are your limitations in the knowledge of ICT? Tick

i) Appreciation of ICT concepts ii) Limited Training iii) No Training

v)others.....
.....
...

15. Were you trained on the operations of the GCNet/GCMS?

    i) Yes [ ] ii)No [ ]

16. If No, what is the limitation to your training needs?

.....
.....

17. What do you think can be done to improve on your knowledge and competence in GCNet/GCMS?

.....
.....

18. Does the ICT policy of CEPS affect the recruitment policy of your company?

i) Yes [ ] ii)No [ ]

C. Respondents' level of use of ICT and its impact on the company's operation.

19. Do you think ICT has impacted positively on the operations of your company?

i) Yes [ ] ii) No [ ]

20. By what extent is the level of impact on your organization?

i) Very High ii) High iii) Average iv) Low v) Very Low

21. Do you think the impact is due the implementation of the GCNet/GCMS system?

i) Yes [ ] ii) No [ ]

22. If Yes, in which areas has the GCNet/GCMS system impacted on your organization? Tick

i) Administration ii) Operation iii) Information management v) Audit trail

v) others.....

23. What was the time of clearance of goods under the MANUAL system? Tick

i) 30min-1hr ii) 2hrs-6hrs iii) 7hrs-1day iv) 2days-6days v) 7^{+}days

24. What was the time of clearance of goods under the ASYCUDA system? Tick

i) 30min-1hr ii) 2hrs-6hrs iii) 7hrs-1day iv) 2days-6days v) 7^{+}days

25. Would you agree to the assertion that that clearance of goods is much easier and fastest under the GCNet/GCMS?

i) Yes [ ] ii) No [ ]

26. If Yes, in which category would you place the time of clearance from port/station due to GCNet/GCMS? Tick

i) 30min-1hr ii) 2hrs-6hrs iii) 7hrs-1day iv) 2days-6days v) 7^{+}days

27. In your opinion, is GCNet/GCMS facilitating trade?

i) Yes [ ] ii) No [ ]

28. Has GCNet/GCMS implementation been able to reduce the cost of doing business?

i) Yes [ ] ii) No [ ]

29. If Yes, what is the percentage reduction in the cost of doing business? Tick

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) > 91%

30. Has GCNet/GCMS been able to reduce the paper work involved in your operations?

i) Yes [ ] ii) No [ ]

31. If Yes, in your estimation, what is the percentage reduction in paper work? Tick

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) > 91%

32. In your estimation, what is the percentage reduction in cost due to the reduction in paper work?

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) > 91%

33. Has GCNet/GCMS been able to facilitate communication between your organisation and CEPS?

i) Yes [ ] ii) No [ ]

34. Has the implementation of the GCNet/GCMS been able to reduce the face-to-face contacts between you and CEPS officials?

i) Yes [ ] ii) No [ ]

35. Do you think GCNet/GCMS has been able to improve the efficiency of your organisation in doing business with CEPS?

i) Yes [ ] ii) No [ ]

36. Has the implementation of GCNet/GCMS been able to minimize the level of perceived corruption in CEPS?

i) Yes [ ] ii) No [ ]

37. In your opinion, in percentage terms what is the level of the minimization of corruption? Tick

i) About 1%-10% ii) About 11%-30% iii) 31%-60% iv) 61%-90%

v) > 91%

38. Has ICT enabled you to comply better with tax regulations?

i) Yes [ ] ii) No [ ]

39. Are you able to generate data on your operations easily under the GCNet/GCMS?

i) Yes [ ] ii) No [ ]

40. Is GCNet/GCMS adequate for the efficient performance of your duties?

i) Yes [ ] ii) No [ ]

41. What would you consider as the limitations of the GCNet/GCMS? Tick

i) Limited Access to Facilities

ii) Limited scope of implementation

iii) Limited formal training

iv) limited practical exposure

v)others.....
.....
...

42. What recommendations can you give to improve the efficient functioning of GCNet/GCMS?

.....
.....

Thank you.