

**IMPROVING PORT EFFICIENCY AND CUSTOM OPERATIONS IN GHANA:  
THE CASE OF GHANA COMMUNITY NETWORK SERVICES LIMITED  
(GCNET) UNDER CUSTOMS EXCISE AND PREVENTIVE SERVICE (CEPS)**

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## DECLARATION

I hereby declare that this submission is my own work towards the M.Sc. 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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## **ABSTRACT**

Ports and customs operations and management in Ghana have been characterized by increasing volume of trade, corruption and technological advancement over the past decade. This situation has undermined the efforts of the management of the ports and customs agencies, especially Customs Excise and Preventive Services leading to escalating ports and customs management challenges. The study attempts, among others, to establish the nature and extent of automation of ports and customs operations in Ghana and to assess the efficacy of the Ghana Community Network Services Limited (GCNet) system in ports and customs operations.

Using the case study method, data was on ports operations and the type of automation for the operations of the ports was gathered. Data was collected from both the primary and secondary sources. With respect to the sampling, institutions whose activities were affected and influenced by the GCNet system were considered. Structured institutional questionnaire was used in collecting the data.

The outcome of the research unearthed the scope and extent of the usage of the automation system in ports and customs operations by institutions like as CEPS, GPHA, Ghana Shippers' Council, Ghana Institute of Freight Forwarders, Ghana Commercial Bank, Ecobank Ghana Limited and other institutions, efforts in managing and improving the GCNet system in ports and customs operations, the impact of the GCNet system on ports and customs operations. Other key findings included the positive effects of GCNet system on promoting international trade and making Ghana the trade hub of the sub-region.

The research thus recommends ways such as deepening people's understanding of the GCNet and to expand the level of usage of the system. The study also recommends an extensive public education on the benefits of the GCNet, and training for stakeholders for effective and efficient use of the system to improve ports and customs operations in Ghana. Last but not the least, the study recommends a more extensive collaboration and coordination of all the major stakeholders of the GCNet system to ensure a common understanding and appreciation of the contributions of the GCNet to ports and customs operations in Ghana.

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## **DEDICATION**

I dedicate this thesis to my loving family; my wife, Joana Korkor Boi and children, Obed, Noela and Collins.

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## LIST OF ACRONYMS

ASYCUDA	Automated System for Custom Data
CEPS	Customs Excise and Preventive Service
ECOWAS	Economic Community of West Africa States
EDI	Electronic Data Interchange
GCMS	Ghana Customs Management Systems
GCNet	Ghana Community Network
GIFF	Ghana Institute of Freight Forwarders
GPHA	Ghana Ports and Harbours Authority
GPRS II	Growth and Poverty Reduction Strategy
ICT	Information Communication Technology
NDPC	National Development Planning Commission



## CHAPTER ONE

### OVERVIEW OF STUDY

#### 1.1 Introduction

The Ghana Ports and Harbours Authority (GPHA) is a statutory public corporation mandated to plan, build, manage and control ports in Ghana in collaboration with other institutions. Key among these institutions are the Customs Excise and Preventive Service, Ghana Commercial Bank and Ecobank Ghana Limited. The GPHA was incorporated by PNDC Law 160 which merged three organizations in 1986 namely Ghana Ports Authority, Ghana Cargo Handling Company and Takoradi Lighterage Company (GPHA, 2006).

Since its establishment in 1986, the GPHA has operated the two ports at Tema and Takoradi. With a capacity of about 10 million tons between them, the two ports handle over 90% of the country's export and import trade. The vision of GPHA is to become a maritime hub, the most efficient one-stop port services centre and the preferred port in the West Africa sub-region and Africa as a whole. To achieve this vision, over US\$100 million was spent to rehabilitate both ports in 1986 resulting in the upgrading of facilities and equipment for high operational performance and efficiency (GPHA, 2006).

Under the Ghana Government Gateway Project, GPHA has begun a process of reverting to a landlord status responsible for the port infrastructure and assets while monitoring the operations of private port operations. In view of on-going changes, a new Landlord Port Bill is under consideration. To enhance efficiency and competition, GPHA is undergoing restructuring to improve infrastructure and increase private sector participation in its operations especially cargo handling (GPHA, 2006).

Ports and custom operations in Ghana are encumbered with several challenges, which have militated against the smooth functioning of the various institutions, concerned with ports management (Ollenu, 2002). Delays in the clearance of goods due to bureaucratic processes have been the major setback to ports efficiency in Ghana. Notwithstanding, ports operation and custom practices are soiled with corruption which has tainted the image of the management of the ports. Lack of common database has also been a major factor impeding the operations of the ports (Bainiah, 2008).

The several problems confronting ports operations have compelled the ports management through the Government of Ghana to embark on a number of policies and actions. In 1990, the management of the ports, as part of its efforts to ensure ports efficiency, restructured customs operations to conform to international standards by implementing an Automated System for Custom Data (ASYCUDA) (CEPS, 2004). Also, the Electronic Data Interchange (EDI) was introduced. This system sought to integrate Information Communication Technology (ICT) into the operations of the ports (CEPS, 2004).

The management of the ports, between 2001 and 2002, undertook the Gateway Project to make Ghana's ports comparable to any ports worldwide (Owusu-Mensash, 2006). This project contained the Ghana Community Network Services Limited (GCNet) which provides the platform for data sharing among the various stakeholders.

This study therefore aims at looking at ports and custom practices in Ghana. Specifically, it assesses the challenges, problems, and potentials of some selected institutions involved in ports and customs operations as well as assess how automation can streamline the various factors of inefficiencies in ports operations and custom practices.

## **1.2 Problem Statement**

In Ghana, the national policy framework for development (GPRS II) has its overarching goals as the attainment of a middle-income status (with a per capita income of at least US\$ 1000) by the year 2015 within a decentralised democratic government. One of the key strategies under the private sector competitiveness is to improve Ghana's access to the global and regional markets by strengthening the capacity and efficiency of institutions responsible for trade and export and also through support services as transportation (NDPC, 2006).

One of these support services is the water transport system. According to Holye and Hilling (1970), a seaport is a link in the chain of transport through which the external trade of the nation passes, as much as a gateway. Seaports contribute extremely to the economy through the enhancement of maritime trading activities. The activities of water transport in Ghana are carried out mainly through the ports. In Ghana, the hub for water transportation is the Tema and Takoradi Ports. The amount of cargo handled by these ports continues to increase over the years both from within the country and outside the sub-region. For

example, the amount of transit and transshipment cargo handled by the ports increased from 145,000 tons in 2000 to 888,000 tons in 2002 (Galley, 2006). This called for the dredging of the Tema Port to a depth of 11.5 meters to enhance its capacity to handle bigger vessels as a result of increase in transit cargo from landlocked countries such as Mali and Burkina Faso (Galley, 2006). The activities of port operations however transcend the domain of physical expansion and construction. It includes a number of tasks such as information and documentation of cargo, which comprise the value of the cargo, the vessel that ferried it and points of origin and destination. Information concerning the interested parties such as the agents, freight forwarders, shipping companies, banks, insurance companies, port authority as well as government controlled agencies are essential. The aforementioned documentation that is done in port operations brings to fore the issue of agencies/institutions involved and the management practices adopted (GPHA, 2006).

Before 2002, the increasing volume of cargo handled by the Ports had overwhelmed the Customs Excise and Preventive Service, GPHA, clearing agents, freight forwarders and other Port agencies as well as government controlled agencies leading to inefficiencies in their operations (Bainah, 2008).

Port inefficiencies resulted from the fact that port operations were not computerised or automated: all activities ranging from provision of information to documentation, processing and clearance were done manually. This led to serious delays of clearance of cargo. Declarants could use at least one day just to retrieve containers for examination. Before this could even be done, there would have been several delays with regard to the documentation and processing of information in the form of submission of manifests by shipping agents, declaration of entries by Declarants, payment and confirmation by banks and clearance by the CEPS and Immigration officials. The clearance time at both Tema and Takoradi Ports took at least three days (CEPS, 2004). The litany of the processes that had to be followed in order to clear cargo resulted in numerous complaints and frustrations by importers (Bainiah, 2008).

Corrupt Custom practices result from the fact that some port officials exploited the loop holes within the existing inefficient system. Due to the fact that data sharing was not possible, the single administrative document which was in hard copy form was easily forged by some customs officials and declarants. This phenomenon of “flying entries” (entries which have not been paid and yet can still be used in the clearing process) was

therefore common at the port. Some custom officials also extorted money from the general public with the view to reducing the process of clearance for such people (CEPS, 2004).

In line with Ghana's Vision 2020, where the country set itself to becoming the gateway to West Africa through trade facilitation and investment, one of the strategies identified was to modernize certain frontline institutions like CEPS in order to increase revenue targets. Coupled with this were the expectations of stakeholders who wanted to reduce cost of doing business through simplified procedures (CEPS, 2004).

In 2002, the Ghana Community Network (GCNet) and the Ghana Customs Management Systems (GCMS) were introduced. The GCNet is a platform enabling GCMS to share with all the parties involved in the processing of trade documents and customs clearances. According to Bainiah (2008), the GCNet caters for activities including:

- a. electronic submission of manifests, entries, payment of duties confirmed electronically by banks;
- b. sharing of files by custom officials;
- c. transferring of electronic messages between Customs and Importers; and
- d. enhancing and facilitating import procedures.

According to Bainiah (2008), the introduction of the GCNet, resulted in the following observations:

- The reduction in clearance time. For example, at the Tema and Takoradi harbours, clearance time, which hitherto was at least three days, has been reduced to at most two days.
- Generation of uncleared cargo list. The GCNet can generate this list at any given time, thus CEPS no longer relies on GPHA to provide this. This procedure was previously flawed due to the possibility of inaccurate and unreliable data being presented. CEPS no longer has to contend with flying entries since all cargo is processed through Customs.
- The system has also generated real time revenue and trade statistics for decision making purposes. For example, in 2007, Customs was able to provide Customs administrators of Burkina Faso and La Cote D'Ivoire with comprehensive data on transit cargo destined for their respective countries only a few hours after request. Notwithstanding these positive observations, Bainiah (2008) still contends that,

procedures for processing shipping documents were cumbersome even though clearance time has been reduced.

From the foregoing discussion, it is evident that the introduction of an automated system for Port Operations under Customs holds a great prospect in terms of improving management practices of Customs as well as enhancing the effectiveness and efficiency of ports operations. This study is thus aimed at looking into automation as an option for port operations, its impact on port operation efficiency and customs practices and its impact on government policy on trade.

### **1.3 Research Questions**

Based on the problem statements, the study seeks to find answers to the following questions:

- 1) What is the nature of automation for Ports Operations in Ghana?
- 2) How does this Automation (GCNet) impact on port efficiency and custom practices?
- 3) How can the use of GCNet impact on overall government trade policy?
- 4) What measures can be adopted to enhance GCNet operations?

### **1.4 Objectives**

Generally, the study seeks to assess the effectiveness of automation in improving ports and customs operations. It is against this backdrop that the research aims at achieving the following specific objectives:

- 1) To assess scope and extent of automation in Ghana's port operations;
- 2) To assess the impact GCNet has had on port efficiency and custom practices;
- 3) To assess the impact GCNet has had on government trade policy; and
- 4) To make recommendations for enhancing the use of GCNet.

### **1.5 Study Scope**

This research focuses on the Tema and Takoradi ports in the Greater Accra Region and the Western Region respectively. These places have been selected due to the operations of the ports and the use of the GCNet. The presence of the various users, interconnectivity of their activities, and the sharing of information through the use of the GCNet make these areas most appropriate for the conduct of the research. The presence of Ghana Ports and

Harbours Authority, Custom Excise and Preventive Services, Ghana Commercial Bank and the Ecobank Ghana Limited make these areas suitable for the study. In addition, the Tema and Takoradi Ports serve as the major ingress and egress points for mass cargo.

Other issues/ areas that were considered include the nature of ports operations and customs practices, and the contribution of GCNet in ports operations and customs practices in Ghana as well as its prospects for the future. The study covers the processes leading to the adoption and usage of the GCNet in the operations of ports and customs. The study also examines the Electronic Data Interchange (EDI) system, which interfaces between Ghana Customs Management Systems (GCMS) and trading community via Ghana TradeNet, and all systems provided, deployed and managed by the GCNet. All customs and declarants training provided by GCNet, necessary customs infrastructure upgrades undertaken by GCNet and the construction of a dedicated customs communications network by GCNet form part of the scope.

#### **1.6 Significance of the Study**

This study, which is aimed at improving port efficiency and custom practices and operations in Ghana, has added to the body of knowledge in different ways. The findings of this research sensitize ports management and other stakeholders on the usefulness of the GCNet in fast tracking operations of the ports.

A careful selection of a right application of the GCNet software in the operations of the ports has the tendency of eliminating data sharing problem confronting ports management hence leading to the development of a more effective strategy to reduce corruption which has often been linked to ports operations and customs practices.

GCNet application in port operations has the tendency of enhancing efficiency and effectiveness as less time will be required to clear goods, share information and the problem of delays will fade into oblivion. The findings of the study provide strategies for improving the efficiency of the ports. This will put the ports on a better pedestal to withstand international competition.

Within the national context, ports efficiency through GCNet will go a long way to augment government revenue. This is because effective implementation of GCNet

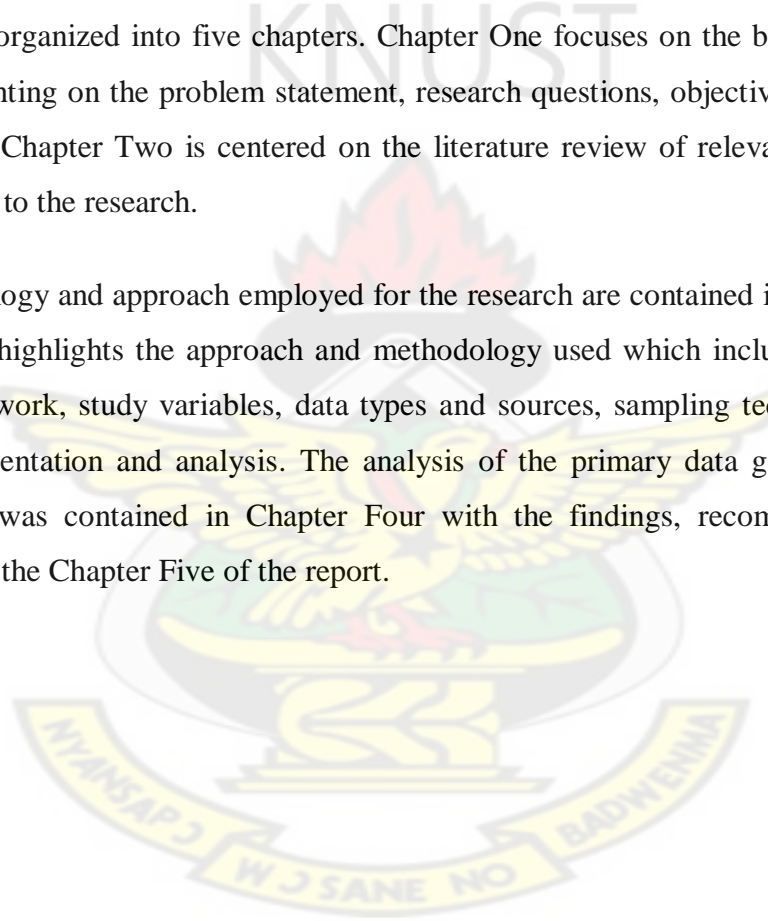
strategies as outlined in the findings of the study will help reduce corruption and increase output.

Ghana, particularly Ghana Ports and Harbours Authority and Custom Excise and Preventive Service, has introduced and executed several policies and programmes over the past decades and this research has come to add to the already existing literature on ports operations and customs practices in Ghana.

### **1.7 Organisation of the Study**

The study is organized into five chapters. Chapter One focuses on the background to the study highlighting on the problem statement, research questions, objectives and the scope of the study. Chapter Two is centered on the literature review of relevant materials and works related to the research.

The methodology and approach employed for the research are contained in Chapter Three. This chapter highlights the approach and methodology used which includes the research design framework, study variables, data types and sources, sampling techniques and the collation presentation and analysis. The analysis of the primary data gathered from the field survey was contained in Chapter Four with the findings, recommendations and conclusion in the Chapter Five of the report.



## **CHAPTER TWO**

### **PORTS OPERATIONS AND CUSTOM PRACTICES-REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter focuses on the history of ports development and custom practices in Ghana. The administrative, legal and management structure of ports operations, ports operation procedures and ports efficiency indicators are also contained in this chapter. Again, in this chapter are the contributions of ports to national development, challenges of ports operations and custom practices, stakeholders' involvement, and government policies regarding ports operations and custom practices in Ghana.

#### **2.2 History of Ports Development and Custom Practices in Ghana**

The development of seaports in Ghana began long before the 15<sup>th</sup> century when trade brought about the interaction with the outside world through which ships and sea vessels landed at the various sites along the coast. Evidence of this is the several forts and castles found in the coastal towns (Oduro, 1999). It was however during the early part of the 16<sup>th</sup> century that ports operations started with the construction of breakwater in Accra (GPHA, 1991).

##### **2.2.1 Historical Development of Tema Port**

In 1949, the colonial administration ordered Sir William Halcrow and partners of the United Kingdom to examine a proposal to set up an aluminum industry powered by hydro-electric station on the Volta River basin. Attention was drawn to the need for deep water port at the eastern part of the country leading to the selection of Tema. Works on the construction of the port began in 1954 with the first cargo entry in 1958. The port was opened in January, 1962 to regular traffic with the opening of the ceremonial declaration on the 10<sup>th</sup> of February, 1962 (GHPA, 1991).

The location of the Tema port is on the Greenwich Meridian and latitude 5.4 degrees north of the equator. It is about 30km east of the national capital, Accra. The port occupies a total land area of 3,904,754 m<sup>2</sup> and the quay length is 2,196 m<sup>2</sup>. The port has a coverage

storage area of 53,270m and 97,200m of open storage. Plug-in refrigerated containers are found at the reefers at the port. There are bunkering services and dry dock facilities available at the port (Owusu-Mensah, 2007). About 80 percent of imported goods in Ghana are handled by the Tema port. Clinker, oil products, aluminum, vehicles, container cargo, rice, wheat and alumina are the major commodities handled by the ports (Gyebi-Donkor, 2006).

### 2.2.2 Historical Perspective of Takoradi Port

In 1911, a lighterage harbour was started along the west coast of Sekondi and completed in 1914 (GPHA, 1991). Ships calling at this port were anchored offshore and their cargoes were conveyed by lighters and surfboats (GPHA, 1991). Due to the dangerous surf causing the loss of life and cargo and the general slow rate of operations, this port soon became unsuitable and insufficient to handle the fast expanding trade of the century. The need to build a deep sea port at Takoradi, about 4.5km west of Sekondi was discernible. The idea was conceived and borne by Governor Sir Gordon Guggisberg (Oduro, 1999).

The construction of the port began in December 1919 and was completed in 1927. Honourable Sir J. H. Thomas, the Secretary of State for the colonies in the United Kingdom, officially opened the port on the 3<sup>rd</sup> of April, 1928 (GHPA, 2002). Through hydrographic survey conducted by the Gold Coast governor, Takoradi was chosen and recommended as a suitable site for deep sea port. About one million tons of both imports and exports cargoes were handled by the port annually after the completion of the port. The Takoradi Port has seen considerable expansions in the area of infrastructure after its establishment in 1928 (GPHA, 2002).

## **2.3 Legal Framework, Administrative and Management Structure for Ports Operations and Custom Practices in Ghana**

Prior to the promulgation of the Provisional National Defence Council (PNDC) Law 160 in 1986, three groups were in charge of cargo handling and shipping in Ghana. These were Ghana Cargo Handling Company and Takoradi Lighterage Company Limited (TLC). Atlantic Port Services (APS) and Speed line Stevedoring Company (SSC). Preceding the amalgamation of the above-mentioned organizations, all offshore operations at the port were handled by them in addition to about 75 percent of the stevedoring activities.

Lighterage, log and timber handling in the port of Takoradi were done by TLC (Naval, 1991).

The seaports in Ghana are under the administration of the Ghana Ports and Harbours' Authority (GPHA). It is responsible for the planning, building, managing, maintaining and operating the seaports of Ghana. Currently, GPHA is the landlord port authority concerned with the responsibility of providing all needed port infrastructure. It controls the marine approach canal, navigational supports, basins and quays of the ports (Owusu-Mensah, 2007).

### 2.3.1 Legal Framework for Ports Operations

According to GHPA (2007), the statutory functions of the GPHA are to plan, manage, maintain, operate and control ports in Ghana and in particular shall:

- Provide in a port such port facilities as appear to it to be necessary for the efficient and proper operation of the port;
- Maintain port facilities and extend and enlarge any such facilities as it shall deem fit;
- Maintain and deepen as necessary the approaches to, and the navigable waters within and outside the limits of any port, and also maintain lighthouses and beacons and other navigational service and aids as appear to it to be necessary;
- Regulate the use of any port and of the port facilities;
- Provide facilities for the transport, storage, warehousing, loading unloading and sorting of goods passing through any port, and operate road haulage services for hire or reward;
- Carry on all the business of stevedoring and lighterage services; and
- Generally discharge any other functions which are necessary or incidental to the foregoing. These include the following:
  - a. Supervise stevedoring lighter age and container services, where these are provide by persons other than the Authority;
  - b. Operate tugs, dredgers and other craft for towerage, salvage, fire prevention and protection of life;
  - c. Enter into any agreement with any person:

- For supply, construction, manufacture, maintenance or repair by that person of any property which the Authority may require for the efficient discharge of its functions under this law; and
  - For the operation or provision of any port facility which the Authority by this law is empowered to operate or provide.
- d. Appoint, license and regulate stevedores, master porters to operate in the container terminals;
  - e. Establish pilotage districts, direct that pilotage shall be compulsory in any such district, determine the pilot (including Authority pilots) to operate in such districts, license pilots for work in such districts and establish pilotage boards and specify their suite including the duty of inquiring into the conduct of pilots; and
  - f. Within such limits as may be fixed by the secretary prescribed rates, charges and dues for services provided by the Authority or specify the persons liable to pay such rates, charges and dues prescribed under section 75 of this law.

### 2.3.2 Administrative and Management Structure of Ports Operations and Custom Practices

Administratively, there are laid down structures and instruments in place to regulate the operations and activities of the GPHA. A nine-member board of directors controls the authority with the Director General inclusive. The government appoints the director of the board. Among the principal roles performed by the director are:

- i. Determine policy with regard to all operations of the authority and ensuring its implementation.
- ii. Submit annual reports on the activities of the authority to the government and
- iii. Approval of annual estimates of revenue and expenditure.

The Board of Directors comprises the following:

- i. Chairman;
- ii. Director General of the Authority;
- iii. The Directors of the two ports-Takoradi and Tema;
- iv. Four representatives of port users;
- v. Representative from the Ministry of Roads and Transport; and

- vi. Two other members; one of whom must be an employee of the authority.

The Board is accountable to the Government of Ghana (GPHA's sole shareholder). The Board of Directors is concerned with the organizational structure, management team, organizational competency and general management procedures. The Board also sets targets for GPHA and monitors the activities of the organization, deliberations and results on financial, technological and strategic decisions (GPHA, 2007).

The management power of the GPHA is subjected to regular and hierarchical interruptions usually from the government. Government of Ghana and the Ministry of Roads and Transport control most of the members of the Board with the exception of the four representatives of port users. The level of autonomy of the ports in Ghana pertaining to administrative, financial, operational and legal issues is clearly defined by the Ministry of Railways, Ports and Harbours and the Ministry of Roads and Transport (GPHA, 2007). Figure 2.1 shows the organizational structure of the GPHA.

### 2.3.3 Operational Structure and Custom Practices of GPHA

The efficiency and tendency of ports to play their roles and execute their duties well depend on the relationship among ports authorities, service providers and agencies responsible for the various roles in port operations and management.

With regard to operations at the ports, there are several departments and they include the materials, engineering, marketing and customer service, port personnel and administration, stevedoring, port security, finance and port audit departments. The functions of these departments are coordinated directly under the director of ports (GPHA, 2006).

- i. Material Department

The department is responsible for purchasing and acquisition of port machinery and other logistics. The port material manager heads the department.

- ii. Engineering Department

This department is in charge of all repairs and maintenance works of the ports machinery. The chief engineer heads the department.

iii. Marketing and Customer Service Department

The department is headed by the marketing and customer service manager. The department is in charge of the promotion of ports business transactions in both the local and the international trade environment. It also sets and ensures that customer service standards are maintained. The complaints of customers are handled by the department through a single system; the customer service center. The department is the communication channel linking ports customers and ports management.

iv. Port Personnel and Administration Department

The department is an in-house administration of the ports. It plays all the administrative roles necessary to ensure efficient operation and management of the ports. The department is responsible for personnel recruitment, transfer and employee welfare and others. The manager of personnel and administration supervises the department.

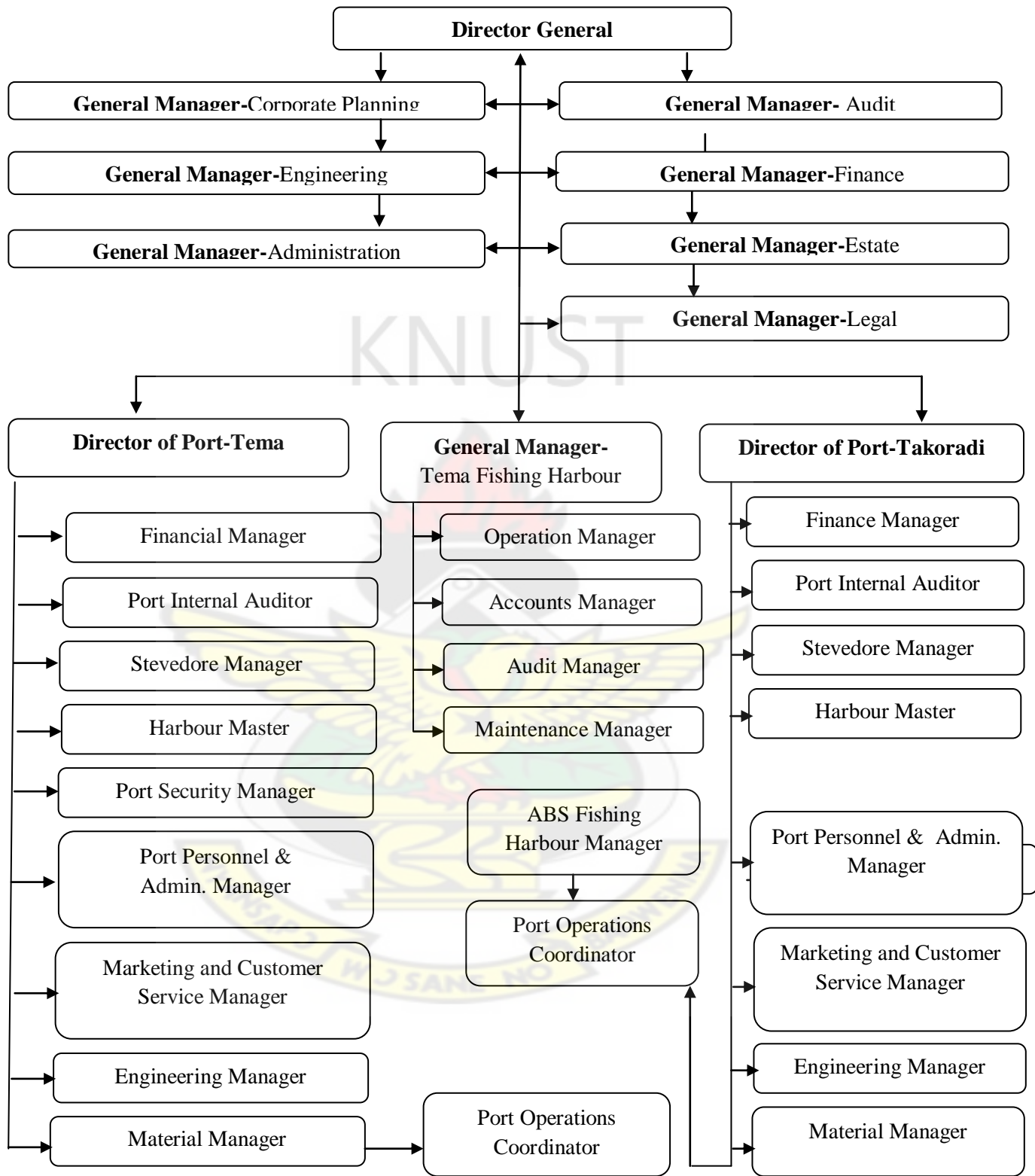
v. Stevedoring Department

The department is in charge of Dockers involved in loading and unloading of container and cargo from vessels. The department supervises the functions and operations of stevedore companies both public and private within the ports.

vi. Port Security Department

The department provides security for the ports. To enhance their operations, they are assisted by the Ghana Police Service and the Custom Excise and Preventive Service (CEPS) at the exit points and the Ghana Navy at the water front. The department is concerned with the responsibility of ensuring the security of goods and vessels. It is headed by the port security manager.

**Figure 2.1 Organizational Structure of the Ghana Ports and Harbours Authority**

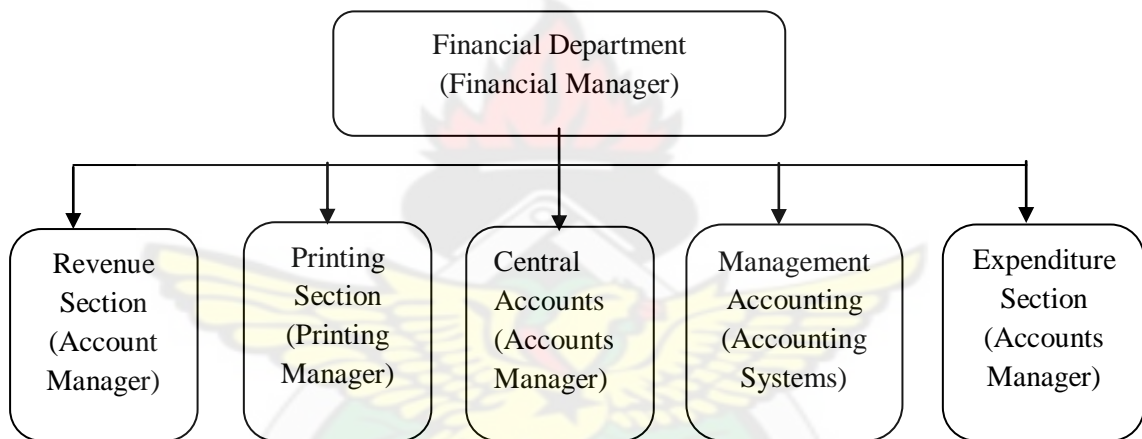


Source: GPHA, December 2007

vii. Finance Department

The department is responsible for every aspects of accounting and financial administration. Also the department is charged with the supervision and implementation of the ports' financial policies, directives and procedures. It is responsible for the initiation and execution of financial plans within the guidelines of the ports' policy framework. There are four sub sections under the department. These are the revenue section, printing section, central accounts, management accounting systems section and the expenditure section. The financial manager is the head of the department. Figure 2.2 depicts the structure of the financial department of the GPHA.

**Figure 2.2 Structure of the Finance Department of the GPHA**



Source: GPHA, December 2007.

viii. Ports Audit Department

The port internal auditor supervises the department. The role of the department is to perform internal examination of official accounts and business interactions of the ports. It ensures that all financial and administrative records are accurate and also supervises the purchasing of logistics and other procurements.

## 2.4 Port Operation Procedures and Custom Practices

### 2.4.1 Clearance Processes

The principal actors concerned with clearance of cargo at the ports are the Shipping Lines, CEPS, Destination Inspection Companies (such as Quarantine Board, Environmental Protection Agency and Ghana Immigration Service), Clearing Agents and Port Authority (GPHA, 2005). The procedures that these institutions operate within and their documentations include:

- ❖ The importers use Clearing Agents or Custom Brokers to clear cargos;
- ❖ The Destination Inspection Companies authenticate the documents and thereafter issue a Final Classification and Valuation Report (FCVR) stating the value of the consignment and the duty payable;
- ❖ The Shipping Lines bring in cargo and release requisite documents of agents, that is
  - Bill of Laden;
  - Invoice;
  - Packing List; and
  - Freight Receipt.
- ❖ CEPS undertake valuation of certain category of items (importations without invoices, used items, and commercial items found in personal effects) and ensure that the appropriate duty is collected; and
- ❖ GPHA facilitates the physical clearance process and ensures collection of rent and handling charges.

### 2.4.2 Import Processes

According to GPHA (2005), the following processes are employed under the importation of goods:

- ✓ The importer/ or his agent presents the original copy of the delivery order and other relevant documents to the GPHA revenue staff to verify the authenticity of the documents and check against the consignment's information on the GCNet. The relevant charges are determined, payment made and receipts are issued.

- ✓ The importer/ or his agent then proceeds to the container depot with the receipts and deposits the delivery order at the charting office. The delivery order again is verified with information on the container received from the stevedores. The container is subsequently tracked down and chartered and the delivery order is dispatched to the yard where the container is located. House to house containers are picked from the stack, consolidated and loaded directly on the importers truck and Containers that will be unstuffed are transferred to the delivery bay where they are unstuffed and examined by CEPS before they are released.
- ✓ After this, the importer/ or his agent proceeds with delivery orders to the tally sheet/ waybill desk. Where the waybill is prepared and the relevant copies are handed over to the importer/agent to enable him/her proceed to the exit point. At the exit gate the GPHA security personnel verifies the delivery tally sheet against the cargo loaded onto the truck. They also verify whether the required GPHA charges have been paid. This ends GPHA role. However under custom practices, CEPS and other security agencies conduct a final verification of documentation against the cargo. The truck is release after all possible checks have been carried out completing the clearance process.

#### 2.4.3 Export Processes

With export, the GPHA (2005) outlines the following general procedures;

- ✓ The Exporter/Agent makes his/her declaration on the GCNet CEPS Front End Software (FES) indicating the commodity type, quantity, volume and other necessary information.
- ✓ The Exporter/Agent goes to the CEPS compliance office at the long room where an examination officer is assigned to him/her. The examination officer accompanies the agent to the stuffing platform to observe the stuffing procedure (this is mandatory). The packing may be done by freight forwarder who handles export trade or shipping lines e.g. Maersk Line who has its own logistics wing with additional stuffing services;
- ✓ The exporter proceeds to the GPHA export desk at the export shed to complete a shipping note. This is a document indicating the commodity, weight, destination, exporter and consignee. The value is assessed at the GPHA revenue office in depot and the requisite charges paid after which GPHA releases CDI which is referred to

- CEPS by the agent. CEPS then releases a handwritten note sealed and embossed directly to the shipping line. The shipping lines have mandatory period of 48 hours to raise the payment invoice and copies of the bill of lading;
- ✓ If there are no anomalies and amendments required, the shipping line releases the original bill of lading to the exporter/agent. The agent sends this to the export shed where a CEPS official releases it online through the GCNet. The goods are then loaded into a vessel. The agent finally sends the original copy of the bill of lading to the consignee in the country of destination.

The aforementioned procedures for import and export entailed going through so many uncoordinated steps, which lead to duplication of roles by the various institutions involved in the process. But it will be seen that with the introduction of the automated (GCNet) system coordination among the various institutions involved with the execution of these procedures has improved and the many steps that pertained have been compressed into just eight steps. This has greatly reduced the time spent and cut down the paper work involve in ports operations in Ghana

## **2.5 Contribution of Seaports to National Development**

Recently, about 90 percent of the world's trade is carried by sea (European Sea Ports Organisation, 1996). Ports play essential role in the development of developing countries particularly in times where the focus of economic growth and development is on trade. In landlocked countries, the efficiency or otherwise of transit ports has direct effects on international trade and competitiveness (Luguje, 2007).

According to the European Commission (1997), ports serve as medium through which countries receive and send goods and services that are imported and exported. This is as a result of the affordability of sea transport in transporting bulky goods and services as compared to other modes of transport. The ports of Ghana handle greater proportion of country's exports and imports. The efficiency and of ports operations in Ghana have increased over the years and have contributed immensely towards the country's development.

Seaports open up countries to the international world by enhancing their comparative advantage in their areas of production. It is through sea ports that countries ensure

optimum utilization of resources usually via trade (Goss, 1990). In Ghana, the contribution of the GPHA to the economic development is enormous. GPHA has been committed to government policy on private sector-led growth. Before 2001, only two private stevedoring companies operated in the ports. In 2008, the number of private stevedoring companies increased to eleven. Significant improvements have been made such as higher level of professionalism and greater degree of choice and attention to customer service due to increasing private sector involvement in the operations of the ports (GPHA, 2002).

The ports are integral parts of the international transport chain; it is the prime mover of industrial and agricultural development (GPHA, 2008). There is easy movement of capital goods from one country to another for production purposes. Most machines used by countries particularly in Africa imported from the outside world through the seaports. Also, the ports of Ghana contribute to the construction of roads. For instance, the port of Tema constructed a 6km road from the port to the Tema Motorway to enhance transportation within the Tema Township and access to the port (Tema Metropolitan Assembly, 2006).

Seaports provide employment opportunities for several people. The successful operations of ports in the world require labour to engineer the operations of the ports. Despite the capital intensive nature of some sea ports in the world, a significant proportion of people are employed by seaports (GPHA, 2008). The intrusion of private sector in to ports operations couple with the openings of new ports over the world, example the Dakar Port in Senegal, are increasing the employment levels of people (Goss, 1990). In Ghana, the GPHA employs about 20,000 people annually in addition to the indirect services due to the existence of the ports (GPHA, 2002).

Several governments generate enough revenue from the operations of the seaports. Government augments its revenue through seaports in the form of custom duties from both exporters and importers. The Rotterdam Port, which one of the biggest in the world, contributes about 10 percent to the country's GDP (Hoyle and Pinder, 1996). In Ghana, revenue from custom duties has doubled over the past decade (GPHA, 2002).

In the area of environmental protection, GPHA has been part and supported several projects relating to pollution control and safety week celebrations. For instance, GPHA supported the Marine Pollution Convention and ensures the protection of the ports

environs. Also, a week in every year has been set apart for the celebration of safety week during which seminars, symposia and lectures are organised for staff to create safety awareness (GPHA, 1991).

The GPHA contributes to the health sector both in cash and in kind. The ports have supported several health related exercises and campaigns such as the National HIV/AIDS awareness week to enhance public consciousness on health problems. GPHA also operates hospitals which serve both the workers of the Authority and the wider community (GPHA, 1991).

## **26 Challenges of Port Operations and Custom Practices in Ghana**

Seaports in Ghana are faced with several challenges and problems, which hinder the smooth operations of the ports (GPHA, 2006). These challenges have been discussed in the sub-sections below.

### **2.6.1 Burdensome and Bureaucratic Processes of Ports Operations**

The activities and functions of the several institutions and agents involved in ports operations in Ghana as a result of poor coordination have resulted in the overlapping and duplication of roles, functions and efforts. Offshoots of these challenges are the delays and long processes in handling and clearance of cargo at the ports.

### **2.6.2 Slow and Low Level of Adaptation of Ports Technology and Configuration**

Port technology and configuration have in recent times due to demand for multipurpose capacities in ports operations. This has become necessary in ensuring efficient and effective operations at the ports. Slow adaptation to modern technology has made improvement in ports operations difficult especially in the areas of port technology, port management, port labour and custom practices at the ports. This difficulty has hindered changes in the flexibility and diversity in port management, investment, ports designs and even in the use of ports resources.

### 2.6.3 Inadequate Infrastructure and Facilities at the Ports

Lack of adequate facilities and infrastructure at the ports have militated against ports operations with regard to inter-feeder transfer of cargo and services, cargo storage, cargo consolidation and cargo manipulation as well as cargo packaging and processing. Congestion at container terminals, vessels traffic and delays in cargo flow are borne by this challenge in the operations of the ports.

## 2.7 Stakeholders' Involvement in Ports Operations and Custom Practices

The participation of major and minor stakeholders in the operations of seaports is very essential in ensuring effective and efficient functioning of the ports. The realization of ports objectives is greatly determined by the level of involvement and coordination among the various stakeholders (CEPS, 2006). Among the principal stakeholders in Ghana are:

### i. Destination Inspection Companies

These companies are private institutions charged with the responsibility of classification and valuation of goods that enter into international trade. Destination Inspection Companies operating in Ghana include the Gateway Services Limited (GSL), Inspection and Control Services Limited (ICS), Ghana Link Network Services Limited, Bureau de'varitas International (BIVAC).

### ii. CEPS

The Custom Excise and Preventive Service (CEPS) plays indispensable role in the operations of the ports by collecting, accounting and protecting taxes and duties on imports and exports.

### iii. Stevedoring Companies

Stevedoring companies deal mainly with the loading and off-loading (transshipment) of goods. In ports customs operations in Ghana, private stevedoring companies constitute 75 percent and state owned stevedoring companies make up the remaining 25 percent. Private stevedoring companies operating in Ghana include the Atlantic Port Services Ltd, Advance Stevedoring Company Ltd, Ordert Stevedoring Company Ltd, Golden Gate

Stevedoring Company Services Ltd and Safebond Company Ltd with GPHA serving as the government stevedoring agent.

iv. GPHA

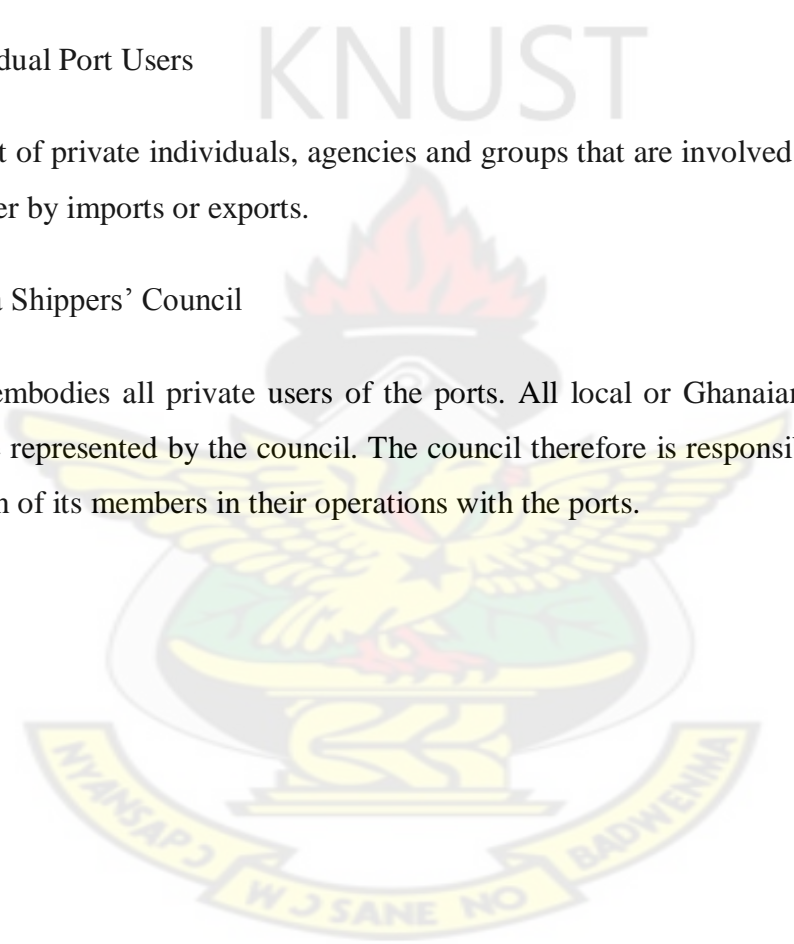
The GPHA acts as the landlord of the ports and thus provide all infrastructural services as well as facilities required by importers, shippers, exporters and other users of the ports. GPHA provides about 25 percent of stevedoring services in addition to the navigational aids and berths.

v. Individual Port Users

These consist of private individuals, agencies and groups that are involved in the maritime industry either by imports or exports.

vi. Ghana Shippers' Council

This group embodies all private users of the ports. All local or Ghanaian importers and exporters are represented by the council. The council therefore is responsible for ensuring the protection of its members in their operations with the ports.



**Table 2.1 Stakeholders' Relationship in Ports Operations**

<b>Institution/Agency</b>	<b>Major Function</b>	<b>Coordinating Agency</b>	<b>Setbacks</b>
Registrar Generals Department	Issuing of business operating license(s)	Registrar Generals Department	Unnecessary delays and high cost due to corruption
Internal Revenue Service	Tax clearance certification	Internal Revenue Service	Expensive cost/fees that encourage tax evasion and discourages small scale businesses
GPHA	Business administration and port management	GPHA	High pressure on existing infrastructural services and facilities
CEPS	Customs inspection and release of containers/cargo and collection of duties and taxes	Ministry of Trade and Economic Planning	Delays and high cost of taxes due to bureaucratic processes
Stevedoring Companies	Provision of cargo and container handling services and facilities	GPHA	Expensive cost of service and facility maintenance.

Source: GPHA, December 2007

The involvement of these stakeholders in ports operations and custom practices dictate the level of performance and achievements of the ports. The motive behind increasing stakeholders' participation in ports operations is to increase private sector involvement by promoting and enhancing efficiency through competition. The roles of the various stakeholders are shown in Table 2.1.

## **2.8 Government Policies on Ports Operations and Custom Practices in Ghana**

The administration and management of seaports in Ghana have consistently been concerned with improving efficiency of ports operations and custom practices even in the midst of several difficulties and challenges. The Ministry of Ports, Harbours and Railway sought to provide uninterrupted and barrier free access to Ghana in accordance to the pursuance of the broad national goal of improving national income by increasing per capita income to US\$ 1000 by 2012 (GPHA, 2007). The removal of these trade barriers was to facilitate and enhance easy access to all parts of the country thus providing favourable environment for accelerated economic development (Tema Metropolitan Assembly, 2005).

It is in vein of establishing accessible, reliable, efficient and affordable as well as safe services for the movement of people, goods and services that the Ministry of Ports, Harbours and Railways was mandated to design its corporate strategy in accordance with the goals of the Growth and Poverty Reduction Strategy (GPRS II).

Government effort with regard to ports operations and custom practices is the Trade and Investment Gateway Project. This project falls under the framework of the National Institutional Renewal Programme which is to embark upon public sector efficiency by reforming public institutions. The relevance of the reforms is to hold public agencies and enterprises accountable for the delivery of services (Alabi, 2009).

The Gateway Project has the fundamental preoccupation of attracting a mass of export oriented investors to accelerate export led growth as well as facilitating trade. The project hunt for the attainment of higher economic growth rates by putting in place sustainable fiscal balance and the enhancement of private investments for export. The achievement of the fiscal balance and the promotion of private investments for export is through the creation of favourable setting to increase private investment by providing infrastructural services and reducing the cost of undertaking business in Ghana (Alabi, 2009).

The Gateway Project is of two components which are essential in increasing inflows of foreign direct investment. The development of a geographically sited Export Processing Zone (EPZ) is the first component of the project. The purpose of this component is to attract private developers who will provide on-site services or infrastructure for investors

to operate in such areas. This first component of the Gateway Project is geared towards the removal of all identified constraints in the operations of the ports (World Bank, 1998).

The second component of the project is the improvement of institutional capacities to encourage investments. This component deals with the reforms of the Custom Excise and Preventive Services (CEPS) and the Ghana Ports and Harbours Authority (GPHA) regarding their administrative processes and operations. The second component is also essential in ensuring the Ghana's vision of become a trade and investment center. The reforms are also streamlined in defining and implementing schemes in quality control methods and processes as well as procedures employed by CEPS, GPHA, Ghana Immigration Service and Civil Aviation in dealing with matters related to imports, exports and investments (World Bank, 1998).

The project seeks to combat institutional capacity challenges confronting principal agencies engage in ports operations and custom practices (World Bank, 1998). These agencies include:

- i. Ghana Investment Promotion Center (GIPC)
- ii. Ghana Immigration Service (GIS)
- iii. The Ghana Free Zone Board (GFZB)
- iv. Ghana Ports and Harbours Authority (GPHA)
- v. Ghana Civil Aviation Authority (GCAA) and
- vi. Customs, Excise and Preventive Service (CEPS)

Under the Gateway Project, GPHA is charged with certain responsibilities including; reducing the turn-over time for vessels, enhancing ports management efficiency, ship handling capacity and clearance cargo time. In light of this, government has increased and encouraging private sector participation in ports operations and custom practices in Ghana. The Gateway project has changed GPHA into a landlord ports authority with ports operations being subcontracted to the private sector (World Bank, 1998).

#### 2.8.1 The Gateway Project: Strategic Schemes for GPHA

The project outlines short-term plans of actions and targets by the government to realize long –term aim of developing the seaports into trade hub and preferred ports within the

Western African Sub-Region (Alabi, 2009). The following strategies and targets are directed towards the realizing the objective:

- a. Establish electronic data interchange for the maritime community that is the introduction of the GCNet and the other port transactional networks;
- b. Transform GPHA into a landlord port authority; that is to provide most port facilities, berthing services required and privatize stevedoring and cargo handling services;
- c. Develop a container devanning area outside the ports to minimise congestion at the container terminal;
- d. Extend and dredge quay 11 of the ports as part of plans to expand the port berths to accommodate contemporary large vessels;
- e. Increase the role of private sector in port operations by setting the tone for private sector participation in port operations and management;
- f. Reorganise GPHA into a downsized headquarters;
- g. Improve container handling productivity in the ports as part of the pillars behind privatisation of certain port services; and
- h. Achieve the following container productivity figures at the end of the plans for its operations to be comparable with international standards. These are to:
  - ❖ Reduce cost of container handling from \$168/box to \$80/box;
  - ❖ Increase container loading and unloading rates from 12 boxes/hour to 24 boxes/hour; and
  - ❖ Reduce dwell time of containers from 25days to less than 7days.

#### 2.8.2 Achievement of the Gateway Project by GPHA

The following accomplishments have been recorded upon the introduction of the Gateway Project by GPHA (GPHA, 2006):

- 1) Dredging of the approach channel to 12.5 meters and berths 1 and 2 to 11.5 meters at the Tema seaport;
- 2) Extension of quay 11 by 200 meters increasing it to 575 meters of continuous quay and a 25.5 hectares terminal;
- 3) Acquisition of three ships to shore (STS) container gantry cranes and four rubber tyre gantries (RTG's);

- 4) Construction of an off-dock container devanning area with a Container Freight Station (CFS) to accommodate all Less than Container Loads (LCL) and vehicles;
- 5) Construction of a transit truck park outside the port. This enables trucks, after loading, to move out of the ports to wait for their final documentation at the truck park. The construction of the park has gone a long way to impart on congestion situations at the ports;
- 6) Construction of a truck park within the port for trucks waiting to load and unload. The park has also facilitated easy movement within the port and has reduced congestion;
- 7) Re-fencing of the Tema port and the introduction of CCTV cameras to enhance and improve security situations in the port; and
- 8) Introduction of two scanners to facilitate quick delivery of containers.

## **2.9 Case Study of Ports Management and Operations in Malta**

### **2.9.1 Overview of Ports Management in Malta**

Port services, essential for the functioning of ports, have undergone fundamental changes in recent years. Previously, a single, monopolistic provider, in many cases publicly-owned or controlled, was the rule. However, over past decade, market forces have gained ground pushing back the public sector. Malta has not been immune to these winds of change in port services (Dingli, 2007).

### **2.9.2 Importance of Ports to Malta**

The ports of Malta serve as the gateway of the Island to the outside world thus providing excellent deep natural harbours in tandem with the Island's strategic location in the Central Mediterranean. These unique location of the Island's ports have been the single most significant factor to have shaped its history and destiny over thousands of years (Dingli, 2007).

These ports have allowed Malta to play an international role of importance far outweighing its size of 320 km and population of 400,000. The ports of Malta made over 9,000 ship calls in port/designated anchorage in 2006. In addition, around 1,000,000 tons of bunkers provided to ships by local bunker barges as well as over 400 cruise ship calls

annually with around 400,000 passengers handled facilitating the growth of the Malta's economy (Dingli, 2007).

### 2.9.3 Operations of the Maltese Ports

Maltese ports are not privately owned. The infrastructure development of the ports such as breakwaters, quays, among others is owned by the State. The State maintains and plays all regulatory and managerial roles which have been delegated to ad hoc government agencies (Dingli, 2007). However, the various services offered by the ports are mainly operated commercially by private entities/entities in the course of privatization. These private entities therefore own the superstructure and other equipment used in ports operations (Dingli, 2007).

The ports of Malta have operational and management structure led by the ports directorate. The ports directorate which is considered to be the Port Authority for all ports in Malta has regulatory and managerial roles. Ultimately, the port directorate is responsible for port management and development ensuring the provision of facilities and services that guarantee the efficient and cost effective operations of the Maltese ports. As a regulatory entity, the ports directorate is concerned with statutory compliance by all port operators and with such key issues as good order, navigation, port operations, pollution prevention and control and port security (Dingli, 2007).

In its managerial role, the ports directorate is obliged to ensure the provision of port workers, pilotage/towage services, mooring services and other related shipment requirements and services. This does not mean that the ports directorate is a direct service provider (Dingli, 2007).

### 2.9.4 Sources of Revenue for Ports Management

The ports directorate of Malta through its managerial and regulatory roles raises revenue from the following sources:

- Port dues;
- Berthage dues( including anchorage);
- Rentals from concessions (Viset, VGT, etc); and
- Miscellaneous (for instance waste reception facility).

### 2.9.5 Recent Ports Development

Recent developments in the privatization of ports operations in Malta have undoubtedly enhanced efficiency and best practice and can be said to reflect the current international trend in the port industry which considers ports as commercial entities which ought to recover their costs from port users who benefit from them, rather than from the tax payer (Dingli, 2007).

However, the issue of complete liberalization of such operations, given the realities of the limited size of the market, the constraints of available space and the considerable investment levels required, is of course another question altogether (Dingli, 2007).

### 2.9.6 Ports Operations and Challenges

The operation of the ports in Malta is under the management of the State owned Ports Directorate. The Directorate however works with a number of private companies in the exports and imports of goods/cargoes as well as the management of the Ports (Dingli, 2007). The ports are faced with acute challenges. Dingli (2007) identified four major challenges impeding the operations and management of the ports and they include: inadequacy of infrastructure which is impeding the expansion of the ports; lack of port regionalization of integrating offshore hubs; and increasing globalization leading to increased in volume of trade.

### 2.9.7 Lessons Learnt from Malta's Experience

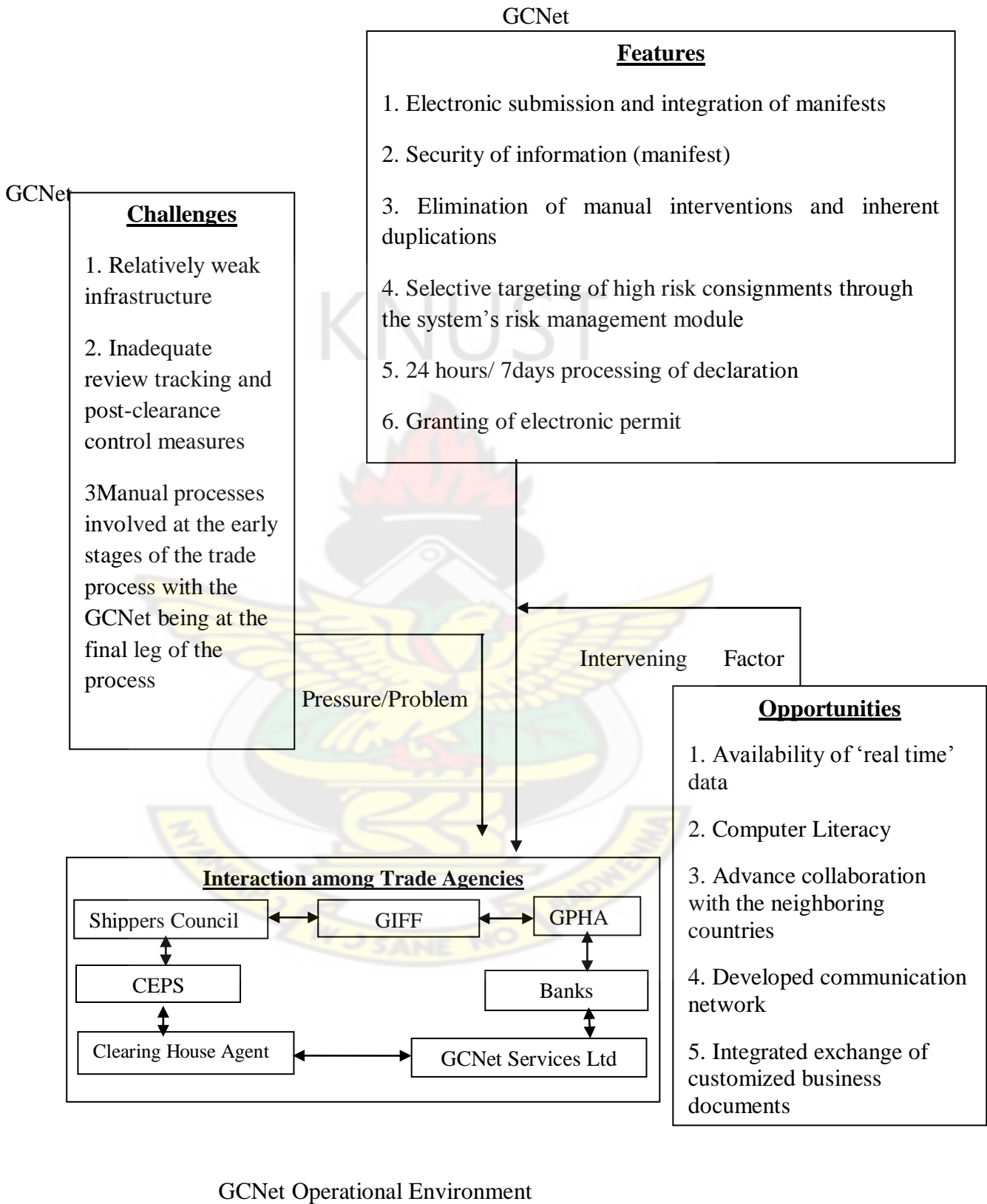
The development and management of ports service requires the commitment and involvement of all stakeholders. The government created an avenue for the effective participation of the private sector especially the freight and cargo movement. The adoption of appropriate technology in ports management is essential and a prerequisite for effective management and increased revenue generation. This is because the adoption of appropriate technology in ports management reduces the incidence of corruption and facilitates ports operations.

## 2.10 Summary

Ports operations and custom practices in Ghana have undergone several metamorphoses over the past decades. This chapter assessed the various processes, ways and actions involved in ports operations and custom practices with emphasis on port efficiency. The chapter portrayed a number of actions, interventions and strategies that are in place to enhance the operations of the ports. Many of these efforts have been implemented and are yielding results. It must however be stated that these efforts and interventions are taken long periods for their impacts to be felt in the operations of the ports. GCNet, being one of the efforts, has been accorded the needed attention from the literature review. The next chapter of this study examines the implementation of the GCNet, its challenges, prospects in enhance ports and customs efficiency and other relevant issues pertaining to the operationalisation and utilization of the GCNet in the operations of ports and custom practices in Ghana. Figure 2.3 shows the conceptual underpinning of effective ports operations and management through the adoption of GCNet.

Figure 2.3 shows the ports operations and management environment. The challenges impeding the smooth operations of the ports are corrected and overcome through the characteristics or the advantages of the adoption of an appropriate technology (GCNet). The advantages and opportunities offered by the GCNet software plays an intervening role to overcome the ever-increasing challenges militating against the smooth operations of the ports. Effective and efficient use of the GCNet software creates an enabling environment within which the various stakeholders and actors involved in ports operations interact and collaborate successfully.

**Figure 2.3 Creation of Efficient GCNet Operational Environment**



Source: Author's Construct, May, 2010.

## CHAPTER THREE

### STUDY APPROACH AND METHODOLOGY

#### 3.1 Introduction

Chapters one and two highlight on the background of ports and customs operations emphasizing on the situation in Ghana as well as examining the theoretical underpinnings of ports and customs operations. This chapter presents the approach and methods used in undertaking the research. Explanations of the research designed used, the data requirements, the various data sources, the survey instruments employed, the sampling procedure, the study variables and data analysis as well as data processing are contained in this chapter.

#### 3.2 Research Design Framework

The research method adopted for the study is a case study. This research design involves an observation of a single group or event at a single point in time, normally subsequent to some phenomenon that allegedly produced change (Nachmias, 1992). This method was used in assessing the nature of automation in ports and customs operations with respect to the use of the GCNet. The case study approach is an empirical enquiry that allows for an in-depth investigation of the dynamics of a particular system. The case study also presents a systematic enquiry into an event or a group of related events aiming at describing and explaining a particular phenomenon of interest (Bromley, 1990). This study design was employed for the research because the issue under exploration is a contemporary phenomenon within a real-life context which is based on multiple sources of evidence. Kumekpor (2002) indicated that this method leads to a better familiarity with the circumstances of a particular case and helps to assess the reaction of a community or a group with regard to concerns raised during the cause of the study.

According to Theordorson and Theordorson (1969), the case study approach is useful for studying an individual, group, an episode, a process, a community, a society or any other units of social life. Therefore with careful planning, detailed study of the current issues and challenges, success can be attained with the application of the case study approach in a research process (Soy, 1997 cited in Zucker, 2001).The case study is an

explanatory method, which makes it easy to ask and seek answers for the relevant ‘why’, ‘when’ and ‘how’ questions linked to the research. The understanding of fieldwork relationships associated with case studies can be the greatest advantage (Davids and Sutton, 2004).

The use of this method stems from the fact that it affords the researcher the opportunity of studying the operations of the ports and customs in Ghana and the impacts of the automation on ports and customs operations. Also, since the researcher has little knowledge about the phenomenon under study, the case study method was the most appropriate as it provides a platform for the researcher to acquaint himself to the local conditions pertaining in the study area. The method enhances better understanding of the issue under investigation as the approach permits the researcher to learn from practice.

Nevertheless, the case study design has its own limitations, among which are: the high probability of investigator related shortcomings such as poor judgment of issues, and political and security difficulties related to the nature of case study. Lack of cooperation from the members of the case being studied may result in gaps in the data gathered for the research. However, these problems were overcome through proper and adequate planning and preparation towards the survey. This was done by educating the respondents on the purpose of the research and also ensuring that data gathered were treated with complete secrecy.

### **3.3 Study Variables, Data Type and Data Sources**

According to Miller and Brewer (2003), a variable is an empirical property which can take on two or more values. In addition, a variable is also a concept that varies taking on two or more values (Kreuger and Neuman, 2006). The values of a variable are its attributes. It also emphasized by Miller and Brewer (2003) that variables help in moving a research from a conceptual level to an empirical level employing the variables as essential elements of the research problem.

Babbie (2007) viewed variables as a logical grouping of attributes. With respect to the study, the key data variables were:

- The level of automation in ports and customs operations;
- Impacts of GCNet on trade policies;
- Level of stakeholders' involvement in the use of GCNet in ports and customs operations;
- Effects of GCNet on ports and customs operations; and
- Challenges associated with automation in ports and customs operations.

Data on the nature of automation in Ghana from the selected groups and agencies in ports and customs operations are needed. Also, the data on the effects of GCNet in enhancing efficiency in ports and customs operations as well as facilitating smooth implementation of government policy especially on trade. The various stakeholders and their roles in ensuring improvement in ports and customs operations are required for the study.

In conducting the research, both primary and secondary data were used. Relevant literature was reviewed by the researcher from secondary sources such as books, journals, internet among others to appreciate key concepts, issues and components relating to the use of GCNet. Gaps identified in the literature review led to the collection of appropriate data through the primary data gathering.

Data on the type and level of automation for the ports and customs in their operations were collected from the Ghana Ports and Harbours Authority, Customs Excise and Preventive Service and Shippers' Council. The effects of GCNet on ports and customs operations were available at the Ghana Ports and Harbours Authority, Customs Excise and Preventive Service, Ghana Community Network Services Limited, Ghana Commercial Bank, Ecobank Ghana Limited, Ghana Institute of Freight Forwarders and Clearing House Agents. The summary of the major variables, data type and sources are shown in Table 3.1.

There were two categories of data collection for the study, although it was an institutional based research. These were administrative and operational levels of data collection. The administrative category comprised the actual body setup and responsible for the execution of the software (GCNet). The operational component of the data collection process constitutes the primary stakeholders involved in the use of the GCNet. The operational level represents the core of the empirical analysis of the actual application of the software

whiles the administrative category forms the nucleus of the software with regard to its implementation.

**Table 3.1 Major Study Variables, Data Types and Sources**

Research Objectives	Study Variable	Data Required	Data Sources	Data Collection Tools
1.To understand the nature of automation in Ghana	The level of automation in ports and customs operations Level of stakeholders' involvement in the use of GCNet	Data on the ports operations and the type of automation for the operations of the ports, level of involvement of actors involved in the usage of GCNet	GPHA, CEPS, Shippers Council, GCB, Ecobank, GCNet, GIFF	Institutional Questionnaire Interview Guides
2.To assess the impact GCNet has had on port efficiency and custom practices	Effects of GCNet on trade policies	Data on the effects of the GCNet on ports operations and custom practices	GPHA, CEPS, Shippers Council, GCB, Ecobank, GCNet, GIFF,	Institutional Questionnaires
3.To assess the impact GCNet has had on government trade policy.	Impact of GCNet on trade policies	Data on the effects of GCNet on government trade policies.	GPHA, CEPS, Shippers Council, Ecobank (Gh), Commercial Bank, GCNet.	Institutional Questionnaires , Interviews Guides
4.To make recommendations for enhancing the use of GCNet	Challenges and prospects associated with automation in ports and customs operations	Data on the possible ways of improving the use of GCNet in ports operations and custom practices	GPHA, CEPS, Shippers Council, Ecobank (Gh), Commercial Bank, GCNet, GIFF.	Institutional Questionnaires Interview Guides

Source: Author's Construct, November 2009.

### **3.4 Data Collection**

Structured questionnaires, interview guides and observations (see appendix 1, 2, 3 and 4) were used as the data collection tools for the study. These instruments ensured a complete assessment and insight into the dynamism of the issue under study and its consequences both ports and customs operations and on government trade policy. In conducting the study, the above tools were used appropriately to enhance the collection of data.

The interview guide was used for the collection of data from the Ghana Community Network Services Limited, the implementation body for the GCNet software. With regard to this, a number of questions basically open-ended type were prepared and administered through the use of purposive sampling technique focusing on the implementation agency. The open ended questions were used to give unlimited room for the respondents to provide relevant responses pertaining to the issue under study.

At the operational level, structured questionnaires comprising different set of questions were employed. The questionnaires were administered at the selected institutions concerned with the use of GCNet for the study. The directors answered these questions and the operational managers of the selected institutions among them were the Ghana Ports and Harbours Authority, Customs Excise and Preventive Services, Ghana Commercial Bank, Ecobank Ghana Limited, Ghana Institute of Freight Forwarders, Shippers Council and Clearing House Agents. The survey presented an opportunity for some secondary data in the institutions possession to be released and reviewed.

Also, observations were used during the survey as a technique to ascertain the easiness with the use of GCNet. This was made possible with the ease with which customers or clients carry out their operations with the use of the software. Also, the expressions on the faces of clients/customers were captured under the direct observation technique employed by the research.

### **3.5 Sampling Techniques**

The study employed the purposive sampling technique in the determination and selection of the institutions and the agencies – Ghana Ports and Harbours Authority, Customs Excise and Preventive Services, Ghana Community Network Services Limited, Ghana

Institute of Freight Forwarders, Ghana Commercial Bank, Ecobank Ghana Limited, Shippers Council and Clearing House Agents. This sampling technique is used where the sampling units are chosen because they meet set criteria of importance. In the purposive determination of the units sampled, institutions whose activities are influenced by the software (GCNet) and have knowledge and role to play in automation in ports and customs operations were the focus of the research.

### **3.6 Data Collation, Presentation and Analysis**

The data were collected from both the primary and the secondary sources. The secondary sources of data included those gathered from relevant books, reports, articles, magazines and from the internet. The primary data was collected from the field through the use of structured institutional questionnaires and observational guides. The operational processes and the administrative techniques of the institutions contacted were observed and noted during the data collection exercise. To validate the information given, questions in the form of interviews were posed to authenticate the information.

According to Babbie (2007), a unit of analysis is the 'what' or 'whom' being investigated or studied. This implies that units of analysis in a research are normally the observation units. He stated in his explanation that units of analysis are those examined in order to create summary descriptions of all such units and to explain differences among them.

In research, units of analysis are described as the most basic part of the issue or phenomenon under study or to be studied. The study therefore employed the following units of analysis:

- Ghana Ports and Harbours Authority;
- Customs Excise and Preventive Services;
- Ghana Community Network Services Limited;
- Ghana Shippers Council;
- Ghana Institute of Freight Forwarders;
- Ghana Commercial Bank; and
- Ecobank Ghana Limited.

In analysing the data collected from the respondent institutions the main focus was on how the GCNet system has contributed positively in the proper and easy management of ports and customs operations since its introduction in the country. Some of the issues considered included time management, revenue collection, how easy and understandability and impact on efforts at the elimination of corrupt practices associated with port operations in Ghana.

The data gathered from the respondent institutions revealed that the introduction GCNet system into ports and customs operations in Ghana has had positive results for CEPS, GPHA, GIFF, Clearing Agents and Importers. The positive impact is reflected in the following areas:

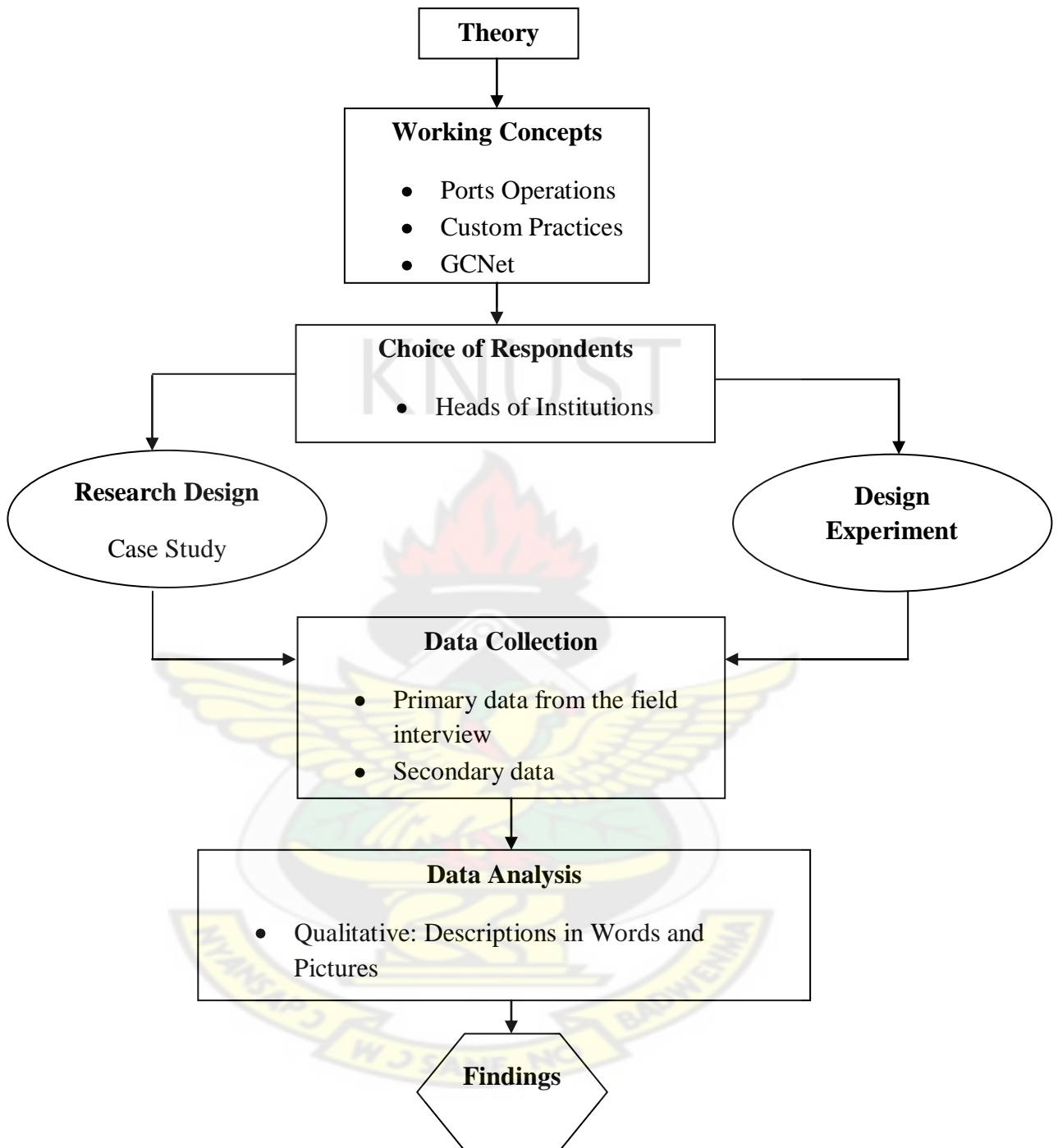
- Simplification of ports and customs procedures for the clearing of goods: the automation of the clearance process through the GCNet has made the process very simple for importers and agents by cutting bureaucracy by half and reducing the cumbersome and time consuming ports and customs procedures from 23 steps to just eight stages. This has cut down drastically the time importers and agents spend in the ports trying to clear their goods
- Increasing government revenue: because the turnover time for clearance has been reduced, port and custom officials are able to process many clients in a day which means more revenue is collected for the state. The automation has also reduced corruption by customs officials and so state revenue that would have been lost to corrupt practices by ports and customs officials is maintained thereby improving state revenue generated from the ports
- Promoting government policy of making Ghana the trade hub of the sub-region: the automation and simplification of customs and ports procedures in the Ghanaian ports have contributed to the increased trade activity in the country. Ports officials indicated that with the introduction of the GCNet system the volume of trade in the ports has increased and many countries like Burkina Faso now pass most of their exports through the ports in Ghana.
- These positive interventions of the GCNet notwithstanding, the study also unearthed a number of concerns and challenges faced by the system. Some of these include the following:

- The GCNet system is Information Communication Technology (ICT) based and CEPS, GPHA and others have to be trained and given constant refresher training on the usage of the operating software and how to manage problems associated with the system. The training they have received so far is not adequate for the full utilization of the benefits of the GCNet system.
- Stakeholders of the GCNet have also raised concerns that the system is too centralised in terms of its management. Institutions like CEPS and GPHA are of the view that some of the operations of the system for instance revenue collection aspects should be under the control of CEPS.
- It also came to light from the data collected that the GCNet system faces financial challenges. Management of GCNet indicated that the need for constant upgrading of the system and the training of staff and other stakeholders makes its operation very expensive and therefore, call for some funding support from government.
- The data also revealed that there is lack of knowledge on the GCnet system by clearing agents and the general public on operations and procedures of the system. There is therefore, the need for an extensive public education campaign designed for the various stakeholders and the general public on the requirements and fees associated with the system

Data analysis was based on the understanding of the study concepts. These concepts included ports operations, customs practices and GCNet. These concepts influenced the type and choice of respondents for the research using the purposive sampling technique.

Data gathered was edited and coded for the analysis. In data editing, errors were detected and eliminated. The analysis was carried out employing the qualitative and quantitative analytical methods. However, emphasis was placed on the qualitative data as the issue under investigation requires less of quantitative data. The qualitative analysis dealt with the descriptions and pictures portraying the extent of automation in ports and customs operations while the quantitative analysis was limited to tables and charts. Figure 3.1 summarises the key issues of the study.

**Figure 3.1 Issues in Data Processing and Analysis**



Source: Adapted from Waugh (1995).

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

The preceding chapter focused on the study approach and the methodology employed in carrying out the study. It also discussed issues bordering on the research design used, study variables, data type and sources. Other issues raised in the chapter were the data collection approach, sampling techniques, data collation, presentation and analysis techniques used in undertaking the research.

This chapter thus emphasizes on the analysis of the research. Issues raised in this chapter include the characteristics of respondents contacted, the profile of GCNet and service and operational structure of the GCNet. Also, the character and impact of GCNet on ports and customs operations, challenges and opportunities of GCNet in facilitating international trade, among others are the issues examined in this chapter.

#### 4.2 Structure of Data Collection and Characteristics of Respondents

##### 4.2.1 Characteristics of Institutions

Considering the nature and extent of ports operations and the level of usage of the GCNet in Ghana, institutions that are directly affected in their operations and have a role to play in improving ports and customs operations were contacted and interviewed. Among the institutions contacted included the Ghana Ports and Harbours Authority (GPHA), Customs, Excise and Preventive Service (CEPS), Ghana Community Network Services Limited and Clearing House Agents. Others were the Ghana Institute of Freight Forwarders (GIFF), Shippers Council, Ghana Commercial Bank and the Ecobank Ghana Limited. These institutions play different roles in the development and management of the ports and customs industry in Ghana.

The Ghana Ports and Harbours Authority is involved in ports and customs operations in diverse ways. The Authority is mandated and charged with the responsibility of vessel movement in and out of the ports premises. Also, the study showed that the Authority is

responsible for storage and delivery of cargoes upon the Customs, Excise and Preventive Service and Shipping Lines release. The Authority is again charged with the responsibility of processing of UCL consignments.

The Custom, Excise and Preventive Service play an important role in ports and customs operations in Ghana according to the field survey. In the area of revenue mobilization, CEPS is mandated to provide revenue targets and collect all revenue accruing from ports and customs operations. CEPS also has the responsibility of providing reasons underpinning revenue trends in ports and customs operations. Notwithstanding, CEPS collate all data resulting from customs and ports operations. Monitoring compliance of stakeholders on regimes and CPCS as well as licensing of self-declarants and custom house agents are among the paramount roles of CEPS. Its activities are therefore greatly influenced by the GCNet.

With regard to Clearing House Agents, the subject of shipping and clearance of goods are paramount as far as ports and customs operations are concerned. The Ghana Institute of Freight Forwarders (GIFF) is concerned with policies regarding ports and customs operations. Also, the GIFF ensures easy movement of freight to and from the ports. The Ghana Community Network Services Limited, which is identified as the heart of GCNet system, is charged with the responsibility of ensuring the entire development of the software through regular improvement and adequate supervision and monitoring.

Matters relating to the collection of customs duties and taxes for the government are the responsibility of the Ghana Commercial Bank and the Ecobank Ghana Limited. This is done through payments made by clearing agents. The Shippers Council is however concerned with the efficient operation and management of the ports. The council is thus responsible for giving policy guidelines regarding ports and customs operations.

A careful observance of the various roles performed by the aforementioned institutions indicate that their operations are very related and dependent on the issue being investigated into. Also, the roles of the institutions can improve the use of GCNet system depending on the level of coordination and collaboration among and between them.

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### **4.3 Profile of Ghana Community Network Services Limited (GCNet) in Ghana**

#### **4.3.1 Background of GCNet**

The Ghana Community Network Services Limited was established following stakeholders concerns with slow and cumbersome port clearance procedures that were expensive and restrictive. The GCNet concept was established to enhance the competitiveness of Ghanaian business by removing constraints to legitimate trade development and facilitation while ensuring that collection of trade-related government revenue was not compromised (Bainiah, 2008).

The Joint Venture Company that managed the deployment of the system was formed in November 2000. The first production customs declaration was processed in November 2002. The system is today fully operational as per the initial project blue print. However, development of the system is continuously being undertaken to improve the service and to add new features (Bainiah, 2008).

#### **4.3.2 Establishment of GCNet**

At the centre of the GCNet project was the issue of interfacing legacy systems. These systems were interfaced in various ways but mostly using the concept of an Electronic Data Inter-change messaging being sent from one system to another. The Ghana system is based on an adaptation primarily of the Mauritian model which itself was developed based on the Singaporean model (Bainiah, 2008).

After having decided which system to adopt, a lengthy process of review and modification of the Mauritian system was undertaken. In parallel, a full review of processes and procedures was undertaken in order to avoid computerising inefficient processes. The system was then customised and deployed in phases, starting with a pilot site that was used for testing. Each site was then rolled-out in sequence. Training was performed at various levels and was always a central element of the project and it took the following form:

- Customs officials were trained using the “train-the-trainer” methodology over a period of 12 months; a total of 600 Customs officers were trained; and

- Other users, who included Customs Brokers, Shipping Agents, Commercial Banks, Freight Stations, Port Authority, and Regulatory agencies were trained in batches in the form of one week training sessions (free of charge) for every entity run back-to-back over 18 months. Total of 1,500 users trained.

From “decision to go ahead” to first production process, it took two years from 2002 to 2004. It then took an additional year to deploy 95 percent of sites. The remaining 5 percent (interconnecting remote land border sites) was completed one year later in 2006 (Bainiah, 2008).

#### 4.3.3 Features of the GCNet

Data gathered from the field indicated that the GCNet system has a number of unique features. According to the Ghana Shippers Council, these features among others include the capacity for electronic submission and integration of manifests by carriers: The GCNet system presents an electronic system that allows for easy submission of manifests (list of cargo being transported, points of loading and destination: The main list of cargo is the master manifest. When the list is broken down to the individual owners of the cargo at the point of destination the manifest is called the house manifest) by carriers. Also, the system has the capacity of integrating manifests thus permitting easy and free flow of information through submission and integration of manifest

The system also allows for easy access to the manifest details by authorised agencies: This ensures security in the sharing of information. The system permits access to manifest details to only agencies that are authorised to use such information

The introduction of the system has also led to the elimination of the numerous manual processes that declarants/clients have to undergo in the process of clearing/forwarding of goods. This has resulted in the removal all inconsistencies and duplications associated with the manual system;

The system’s ability for selective targeting of high risk consignments through its risk management module is another benefit of the GCNet system. Furthermore, the system has an in-built risk management component that reduces the high risks usually associated with consignments.

The GCNet system has among its features the capacity of providing 24 hours/7 days a week processing of declarations. This feature of the system facilitates ports and customs operations as trade transactions can be carried out throughout the week. In addition to this, the system grants declarants the opportunity to access and process their declaration at any time or day of the week.

In addition to the aforementioned features, the GCNet system is able to grant electronic permits, licences and exemptions. This feature of the system allows agencies/institutions like the Ghana Free Zones Board, Ghana Standards Boards and the Investment Promotion Centre to issue permits, licences or exemptions electronically to importers and exporters.

Figure 4.1. is a summary of the features and characteristics of the GCNet software in ports operations. Issues relating to delays in cargo clearance, manual operations, insecurity of information will be adequately addressed through the adoption and implementation of the GCNet software in ports operations and management. Figure 4.1 further explains the effects/consequences of adopting GCNet in the operations and management ports in Ghana. These effects include reduction in corruption, increased trade, and elimination of cumbersome manual processes among others.

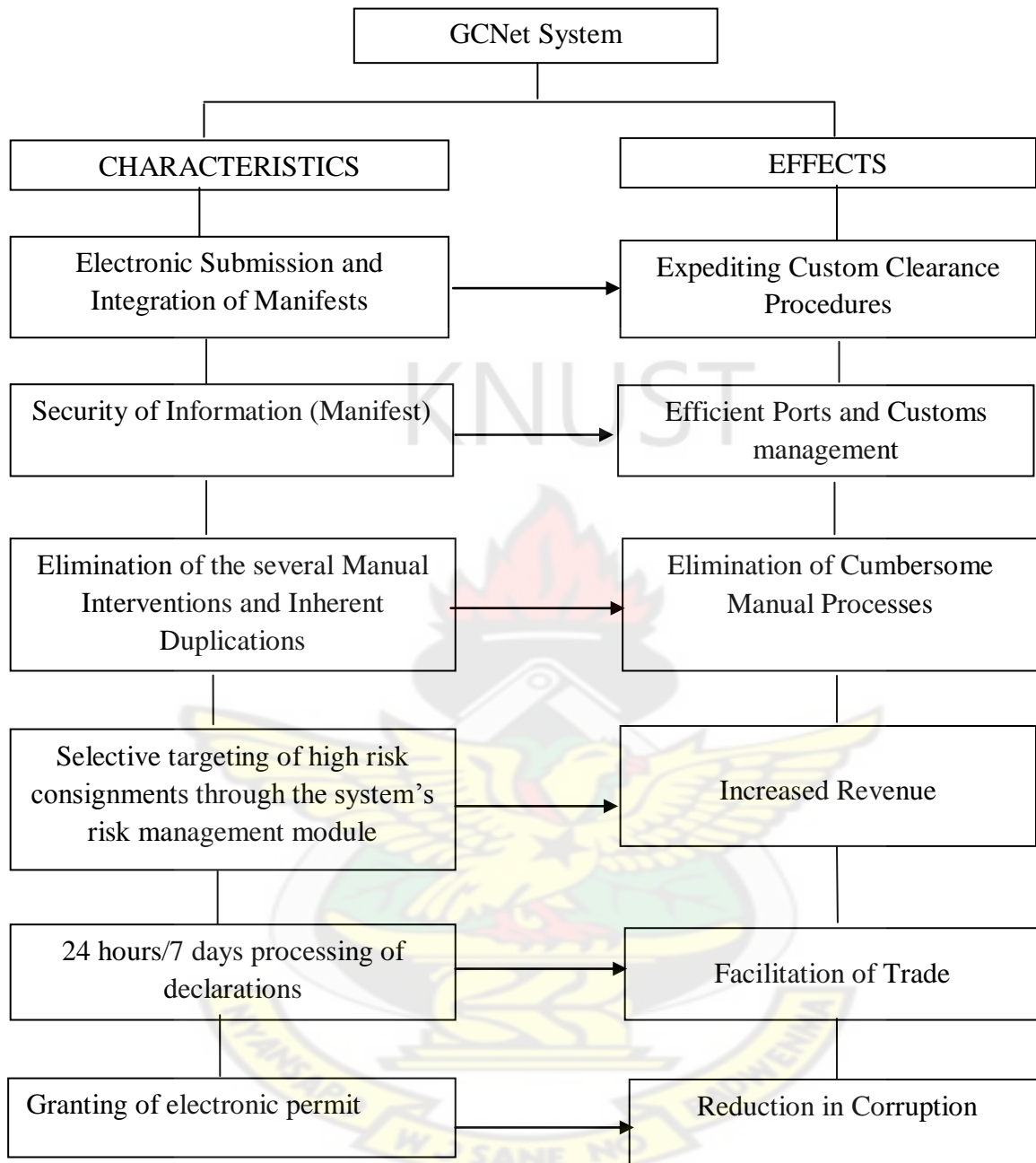
#### **4.4 Services and Operational Structure of the GCNet**

This section highlights on the type of services the GCNet system provide, the different categories of documents, information, processes that are covered, the number of transactions handled per day and the percentage of the total transactions under the GCNet.

##### **4.4.1 Services of the GCNet System**

The survey unearthed several services rendered by the GCNet system in the operations of ports and customs practices in Ghana. Among others the GCNet system made document submission and distribution simple and easy to handle. The System uses Master Manifests, House Manifests, Custom Declarations and Custom Releases to facilitate document submission and distribution. Also, Delivery Orders, Regulatory Agency Permits, Duty and Tax Exemptions, Transit Bonds, Final Classifications and Valuation Reports are delivered by GCNet system.

**Figure 4.1 Characteristics and Effects of the GCNet System.**



Source: Author's Construct, May 2010.

It was realised from the survey that the GCNet system serves as information availability and sharing platform where stakeholders can have easy access to information. The system creates a framework where information/data from different sources of customs and ports operations is synchronised without difficulty. The multi-faceted nature of the system also enhances easy communication and clearance of goods at the ports and borders of Ghana. This ensures a holistic growth and management of the ports and customs services and allows for easy tracking of the various stages of the transaction process. In addition, the

system also makes data mining available for mandated public organisations concerned with ports and customs operations. The survey showed that the GCNet system is currently used at two seaports, the single international airport and four land border posts (Paga, Aflao, Elubo and Kulungugu) in Ghana. These ports and posts are able to operate and communicate effectively through the use of GCNet.

The operational efficiency of the GCNet system in ports and customs practices in Ghana is summarised in Table 4.1. The introduction of the GCNet system has increased ports and customs efficiency and has impacted positively on government trade policy. The use of the GCNet system enhanced trade transactions as it covered 90 percent of all permits and exemptions transactions annually from Government ministries except the ministry of Finance and Economic Planning which was not hooked to GCNet, whose permits and exemptions transactions accounts for the 10%. With regard to the manifest, the GCNet system covered 100 percent of the transactions, which shows the efficacy of the system. The transit bonds and the customs declaration and related releases also had 98% coverage (the 2% being transshipments which were not offloaded at the ports but were loaded directly in a vessel and shipped to their final destination and short landings –goods which did not arrive at the port though were declared ).

**Table 4.1 GCNet Operational Efficiency in Ports and Customs Operations in Ghana**

Trade Transactions	Frequency (per annum)	Percentage of Total Transactions covered by GCNet
Permits and Exemptions	100,000	90
Transit Bonds	18,000	98
Customs Declaration and related releases	400,000	98
Manifests	7,000	100
Final Classification and Valuation Reports	100,000	95

Source: Field Survey, March 2010.

The information contained in Table 4.1 is a reflection of Table 4.2, which emphasizes on the agent usage of the GCNet system in 2008. About 90 percent of Clearing Agents in 680 different locations employ the GCNet system in their operations while 85 percent of Shipping Agents use the system. Moreover, 95 percent of government ministries and agencies and 90 percent of Private Freight Terminals use the GCNet system in the operations of ports and customs. These successes and improvements recorded in the management of ports and related operations with the use of GCNet has set the premise on which ports management related institutions are currently compelled to increase efficiency by employing GCNet in their operations.

**Table 4.2 Agent Usage of the GCNet System in 2008**

Agent	Frequency of Usage	Percentage of Users Covered
Clearing Agents	500	90
Shipping Agents	50	85
Private Freight Terminals	11	90
Government Ministries and Agencies	21	95

Source: Field Survey, March, 2010.

#### 4.4.2 Operational Model of the GCNet

GCNet is a Public-Private Joint Venture Company formed by the following entities:

- Societe Generale De Surveillance Switzerland corporate (Private);
- Ghana Customs (Government);
- Ecobank Ghana Limited (Private);
- Ghana Commercial Bank (Government Majority); and
- Ghana Shippers' Council (Government)

The GCNet system has two main operational components which form part of the Ghana Single Window system (database of Ghana's information management system). These include a Customs Management Software called GCMS (Ghana Customs Management System) and an electronic data inter-change platform called TradeNet. The GCMS enables

Customs to perform all necessary Customs-related processing. TradeNet on the other hand interfaces GCMS to all stakeholders by exchanging electronic data interchange files.

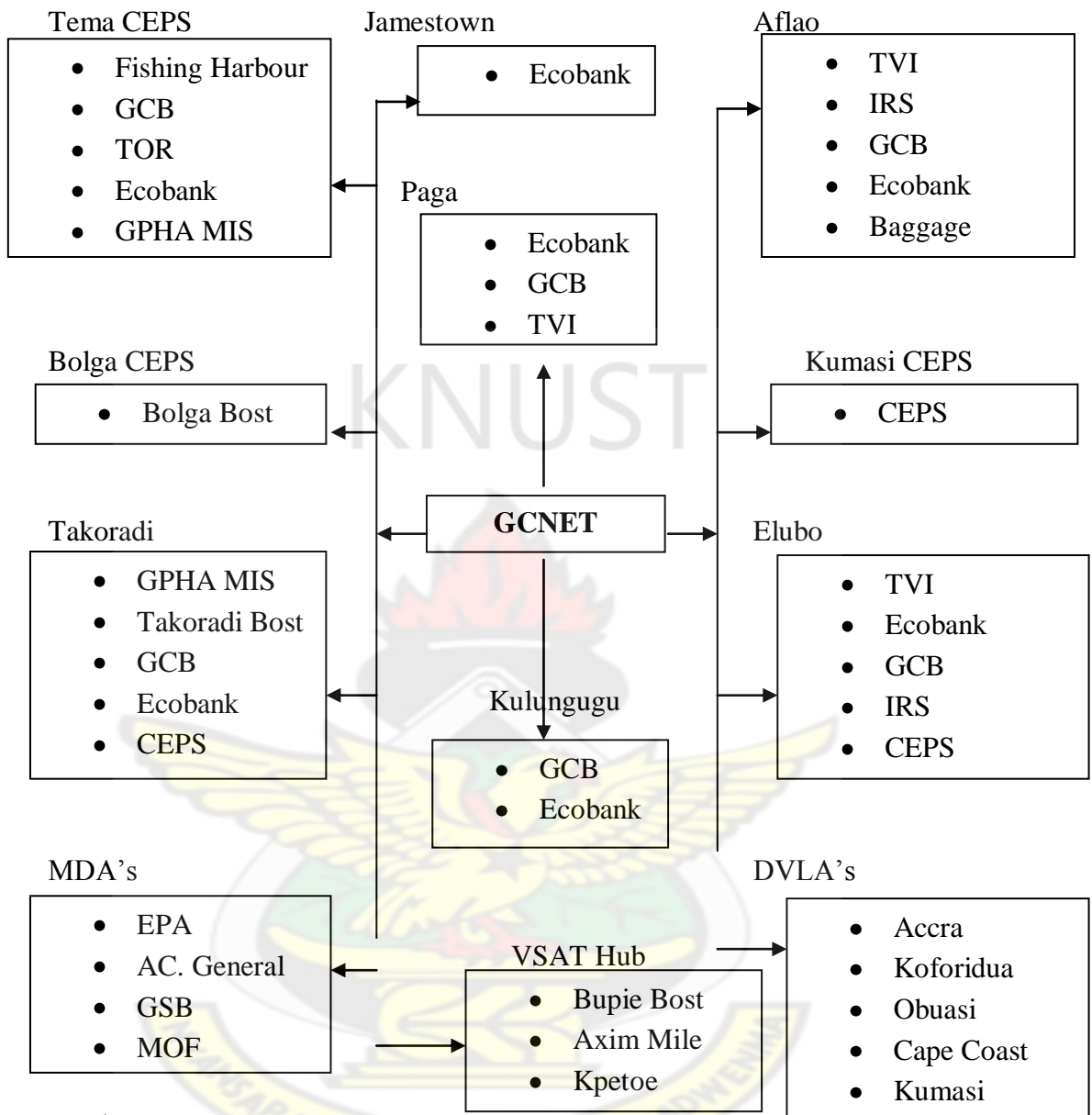
The entity that provided the mandate for the GCNet system is the Ministry of Trade and Industry of Ghana. The successful implementation of the GCNet system is made possible by a number of stakeholders and users and among them are: Customs, Excise and Preventive Services, Ghana Ports and Harbours Authority, Customs Brokers, Freight Forwarders, Commercial Banks, Freight Terminals, Airport Freight Ground Handling Operators, Ministry of Trade and Ministry of Finance and Economic Planning.

Also, other actors include Ministry of Food and Agriculture, Revenue Agencies Governing Board, Bank of Ghana, Ghana Statistical Service, Narcotics Control Board, Value Added Tax Service, Internal Revenue Service, Accountant General, Driver and Vehicle Licensing Authority, Ghana Shippers' Council, Ghana Free Zone Board, Ghana Standards Board, Environmental Protection Agency, Minerals Commission, Ghana Investment Promotion Centre, Timber Industry Development Department and Ghana Export Development Council. Figure 4.2 depicts the various coverage zones and stakeholders of the GCNet system in Ghana.

The application of GCNet has been employed in a number of ministries, agencies, institutions and organization apart from ports management. Figure 4.2 shows the various facets of Ghana's economy which are employing the GCNet system to enhance their operations. Institutions like Environmental Protection Agency, Internal Revenue Service, Drivers and Vehicles License Authority among others are using the GCNet system to streamline their operations and improve efficiency. Figure 4.2 also shows the coverage zones of the GCNet in Ghana.

The GCNet system, as a process of enhancing ports and customs operations, cannot operate in a vacuum. The coordination among the stakeholders plays a central role in ensuring effectual implementation and utilization of the GCNet system. The effective coordination and collaboration between and among stakeholders, which often should be the case, provides the contextual framework within which GCNet works.

**Figure 4.2 Zones of Stakeholders involved in the Usage of GCNet in Ghana**



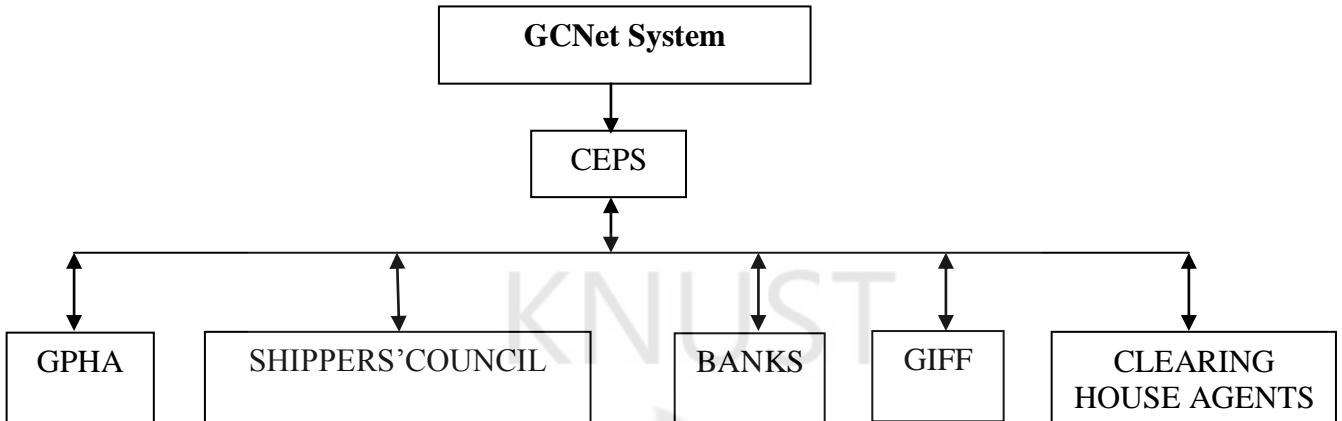
Source: Author's Construct, May 2010

#### 4.4.3 Level of Coordination among the Stakeholders in the Usage of GCNet

Sharing of information on ports and customs operations, goods clearance, duty payment, holding of regular meetings among others are the principal ways the various stakeholders involved in ports and customs operations collaborate and coordinate. In addition, as part of the quality control measures to ensure an efficient service delivery, the Ghana Community Network Services Limited undertakes regular interactions with the actors ranging from service users through regulatory agencies to law makers to receive feedback from stakeholders about the efficacy of the GCNet system. The level of coordination among the

various institutions contacted during the field survey with regard to the usage of the GCNet system is depicted in Figure 4.3.

**Figure 4.3 Institutions in the Usage of GCNet in Ports and Customs Operations**



Source: Author's Construct, May 2010.

From the field survey, the level of collaboration among the stakeholders in GCNet system application is weak and appalling. As shown in Figure 4.3, the lateral relationship among the institutions in the use of the GCNet system was lacking. This stems from the fact that these stakeholders relate solely with the Custom Excise and Preventive Service and the Ghana Community Network Services Limited in the area of information sharing, exports, imports and clearance of goods without relating among themselves. This was attributed to the different roles the institutions play in ports operations. Again, the cause of the lack of lateral relationship and collaboration among the institutions was as a result of completion among the institutions especially the private stevedoring companies. This situation has militated against efforts in ensuing effective collaboration among the ports management related institutions. In addition, the stakeholders, aside relating to the Custom Excise and Preventive Service in clearance of goods, have very limited knowledge on the GCNet system, its application and the processes involved in its usage. This has contributed greatly to the slow rate of GCNet development in Ghana.

## **4.5 Disposition and Impact of GCNet in Ports and Customs Operations**

### **4.5.1 Effects of GCNet on Ports and Customs Procedures**

Prior to the introduction of the GCNet, ports and customs procedures for the clearing of goods were very cumbersome and involved so many steps which gave rise to duplication of duties delays, corruptions and lost of revenue for government. But the introduction of the GCNet system has simplified ports and customs procedures and so has reduced the time spent between the submission of documents and the final clearance of goods in the ports.

Before the introduction of the GCNet clients followed the following Ports and Customs procedures:

1. Submission of 12 copies of shipping manifest by shipping agent/importer;
2. Obtain shipment notifications;
3. Declarant purchases Import Declaration Form;
4. Declarant submits documents for Destination Inspection;
5. Purchase of 13 copies of Customs Declaration Form;
6. Submission of final Classification and Valuation Report from Inspection Company;
7. Payment of self assessed duties at bank by declarant(only one bank accepts payments; located at point of entry—usually overcrowded and delays);
8. Issuance of payment receipts by bank and passes it on to CEPS (located at same point of entry);
9. Submission of declaration by declarant with supporting documents to CEPS;
10. CEPS reviews declaration (Face Vet);
11. CEPS enters declaration into ASYCUDA (takes a minimum of 24 hours);
12. CEPS prints ASYCUDA form and confirms or alters the tax liability;
13. CEPS numbers the declaration and affixes a date and hologram seal on the paper;
14. CEPS detaches the 13 copies and dispatches them to the various intended recipients;
15. CEPS Verification Unit receives its copy of the declaration;
16. An examination officer is allocated to a particular shipment;
17. Entry of the inspection results in the Landing Accounts Book;

18. Appending of signature in the Landing Accounts Book and handing over to the declarant;
19. Declarant pays handling charges to port authority and the shipment agent as required;
20. Issuance of waybill by the port authority;
21. Goods are move to the ports gate, where frequent checks are made, before release.
22. Manifest is jerked (strike of ); and
23. Agents report monthly to CEPS on their operations and activities.

As a result of the use of the GCNet system, ports and customs operations have greatly been enhanced. The GCNet system has reduced ports and customs procedure into eight separate stages of clearance processes and includes the following:

- ❖ Stage One: This stage presents to importers the opportunity or platform to obtain an Import Declaration Form (IDF) from Ministry of Trade and Industry (MOTI) at a cost. This is, however, currently not connected to the GCNet system. The IDF is employed by banks and the Destination Inspections Services (DIS) for the purposes of payment and notice of intent to importers respectively;
- ❖ Stage Two: At this stage, the importer requests a Destination Inspection from one of the several DIS companies connected to MOTI. With regard to certification and regulation, only two of the DIS companies who are members of the International Federation of Inspection Agencies (IFIA) are authorized to regulate and certify the operations of the inspection companies. Importers are charged one percent (same as before) of the CIF value of the shipment for the DIS certificate. A Final Classification and Valuation Report (FCVR) is issued to the trader and to CEPS;
- ❖ Stage Three: This is the stage whereby the declarant (importer/shipment agent) prepares and submits an electronic custom declaration on a computer with GCNet system installed front end software to TradeNet which is located at the headquarters of the GCNet. The declaration provides custom information, such as valuation, weight, HS classification, taxes, origin of cargo and other fees are required for a particular import. The declaration is needed by the Ghana Standards Board (GSB) and other related controlling agency. The declaration is electronically forwarded to CEPS headquarters. GCMS validates the declaration, a process that takes few minutes, and electronically notifies the declarant of the validation or

- sends it back through GCNet to declarant for further information or to resolve inconsistencies;
- ❖ Stage Four: The declarant prints the validated declaration and makes tax payment at one of the two banks, linked to TradeNet, branches of which are located at the CEPS clearance offices. The banks electronically notify GCMS about payment of taxes and duties of declaration;
  - ❖ Stage Five: This is the stage where the declarant presents supporting documentation (declaration, invoice, certificate of origin, DIS certificate, among others) either to the Document Verification Section or the CEPS Compliance Office of the clearance point, dependent on the risk profile. The risk analysis module of GCMS determines whether the cargo is to be cleared without further argument (Green Line), will be subjected to document verification (Yellow Line) or demands physical inspection (Red Line);
  - ❖ Stage Six: This is the stage at which the GCMS assigns or allot an inspector who seeks to the physical examination and inspection on a random basis. The GCMS further informs the freight stations on the progress of the inspection requirements;
  - ❖ Stage Seven: At this stage, the GCMS issues clearance statement or form, and eventually the need for the declarant to make adjustments in payment. The consignments are released electronically to the port authorities and the declarant. Waybill is issued by port authorities manually or electronically; and
  - ❖ Stage Eight: This stage concludes the ports and customs procedure. Goods are cleared or moved from the ports with no difficulty.

The procedures of GCNet operation has reduced considerably the time spent by clearing good/freight (59%), the increased cost associated with bureaucratic processes has improve the business environment with a maximum of three days of freight clearance. The GCNet system has therefore greatly improved the operations of ports and customs by ensuring faster clearance of goods, saving time and promoting better working environment.

#### 4.5.2 Achievements of GCNet on Ports and Customs Operations and Government Policies

Enhancing ports and customs operations is a major challenge confronting the management and the Government of Ghana. The data collected indicated that the GCNet system has a

multiple benefits to importers, exporters, customers and corporate bodies. The major achievements outlined by the institutions and organisations contacted are as follows:

- **The Importer and Exporter:** The GCNet system facilitates faster clearance of goods within a limited time than the old system. Also, the GCNet process has been identified to be more transparent in carrying out trade transactions at the ports and customs joints in the country. Also, the system adopts a more predictable process and it is less bureaucratic. The processes clients have to follow in clearance; exporting and importing goods are simplified and made easy with the introduction of the GCNet system.
- **CEPS:** The emergence of the GCNet system in the operations of the ports and customs has greatly enhanced the activities of the Customs, Excise and Preventive Service and the Ghana Ports and Harbours Authority as well as the other stakeholders. To the Custom Excise and Preventive Service, the GCNet system has vastly improved the working environment with improvement in staff efficiency through upgraded infrastructure, and substantial increase in Customs revenue (from 4393.90 billion cedis in 2002 to 7,146.26 billion cedis, an increase of 62.5%). In addition, the system has ensured a more structured and controlled working environment thus, increasing and enhancing the professionalism of staff.
- **Banks:** The manifestation of the GCNet system in the operations of ports and customs has had dramatic impact on the activities of the Ghana Commercial Bank and the Ecobank Ghana Limited. This situation was made evident when institutions contacted especially the banks indicated how the system has increased the number of customers and the amount of funds being realized (before the introduction of the GCNet system only SGSSB was handling ports and customs payments). The banks further stated that the amount of funds passing through banking operations and the collection of dividends from Ghana Community Network Services Limited has helped improve the banks' capital base considerably. The Ghana Commercial Bank, for instance, increased its customers based by 15 percent in 2007 and was attributed to traders who make payments for their freight through the bank.
- **Government:** The GCNet system, in line with enhancing government trade policy, has tremendous impacts on the government's operations. Resource wise, the GCNet system has had a substantial increase on government revenue. It has helped to increase government revenue collection and the achievement of set revenue

targets especially in 2006 Though CEPS could not achieve its set target Government recorded about 45 percent improvement in its revenue from ports and CEPS operations. From (16,420.8billion cedis) in 2004 to (23,931billion cedis) in 2006 (CEPS NEWS 2007).Again, the best practice of the GCNet system in ports and customs operations made it earn an international recognition from donors such as the World Bank and the World Customs Organization.

- Economy: The achievements of the GCNet system was noted through the survey that it is not limited to only government, ports and customs management, banks and clients but also has greater effects on the economy of Ghana. The survey revealed that the GCNet system has improved transparency and good governance as well as increased employment in ports and customs operations in the national economy. About 249 people were employed in 2002 to man and operate the GCNet system across Ghana. This is because the system makes available information on the operations of ports and customs thus reducing corruption and improving transparency as well as enhancing good governance in Ghana.

#### **4.6 Challenges and Opportunities of GCNet in Facilitating International Trade**

The Ghana Shippers Council and GCNet Services Limited stated through the survey that the GCNet system was introduced in response to stakeholders' concerns for the removal of difficulties to legitimate trade development and facilitation, and to enhance Ghanaian business competitiveness. It was geared toward ensuring that the facilitation of trade processes did not compromise the mobilization of trade-related revenue, and other systems failure associated with the previous system. This sub-section thus highlights on the principal challenges confronting the GCNet system as well as the opportunities the system present to trade facilitation.

##### **4.6.1 Challenges of the GCNet System in Enhancing Trade Development**

In the area of infrastructural development, the GCNet Services Limited, Ghana Shippers Council, Ghana Institute of Freight Forwarders and the Ghana Ports and Harbours Authority indicated that the relatively weak infrastructure, especially the availability of a reliable telecommunications network at the land borders is a major setback of the system. They further stated that the relatively low level of infrastructural development is posing resistance to effective management of the ports. This situation is militating against the

desired model state of the smooth utilization of the GCNet system. The institutions contacted also indicated that there is sluggishness on the part of the actors or the institutions to interface with the GCNet system in addition to the introduction of complementary electronic systems for other trade related agencies. This is as a result of the uniqueness of the system, financial difficulties and inadequate knowledge concerning its usage.

The Customs Excise and Preventive Services and the Ghana Shippers Council stressed on the fact that the optimal usage of the GCNet system for the realization of its full benefits has been exigent, especially in the stir of possible revenue losses and security worries connected to improved trade facilitation. They echoed that the GCNet system's review track and post-clearance control measures that were estimated to tackle potential abuses have also not been successfully undertaken as anticipated. This is due to the inability of the CEPS to mainstream the activities of all actors/institutions into the GCNet system.

Also, the Clearing House Agent and the Ghana Institute of Freight Forwarders highlighted on the fact that whilst the general clearance time of cargoes through customs has improved greatly with the emergence of the GCNet system from two weeks and more to a maximum of three days, customs clearance is only at the final leg of the trade process. Meanwhile, the procedures that lead to customs declaration are still mainly manual, burdensome and laden with costs, as trade operators' commute from one institution to the other to obtain inspection reports, permits, and exemption letters, among others before the clearance of freight from the ports.

The above challenges affect trade operators' perception about the efficacy of the GCNet system. This is because the trade operators sometimes fail to make a clear difference between the specific services rendered by the GCNet system and the complementary services provided by other agencies and institutions. This is because the GCNet Services Limited and CEPS have failed to educate the traders of the GCNet system and its benefits.

#### 4.6.2 Opportunities of GCNet in Facilitating Trade in Ghana

In the light of the above mentioned challenges, the institutions contacted indicated the several opportunities the GCNet system offers to trade development in Ghana. In the area of data sharing, the availability of current data for various purposes ranging from

reporting, programming development and investment decision is a major opportunity of the GCNet system. Opportunities also exist for the provision of other add-on benefits such as the electronic filing of tax returns, social security claims and returns as well as port management arrangements. The GCNet system provides a distinctive electronic platform for interfacing all the relevant institutions by creating a common platform for networking all actors involved in trade and revenue processing. This reduces the cost associated with traders moving from one institution to the other and corruption.

Also, as trading parties and regulatory agencies in importing and exporting countries seek to improve trade information and strive to facilitate trade as well as reduce trade malpractices and ensure that regulatory standards are met, the Ghana Shippers Council affirmed that the GCNet system provides another opportunity for an integrated exchange of customized business documents within a safe and traceable supply chain management and information exchange such as export trade among trade partners. The survey revealed that the GCNet system has the capacity to integrate business documents and ensure adequate protection and management of the information. This is done through the sharing of a common database where only institutions involved in ports operations can share business and other information regarding their operations.

Moreover, in the absence of a reliable communications system, the GCNet has had to develop its communication network, based on a hybrid of links such as fibre optics, microwave radio, satellite and dedicated lease lines. The Customs Excise and Preventive Services noted that this network is available at all customs stations where the system has been deployed. This provides an opportunity for other institutions operating at these stations and other users who may encounter communications challenges during the deployment of their systems to these areas to share bandwidth on the network for their operations. This condition has led to a situation whereby CEPS increased its trade and revenue by 35% from (2004-2005). (9077.79billion cedis to 11317.88billion cedis)

In the same vein, the GCNet system creates a platform for advance collaboration with the neighbouring countries both at the bilateral level and within the context of the multilateral ECOWAS arrangements such as the convention on the inter-state transit of goods and convention on mutual assistance on administration of customs matters to join forces in the exchange of trade information, monitor transit consignments passing through their respective corridors. According to the Ghana Shippers Council such collaboration has

been activated within the GCNet system with data on Ivorian exporters and importers at the Cote d' Ivoire customs.

In an environment of perceived difficulty with respect to roll out of such system, the GCNet system has created a milieu for showcasing the potentials within the Ghanaian environment for providing similar ICT-based services to trade related and other relevant agencies. This was brought to light during the survey as the GCNet Services Limited, Ghana Shippers Council, Ghana Ports and Harbours Authority and the Customs Excise and Preventive Services indicated that the human capacity needed to respond to the new challenges have also been brought to the fore with the use of GCNet system. This is because the GCNet system users and agencies who did not perceive ever going to traverse the information super highway, have found themselves becoming fully-fledged computer literates.

#### **4.7 Summary**

Ports and customs development in Ghana have greatly been enhanced with the introduction of the GCNet system. The GCNet system has also provided multi-faceted opportunities for not only ports and customs management, but also provided a framework for all users, actors and institutions involved in ports and customs procedures. In addition, the system provides an avenue for Ghana to interact with her neighboring countries in enhancing international trade which has a long lasting implication on government policies and the economy in general.

The characteristics and opportunities as well as the achievements of the GCNet system are enormous which when well harnessed would overcome the challenges confronting the system.

## CHAPTER FIVE

### SUMMARY, RECOMMENDATIONS AND CONCLUSION

#### 5.1 Introduction

In the chapter preceding this, a presentation and analysis of the field data on the usage of the GCNet system in enhancing the operations of ports and customs was made. Special consideration was given to the ports and customs related institutions where the usage of the system is evident and prominent, respondents' characteristics and profile of GCNet system as well as service and operational structure of the GCNet. Also analysed were the character and impact of GCNet on ports and customs operations, challenges and opportunities of GCNet system in facilitating international trade. This chapter thus summarizes the major findings from the analyzed data. This chapter also contains recommendations which are in accordance with the findings captured in addition to the conclusion of the study.

#### 5.2 Summary of Findings

Although the GCNet system has some challenges, it protects the very traditions of ports and customs operations, as it generates positive social and economic impacts for both the government and the management of ports and customs institutions. Furthermore, it facilitates attempts to make Ghana the hub of international trade in the Sub-Saharan Africa. This is because the GCNet system is identical with ports and customs operations, characterized by free flow of and easy access to information. The phenomenon of the GCNet system affects every activity within the context of ports and customs operations. This section is therefore tailored along the analyzed data presented in the previous chapter.

##### 5.2.1 The Scope and Extent of Automation in Ghana

The study revealed a wide usage of the GCNet system in ports and customs operations in Ghana. The sectors identified to be utilizing the GCNet system were Customs Excise and Preventive Service (all branches), Ghana Ports and Harbours Authority (both Tema and Takoradi), Ghana Shippers Council, Ghana Commercial Bank and Ecobank Ghana Limited, Clearing House Agents, Freight Forwarders, among others. It must be stated that these institutions or agencies were found to be engaged in the operations of ports and

customs. It was also observed through the survey that these agencies have different purpose for employing the GCNet system. For instance, CEPS use the system in the area of revenue mobilization and information sharing.

#### 5.2.2 Efforts in Managing and Improving the GCNet System in Ports and Customs Operations

The survey unearthed some of the efforts initiated to perk up the GCNet system in ports and customs operations in Ghana which included the use of the GCNet system at all levels of ports and customs operations. Attempts made in facilitating the usage of the GCNet system in the operations of ports and customs form the central role and focus of the Ghana Community Network Services Limited.

#### 5.2.3 The Impact of the GCNet System on Ports and Customs Operations

The study revealed that effective utilization of the GCNet has the tendency to halt the increasing difficulties and corruption associated with ports and customs activities. This is obvious at the ports as agencies such as Ghana Ports and Harbours Authority, Customs Excise and Preventive Service, Ghana Institute of Freight Forwarders, Clearing House Agents and Ghana Shippers Council are undertaking their activities with use of the GCNet system. Nonetheless, the impact and efficacy of the GCNet system was noted through the survey that it has been underrated as several institutions and agencies are finding reasons for their unwillingness to embrace the system.

#### 5.2.4 Effects of GCNet System on Government Trade Policy

Several effects of GCNet system on government policies were discovered through the study and among them are good institutions, increasing revenue and improving government's relationship with the traders and ports management institutions. Nevertheless, the study showed that there is apathy and feeble relationship among the actors in the utilization of the GCNet system leading to ill application of the system.

### 5.2.5 Unique Features of the GCNet System

The numerous unique features of the GCNet system are added traits accounting for the increasing efficiency in ports and customs operations in Ghana. The GCNet system, having an electronic submission and integration of manifests, adequate security of information/data, elimination of the several manual interventions and inherent duplications, selective targeting of high risk consignments through the system's risk management module and 24 hours/7 days processing of declarations, has introduced a new dimension to the activities of ports and customs in Ghana. The strategic locations of the ports and customs posts have created a vibrant and unique environment for the utilization of the GCNet system in ports operations and customs practices in Ghana.

### 5.2.6 The Role of GCNet System in Managing Ports and Customs Operations

The survey unraveled the indispensable role the GCNet system plays in subduing and overcoming ports and customs related challenges. It was noted that effective execution of stakeholders' role in using the system and effective collaboration and coordination are the antidotes to the challenges confronting ports and customs development in Ghana. Nevertheless, these are the very factors that are missing in the ports and customs operations.

### 5.2.7 The Role of GCNet Actors in Enhancing Ports and Customs Activities

The study unearthed that the successful implementation of the GCNet system encompasses a broad spectrum of actors whose meticulous attempts are essential in arresting the difficulties associated with ports and customs management. The Ghana Community Network Services Limited is charged with the responsibility of ensuring the successful running of the system and system's infrastructural development. The Ghana Ports and Harbours Authority and Customs Excise and Preventive Service are into the utilization and application of the GCNet system in their activities.

### **5.3 Recommendations**

The positive contributions of the GCNet system to ports and customs operations in Ghana notwithstanding, the study has identified a number of areas of the operations of the GCNet system that can be developed and enhance so that both management and clients can draw the full benefits of the system. This section of the chapter thus highlights some recommendations for improvement and enhancement of the GCNet system for a more efficient and effective management of the system in ports and customs operations in the country.

#### **5.3.1 Development of Extensive and Effective Public Education Strategy on the GCNet System**

The study discovered that despite the benefits of the GCNet to the economy and to the general public, and despite the fact that the system has been operational since 2002 very few Ghanaians really understand how the system work and the procedures involved. There is therefore, the need for a comprehensive nationwide education strategy to create awareness on the use and benefits of the GCNet system and to stimulate effective utilisation and improvement of the GCNet system in ports and customs operations. The Ghana Community Network Services Limited in conjunction with the Ghana Shippers Council and Customs Excise and Preventive Services should spearhead this campaign to ensure that importers/exporters and clearing agents are thoroughly educated on the procedures and fees so as to ensure that unscrupulous customs officers and other port officials do not play on their ignorance to extract unlawful payments from them. This should be done in collaboration with media houses (both electronic and print) to facilitate wider public participation in the process. Also through the permit process, the CEPS should educate clients on the benefits and impacts of the GCNet system on ports and customs operations.

#### **5.3.2 Managing and Improving the GCNet System in Ports and Customs Operations in Ghana**

It is becoming increasing tedious for the Ghana Community Network Services Limited to single handedly manage the GCNet system especially in the area of ensuring effective ports and customs development. The other trade agencies and institutions involved in the

use of the GCNet system, with CEPS being on the forefront, should therefore capitalise on the opportunities the GCNet system presents to ensure efficient and holistic development of ports and customs in Ghana. In augmenting the efforts made in the usage of the GCNet system, trade agencies and ports and customs clients should be given equal access and knowhow of the GCNet system to help them contribute their quota in supporting the successful implementation of the GCNet system.

### 5.3.3 Provision of Regular Training to Enhance the Impact and Efficient Use of the GCNet System

The implementation of the GCNet system requires huge investments especially for the infrastructural development and for that matter value for money should be expected. It is essential therefore that all personnel involved in the development and implementation of the GCNet system be trained and their skills upgraded to use modern technologies to manage the management of ports and customs operations. The national government, through the Ghana Shippers Council and Ghana Community Network Services Limited, should play the role of providing resources for the training of these staff in the areas of usage of the system in mobilizing revenue, tracking smugglers and enhancing trade among others. The Customs Excise and Preventive Service should be strengthened to provide the training with facilitation from the Ghana Ports and Harbours Authority. This will lead to the implementation of a system that is client centered, efficient and all embracing.

### 5.3.4 Augmenting the Impact of GCNet on Government Trade Policy

The GCNet system is considered by many as an alternative ports and customs strategy to the manual process that encourages and supports ports and customs activities while enhancing local and international trade. It calls for building trade agencies and institutions that are more efficient, productive, and financially responsible in ports and customs operations in Ghana. The Customs Excise and Preventive Service in collaboration with Ghana Shippers Council, Ghana Ports and Harbours Authority and the other trade agencies should finance the preparation of a strategic plan for the future through government policy of making Ghana the hub of international trade in West Africa. The Shippers' Council should play a lead role in the implementation of this plan to facilitate wider coverage and usage of the GCNet system which will subsequently lead to reduction in corruption and other bureaucratic bottlenecks.

### 5.3.5 Coordination and Collaboration among the GCNet System Usage Stakeholders

Harmonization and cooperation are key in ensuring effective utilization of the GCNet system and for that matter enhancing the operations of ports and customs operations. There is the need for all actors to consent on the clarity of their responsibility in the usage of the GCNet system. In the public context, the actors should liaise with each other in joint meetings which are usually facilitated by the Ghana Shippers Council. The Ghana Community Network Services Limited, being the nursing agency of the GCNet system, should be on the forefront to finance and provide the framework like workshops and seminars where all other actors would make input and understand the principles and reasons behind the GCNet system.

### 5.3.6 Achieving the Features of the GCNet System

A further recommendation concerns giving adequate attention to the characteristics/opportunities of the GCNet system at both the local and international level. This will help surmount the challenges confronting ports and customs operations in Ghana, especially on revenue collection and generation. Government policies on trade and the several policies on customs and ports operations, for instance, will be realised through the use of the GCNet system to suit the current development pattern of ports and customs. The processes of granting clearance permit are simplified and made more flexible through the use of the GCNet system thus encouraging clients to undertake their activities with no difficulty. The Customs Excise and Preventive Service in collaboration with the Ghana Shippers Council should spearhead and facilitate the process of utilizing the GCNet system to help meet current trends of ports and customs development. This will induce clients to undergo the clearance process to obtain permits before importing or exporting goods hence ensuring efficient development of the activities of ports and customs.

### 5.3.7 Development of the GCNet System at all Trade Posts/Borders

In tackling challenges of ports and customs operations, external factors that engineer the implementation process of the GCNet system should be taken into account and plan for. Trade development is a principal factor propelling the growth of the GCNet system in the operations of ports and customs operations. It is therefore important to ensure the usage of the GCNet system at the various entry and exit borders of Ghana. The empowerment and

sustenance of border posts like Elubo, Paga and Aflao would ensure adequate transparency and accountability of ports and customs operations in Ghana.

This would result in the creation of employment opportunities, adequate security and proper governance not only ports and customs operations but also in government institutions such as the ministries since the system would improve efficiency in their activities. The central government, through the Customs Excise and Preventive Service, should provide the avenue for these border posts to be the focal points of trade development. The government should also provide and put resources into the development of the GCNet system in ports and customs operations to help increase productivity. This would put the ports and customs agencies on a better pedestal to play their role effectively.

#### **5.4 Conclusion**

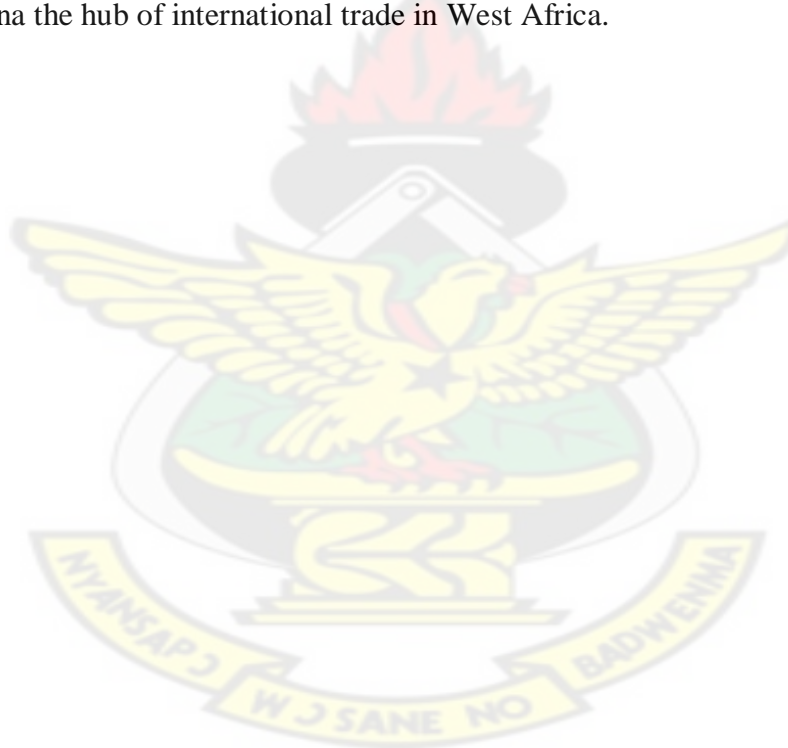
The survey unraveled the manifestation of the GCNet system in ports and customs operations in Ghana. The GCNet system was basically instituted to facilitate the operations and management of institutions especially public institutions. The relevance of GCNet has also been identified to be very essential in enhancing the effectiveness and efficiency of ports management institutions. It is however unfortunate that the GCNet system has not been adequately embraced by all the ports management institutions due to inadequacy of infrastructure and the knowledge of the GCNet application.

This study, which seeks to ascertain the nature of automation in Ghana, the impacts of GCNet on ports efficiency and customs, practices and the effects of the GCNet system on government trade policy presents opportunities for realizing the purpose of the system. Findings and recommendations include stimulating the nature and extensiveness of the GCNet system, managing and improving the GCNet system in ports and customs operations in Ghana and enhancing the impact of the GCNet system in ports and customs operations. Others were to augment the impact of GCNet on government trade policy, ensure effective coordination and collaboration among the GCNet system usage stakeholders and to enhance the development of the GCNet system at all trade posts/borders.

It is when all the proposals made are swiftly and consistently executed that the efficacy of the GCNet system would be realized in Ghana. This would among other things create

effectual management of ports and customs operations by the institutions. The operations of the ports and customs would be a more efficient, comfortable and functional place to transact trade business thus augmenting government revenue while increasing job openings. The development of the GCNet system would also increase the revenue base of the Customs Excise and Preventive Service as clients/traders would be tracked and taxed. In addition, ports and customs management would be made easier as clients and the general public will appreciate and understand functions and operations of the GCNet system.

The recommendations given would yield the preferred results if there is a commitment on the part of the government, institutions and agencies involved in ports and customs operations to adopt and implement the GCNet system. This has the overall effect of making Ghana the hub of international trade in West Africa.



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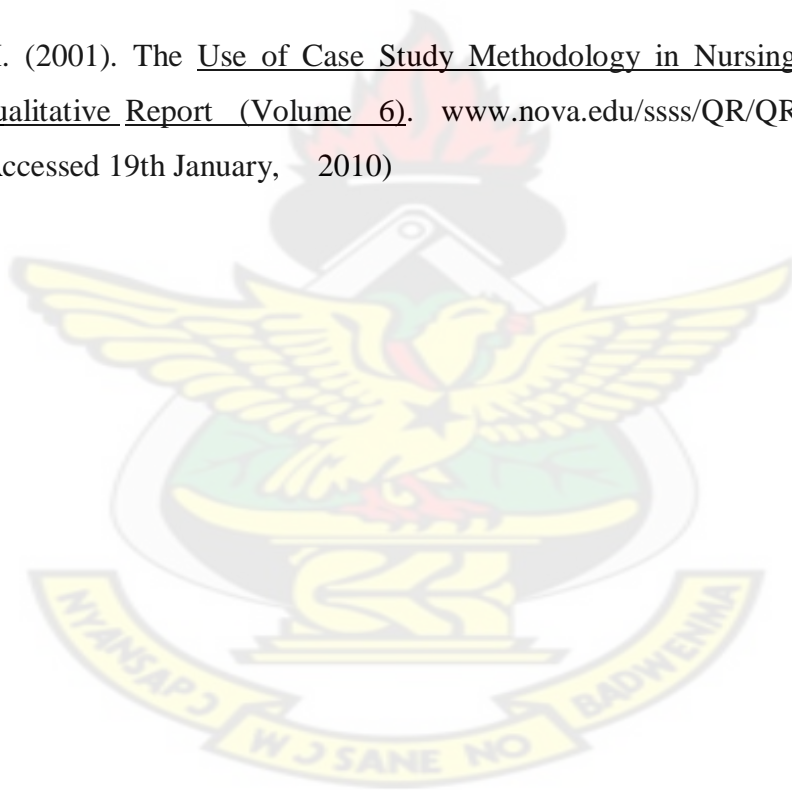
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**APPENDIX 1**

**DEPARTMENT OF PLANNING FACULTY OF PLANNING AND  
LAND ECONOMY COLLEGE OF ARCHITECTURE AND  
PLANNING KWAME NKRUMAH UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, KUMASI**



**QUESTIONNAIRES FOR CEPS AND GCNET**

*The Interview Guide is employed to solicit for relevant data for the conduct of an academic exercise on the topic: Improving Port Efficiency and Custom Practices in Ghana: The Case Study of GCNet. Your support and cooperation is very much anticipated since data collected will be treated with complete secrecy.*

Name of Institution: .....

Name of Respondent:.....

Position of Respondent: .....

Date of Interview:.....

1. Where is the location of your institution? a) Inside the ports b) Outside the port-

2. What are the roles played by your institution in custom operations?  
.....

3. How does your institution liaise with other institutions and agencies in the operations of the ports and custom practices?  
.....

4. Does your institution employ GCNet in its operations? a) Yes      b) No

4b. If yes, complete the table below;

Area of Usage of GCNet	Challenges in the use of GCNet	Effects of GCNet on Custom practices

- 4c. If no, give reason(s) .....
  
5. What are the effects of GCNet on the following custom operations?
  - a. Revenue mobilization .....
  - b. Clearance .....
  
6. How does the GCNet allow other people to make declaration on behalf of others?  
.....
  
7. How reliable is the GCNet system in custom operations? .....
  
8. What are the impacts of GCNet on government policies on trade? .....
  
9. What are the impacts of GCNet on custom practices? .....
  
10. What are the challenges of GCNet on custom operations? .....
  
11. What are the prospects of GCNet on custom operations?.....



**APPENDIX 2**



**DEPARTMENT OF PLANNING**  
**FACULTY OF PLANNING AND LAND ECONOMY**  
**COLLEGE OF ARCHITECTURE AND PLANNING**

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

**QUESTIONNAIRE FOR GPHA AND SHIPPER'S COUNCIL**

*The Interview Guide is employed to solicit for relevant data for the conduct of an academic exercise on the topic: Improving Port Efficiency and Custom Practices in Ghana: The Case Study of GCNet. Your support and cooperation is very much anticipated since data collected will be treated with complete secrecy.*

1. Where is the location of your institution? a) Inside the ports b) Outside the port
2. What are the roles played by your institution in ports operations? .....
3. How does your institution liaise with other institutions and agencies in the operations of the ports and custom practices? .....
4. Does your institution employ GCNet in its operations? a) Yes b) No

4b. If yes, complete the table below;

Area of Usage of GCNet	Challenges in the use of GCNet	Effects of GCNet on ports operations

- 4c. If no, give reason(s) .....
5. How does the GCNet allow other people to undertake clearance on behalf of others?.....
6. How reliable is the GCNet system in ports operations? .....
7. What are the impacts of GCNet on government policies on trade? .....
8. What are the impacts of GCNet on ports operations? .....
9. What are the challenges of GCNet on ports operations? .....
10. What are the prospects of GCNet on ports operations? .....

### APPENDIX 3

**DEPARTMENT OF PLANNING FACULTY OF PLANNING AND  
LAND ECONOMY COLLEGE OF ARCHITECTURE AND  
PLANNING KWAME NKRUMAH UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, KUMASI**



#### QUESTIONNAIRES FOR GCB AND ECOBANK

*The Interview Guide is employed to solicit for relevant data for the conduct of an academic exercise on the topic: Improving Port Efficiency and Custom Practices in Ghana: The Case Study of GCNet. Your support and cooperation is very much anticipated since data collected will be treated with complete secrecy.*

1. Where is the location of your institution at the port? a) Inside the ports b) Outside the port
2. What are the roles played by your institution in custom operations? .....
3. How does your institution liaise with other institutions and agencies in the operations of the ports and custom practices?.....
4. Does your institution employ GCNet in its operations? a) Yes      b) No 4b.

If yes, complete the table below;

Area of Usage of GCNet	Challenges in the use of GCNet	Effects of GCNet on banking

- 4c. If no, give reason(s) .....
5. What are the effects of GCNet on the following custom operations?
  - a. Revenue mobilization
6. How does the GCNet allow other people to make payments on behalf of others?.....
7. How reliable is the GCNet system in banking operations?.....
8. What are the impacts of GCNet on government policies on trade?.....
9. What are the impacts of GCNet on banking operations? .....

10. What are the challenges of GCNet in banking operations? .....
11. What are the prospects of GCNet in banking operations? .....

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## APPENDIX 4

**DEPARTMENT OF PLANNING ,FACULTY OF PLANNING AND LAND ECONOMY  
COLLEGE OF ARCHITECTURE AND PLANNING KWAME NKRUMAH  
UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**



### QUESTIONNAIRE FOR GIFF AND CLEARING HOUSE AGENTS

*The Interview Guide is employed to solicit for relevant data for the conduct of an academic exercise on the topic: Improving Port Efficiency and Custom Practices in Ghana: The Case Study of GCNet. Your support and cooperation is very much anticipated since data collected will be treated with complete secrecy.*

1. Where is the location of your institution at the port? a) Inside the ports b) Outside the port
  2. What are the roles played by your institution in ports and custom operations? .....
  3. How does your institution liaise with other institutions and agencies in the operations of the ports and custom practices? .....
  4. Does your institution employ GCNet in its operations? a) Yes      b) No
- 4b. If yes, complete the table below;

Area of Usage of GCNet	Challenges in the use of GCNet	Effects of GCNet on Ports and Custom practices

- 4c. If no, give reason(s) .....
5. What are the effects of GCNet on the clearance of goods?.....
  6. How does the GCNet allow easy declaration?.....
  7. How reliable is the GCNet system in your operations? .....
  8. What are the impacts of GCNet on government policies on trade? .....
  9. What are the impacts of GCNet on ports and custom practices? .....
  10. What are the challenges of GCNet on ports and custom operations?.....
  11. What are the prospects of GCNet on ports and custom operations? .....