

UNIVERSITY OF GHANA

GCNET AND THE FACILITATION OF INTERNATIONAL TRADE AT THE PORT OF TEMA

BY

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DECLARATION

I do hereby declare that this study was wholly undertaken by me under supervision, and that all sources of data and information have been dully acknowledged.

I take responsibility for any omissions or commissions that may be found in the work.

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DEDICATION

I dedicate this work to the ever loving memory of my parents; Mr and Mrs Agyei, my indefatigable wife Miss Joyce Mensah whose moral, spiritual, and material support and persistent reassurances have propelled me in my academic pursuit. I wish to also dedicate this work to my daughter Cindy Nana Akua Agyemang who has been very supportive of me through my post graduate education at the Regional Maritime University. I am also indebted to my brother Mr Edward Agyei for his prayers and encouragement.



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ABSTRACT

Whether the inception of the GCNet at the port of Tema has aided better facilitation of international trade is the burden of this study.

By use of the quasi experimental method and the administration of questionnaires in a survey to a purposively sampled group of respondents in addition to analysis of documents, it came to light that indeed, by the turn of the last century the situation at the port of Tema had become unwieldy and the state was losing vital revenue to inefficient International Trade Facilitation (ITF) processes, congestion and corruption. The study further identified that the introduction of the GCNet single window platform has reversed most of the ills of the facilitation of international trade at the port of Tema while bringing its activities in line with international practices with regard to ITF.

While the GCNet has come to reduce these challenges, it needs fine tuning in order to stay relevant to the mounting demands on its operations. The study therefore recommends that, the platform seeks further improvement to reduce difficulty faced by some of its users by developing less cumbersome interfaces that are more user friendly, in addition to a more robust dedicated internet connectivity to ensure unobstructed communication.

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LIST OF ABBREVIATIONS

BOO	-	Build Own and Operate
CEPS	-	Customs Excise and Preventive Service
DSL	-	Domain Specific Language
EDI	-	Electronic Data Interchange
FES	-	Front End System
GATT	-	General Agreement on Tariff and Trade
GCMS	-	Ghana Customs Management System
GCNET	-	Ghana Communities Network Services
GDP	-	Gross Domestic Product
GIFF	-	Ghana Institute of Freight Forwarders
GPHA	-	Ghana Ports and Harbours Authority
GRA	-	Ghana Revenue Authority
ITF	-	International Trade Facilitation
OECD	-	Organisation for Economic Cooperation and Development
SGS	-	Societe General De Surveillance
TEU	-	Twenty Footer Equivalent Unit
UNCTAD	-	United Nations Convention on Trade and Development
WTO	-	World Trade Organisation

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

International trade or the exchange of goods, capital, and services across international borders or territories has been in existence for millennia. It is however useful to note that, while international trade has been present throughout much of history, its economic, social, and political importance has seen dramatic rise in modern times (Barreto, 1998). Much as it is an economic activity and a source of livelihood and revenue for people and states respectively, it is also assumed that international trade brings about a significant level of geopolitical peace and stability among states in order to allow for the peaceful exchange of trade and commerce among states. For instance, in the era of the Greek city states, international trade was viewed as a means of foreign influence and only such trade in goods that preserved the uniqueness of a state was allowed otherwise it was a means of political influence or alliance (Das, 2006). In most developing countries however, international trade and the tariffs thereof represent a significant share of internal revenue and Gross Domestic Product (GDP) (Killick, 2010). Consequently, states have paid particular attention to the facilitation of international trade and how revenue is collected in order to harness all the benefits thereof.

International trade facilitation covers all the steps that can be taken to smoothen and enable the flow of trade between one country and another. The term has been used widely to cover all sorts of non-tariff barriers, including product testing and impediments to labor mobility, but in the World Trade Organization (WTO), discussions are limited to “the simplification and harmonization of international trade procedures” covering the “activities, practices and formalities

involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade”. It relates to a wide range of activities at the border such as import and export procedures (e.g. procedures relating to customs, licensing and quarantine); transport formalities; payments, insurance and other financial requirements (Public Affairs and Communications Directorate, OECD, 2003). To effectively carry out trade facilitation, various regimes have been used in different countries across the globe. Apart from ensuring the smooth flow of trading activities in international trade facilitation activities involve the effective and efficient collection of tariffs and revenue accruable as a result of international trade. In Ghana, one of such modalities has been the introduction of the Ghana Communities Network Services (GCNet).

The need to streamline trade facilitation in order to maximize the free flow of imports and exports and revenue collection has gained focal attention since Ghana became independent and more so in the face of Economic Recovery Programmes (ERP) under Structural Adjustment Programmes (SAP) over the last three to four decades (Killick, 2010). To add to that, globalization has led to unparalleled increase in the volume of international trade, leading to enormous pressure on port authorities to increase efficiency in their operations and also expand to keep up with the competition in the system (Caesar, 2010). The activities required at port level are sometimes crucial for international trade transactions. These include not only activities that depend on port infrastructure, like pilotage, towing and tug assistance, or cargo handling, but also activities related to customs requirements (Clark, Dollar and Micco 2004). However, at the points of entry and exit we witnessed serious bottlenecks such as long processing time, congestion and corruption which compound the already cumbersome clearing procedures and technological inefficiencies (Amanfu, 2010).

The Ghana Community Networks Services (GCNet) is a single platform that ensures that all stakeholders involved in international trade lodge documents with a lone access point to fulfill all trade related regulatory requirements (De Wulf, 2004). It was established to remove constraints to legitimate trade facilitation and ensure that collection of trade-related revenue was not undermined. It became necessary due to the persistent challenges faced by stakeholders on the slow and unwieldy freight clearance practices. While the system was adopted to allow for efficiency in the documentation of international trade, the need to reduce avenues of revenue leakage due to bureaucratic corruption also fed into the justifications for it. It is the objective of this study to assess how the introduction of the GCNet has aided the efficiency of international trade facilitation at the port of Tema. Objectives such as how the GCNet project helps to: Facilitate trade and clearance of goods through customs at a faster rate; Reduce congestion associated with import/export trade at the port; Reduce transaction costs and delays trade operators encounter in clearing consignments through the ports; and; the level of transparency in trade facilitation at the ports.

1.2 Statement of the Problem

This situation undermined the efforts of the management of the port in its processing efforts leading to heightened port and customs management challenges. While this may be attributable to the neglect and lack of investment in infrastructure and processing technologies for decades at the ports, there is evidence to the effect that in the past few decades, Governments of Ghana have committed scarce resources towards building appropriate infrastructure through the expansion of the port and automation of port operations to subsequently remove substantially the challenges but the problems refuse to subside (Caesar, 2010). It is also regrettable that, little seems to have been done in terms of research and literary works on international trade facilitation in Ghana. Credit

must however be given to a few works in this regard by De Wulf (2003), Broni (2012) and Asuliwonno (2011). Broni attempted to establish the impact of Ghana's Single Window (GCNet) on port and customs operations in achieving port efficiency. The burden of this study therefore, is to assess how the introduction of the GCNet has facilitated international trade at the Port of Tema. In other words, has the introduction of the GCNet resulted in efficiency in document processing and the reduction of avenues of corruption at the port, and increase in the volume of trade at harbour?

1.3 Objectives of Study

1. Identify the nature of international trade facilitation at the Port of Tema before the introduction of GCNet
2. Understand the operations of the GCNet
3. Assess how the GCNet has affected international trade at the Port of Tema

1.4 Research Questions

The pertinent questions to be addressed by the study are;

1. What was the nature of International Trade Facilitation at the Port of Tema before the introduction of the GCNet
2. How has the GCNet facilitated international trade at the Tema Port
3. How does the introduction of the GCNet at the port of Tema rationalized International Trade Facilitation(ITF) with international standards

1.5 Methodology

The research design will involve the use of a quasi-experiment in conducting the study due to the question of the study. A quasi-experiment is an empirical study used to estimate the causal impact of an intervention on its target population (Fraenkel, 2002). Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but specifically lacks the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition, but using some criterion other than random assignment (e.g., an eligibility cutoff mark). In this case, an arbitrary selection of the intervention of GCNet at the Port of Tema, and how this has affected the operations of international trade since. Even though quasi-experiments are subject to concerns regarding internal validity, in this case because there is a starting point of the intervention its validity can be improved by comparing baseline data to empirical data.

The sampling design will be a multistage sampling method that involves a purposive, systematic, sampling method in order to select relevant stakeholders and informed elements/respondents while giving equal chance to all.

Questionnaires shall be used in collecting data while simple statistical and frequency tables shall be used for analysis.

1.6 Scope of Study

This study focuses on the port of Tema which is the major point of imports and exports in Ghana. The appropriateness of the port of Tema to this study is informed by its association with the operation of the GCNet and for the fact that it is Ghana's major point for the facilitation of international trade. It is essentially limited to how the introduction of the GCNet has facilitated

imports and exports through the port of Tema. The study delves into the automation of customs in facilitating trade, the significance of GCNet in customs practices in Ghana with emphasis on clearance time and turnaround time, congestion, and revenue collection. To establish a relationship between the introduction of GCNet and increased facilitation of international trade, it is important to examine the process from the period that precedes the introduction of GCNet and post-introduction periods. That is, 2000 to 2003 as the pre-introduction era and 2003 to 2013 as the post introduction era.

1.7 Significance of the Study

The importance of ports to third world countries resulting from its strategic revenue generation as well as the facilitation of international trade is even more underscored as the increase in volume and complexity of world trade becomes more apparent. Correspondingly, the need for port efficiency and why interventions targeted at ensuring the speedy transfer of goods across boundaries of Ghana must be pursued with the necessary level of commitment by all stakeholders needs more attention. Therefore, this research will help to apprise the administrators of the port and the managers of GCNet of its usefulness in fast-tracking the processes of the port and reduction of trade related malfeasance through the rightful application of the system.

The findings of the study will provide the required schemes for refining the proficiency of the ports. It may also lead to enhancing the strengths and exposing the weaknesses of GCNet which will suggest to management ways to provide custom-made services to clientele.

1.8 Limitations of the Study

The study may face a significant limitation in accessing up-to-date data because of the multiplicity of stakeholders such as GCNet, GPHA, Customs Division of GRA, exporters and importers (both local and foreign), shippers, freight forwarders, transit truck drivers, and the many banks involved. To add to that, considering the scope in terms of coverage period (before and after GCNet) of the research, some of the respondents may not remember the situation properly before the implementation of the GCNet because of the poor record keeping practice of many organizations and consequently, the poor nature of administrative history in the country.

1.9 Organization of the Study

The study is divided into five chapters. The first specifies the problem, research questions, objectives, significance, justification and methodology.

The second chapter discusses material related to variables of the study. Consequently, international trade, international trade facilitation and its history in Ghana, Single platform trade facilitation interventions i.e. GCNet, TRADEnet, etc. shall be reviewed among others.

The third chapter details and explains the methodology employed to meet the goal and objectives of the study as set out in chapter one.

The fourth chapter presents and analyse data collected in an empirical survey to be conducted.

Chapter five covers the summary of findings, conclusions, and recommendations

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, a review of literature related to GCNet and how its introduction has facilitated international trade at the Port of Tema of Ghana. The review is related to other international trade facilitation procedures used at harbours in order to get a clearer view of the subject. It is important to appreciate that the mutable nature of the maritime industry due to the increasing and varied demands of contemporary world trends in international trade compels innovative definitions of ports and their operations. Therefore, a comprehensive understanding of ports and what phenomena exemplify port efficiency is necessary and needs reference to material relating to the phenomenon of harbours from antiquity and international trade facilitation. And, even though large corpus of material abounds in the area of international trade and trade facilitation over the millennia, only literature pertinent to the objectives of this study shall form the focus of the review. The review therefore focuses on harbours and the history of harbours, international trade facilitation in general, international trade facilitation in Ghana and the GCNet. The final part of the review then focuses on how the GCNet has fared compared to other international trade facilitation systems across the world before zeroing in on its merits and weaknesses over the last decade or more.

2.2 Harbours and International Trade

In this section I give a brief definition, description, and categorization of harbours. I then render a brief history of harbours before zeroing in on international trade. A harbour ordinary means a part of a body of water near a coast in which ships can anchor safely, or a place of refuge that is safe and sheltered. They are a naturally or artificially protected basin on an ocean, lake, or river where ships may be anchored or docked without danger from waves or high winds. In the strictest sense the term harbour is confined to the water area of a port, but in general usage it includes the protective breakwaters and jetties and the piers and docks that surround the harbour proper. Harbours may be classified according to their use. They may consequently be categorized into three types; harbours of refuge, commercial harbours, and naval harbours. A harbour of refuge is a harbour created solely as a temporary haven for ships in storms. Commercial harbours are equipped with docking or other facilities for the loading and unloading of cargo and, usually, with installations for the refuelling and repair of ships. Naval harbours contain, in addition to the facilities of the commercial harbour, buildings and equipment for the storage and handling of munitions. A number of large and important harbours such as those of San Francisco and New York City in the United States and of Southampton, England, are both commercial and naval harbours (Microsoft® Student 2009 [DVD], 2008). In Ghana the harbour at Takoradi serves as both a commercial and naval harbour.

Harbours may also be classified into three types according to the ways in which they are protected. Natural harbours have the protection of natural bays, peninsulas, headlands, or offshore islands. Improved harbours are those in which the natural features that afford shelter have been augmented with breakwaters and other works. Artificial harbours are entirely protected by fabricated

structures (Microsoft® Student 2009 [DVD], 2008). Most commercial harbours of the kind this study is concerned with are either improved or artificial harbours.

Archaeological excavations undertaken by the British Museum a few decades ago confirm Biblical accounts of proto-harbours at Sidon and Tyre that facilitated overseas trade between the ancient kingdoms of the Middle East (Marriner, Morhange, & Doumet-Serhal, 2006). It is also evident that the ancient civilizations of Greece and Rome used harbours extensively for trade and political relations. We are told in early Greek history of the use of harbours as tools of international relations (Das, 2006). It was a source of foreign influence or political dominion.

For instance, in 165 B.C, the Roman Senate penalised Rhodes, then the major trading centre in the eastern Mediterranean, for its indecisive support in the third Macedon war (171-167 BC) by giving Athens the administration of a harbour on the island of Delos. The senate gave a condition that there were to be no port charges at Delos, which upset Rhodes' economy as revenues from trade dropped (Holland, 2003:79). Moreover, following extensive nationalist policies and withdrawal from further naval and commercial expeditions in the 16th century, China awarded Portugal exclusive access to harbour and trade in Macao as a window and border to further European cultural and economic expansion in the region (Barreto, 1998:22). The world's first tidal dock is believed to have been built at Lothal around 2300 B.C. during the Harappan civilisation, near the present day Mangrol harbour on the Gujarat coast. Sea transport gained a prominent position with time and maritime activities began to grow with the different conquests (UNCTAD, 2008). Significantly shortened maritime transport times between Asia, Europe and America in the future may yet again change the face of global transportation (Krauss et al., 2008). Since this historical antecedent, sea trade has known no bounds. Currently, it is estimated that 95% of world trade goes either in whole or in part by sea (Farthing and Browning (1997) as cited by Caesar (2010).

Indeed, in the middle ages, harbours continued to serve both political and economic purposes as rising European powers explored the oceans in pursuit of adventure, trade, and eventually colonies. In modern times, the harbour has not lost its strategic economic or political importance; just that its economic importance has edged over the political, considering that few parts of the world are under foreign rule. Be that as it may, its strategic importance as a facilitator of international trade cannot be overemphasized. Neither could its strategic importance as revenue generator be reduced especially in developing countries. It remains a major medium of relationship between nations across the world through international trade.

International trade simply refers to trade between trade partners' resident or originating from different countries. More specifically it refers to the exchange of goods and services between nations. Goods can be defined as finished products, as intermediate goods used in producing other goods, or as agricultural products and foodstuffs. International trade enables a nation to specialize in those goods it can produce most cheaply and efficiently. Trade also enables a country to consume more than it would be able to produce if it depended only on its own resources. Finally, trade enlarges the potential market for the goods of a particular economy. Trade has always been the major force behind the economic relations among nations (Microsoft® Student 2009 [DVD], 2008). In addition, in developing countries the importance of international trade goes beyond the exchange of goods but extends to opportunity to consume those products that could be otherwise not available in their countries. Goods such as electronic and electrical appliances including automobiles are all within reach of consumers. To add to that, it is a major source of income considering the difficulty with raising revenue from income tax due to the underdeveloped nature of revenue collection institutions. These then bring up the issue of effective and efficient revenue

collection. But before I go into the efficiency of trade facilitation and how the GCNet has been able to occasion it I give a brief account of the antecedents to the Port of Tema.

2.3 Harbour Development in Ghana and the Tema Port

The fisher folk along the coast of Ghana had been used to canoeing and fishing long before the advent of the Europeans. However, the development of seaports in Ghana started in the 15th century and intensified when trade brought about intensified contact between the external world by which ships and sea vessels landed at the various locations along the shore. The numerous castles and forts found in the coastal towns are the palpable evidence that can be seen (Oduro, 1999). It was not until the early part of the 16th century that port operations begun with the construction of breakwater in Accra (GPHA, 1991). Ghana has 539 km coastline and two deep artificial harbours; one at Tema and the other situated at Takoradi. The two seaports, Tema and Takoradi, now carry practically all the seaborne trade of Ghana (Pedersen, 2001); as international shipping is confined to these ports. After the demise of Ghana Black Star Line in 1991, commercial shipping is now done by private companies with Maersk Ghana leading the pack in the maritime industry. The ports in Ghana are a major entry point for transit trade to Mali, Burkina Faso and Niger. Ghana Ports and Harbours Authority (GPHA) is a parastatal agency mandated under the Provisional National Defence Council 160 of 1986 to operate ports in Ghana (Caesar, 2010).

Even though a modern harbour had been constructed by the colonial government at Takoradi in the second decade of the twentieth century, the need to explore an industrial utility for the planned hydroelectric dam at Akosombo prompted the need for an even more elaborate dam at Tema. The colonial administration having finalized plans to establish an aluminium smelting plant at Tema invited Sir William Halcrow and Associates of the United Kingdom in 1949, to examine a proposal

to set up an aluminium industry to be powered by hydroelectric station on the Volta River basin. The need, therefore, arose for a deep water port in the eastern part of the country. This led to the selection of Tema as the chosen destination. Works on the construction of the port began in 1954 with the first cargo entry in 1958. The port was opened to traffic in January, 1962 (GPHA, 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 (Asuliwonno, 2011). The port occupies a total land area of 3,904,754sqm with a quay length of 2,196m. The port has a cover storage area of 53,270sqm and 97,200sqm of open storage. Plug-in refrigerated containers are found at the reefers at the port. There are bunkering services and dry dock facilities too available at the port (Owusu-Mensah, 2007). Close to 80% of imported goods are handled by the Tema port in Ghana. Clinker, oil products, aluminium, vehicles, container cargo, rice, wheat and alumina are the major commodities handled by the port (Gyebi- Donkor, 2006).

As Africa's largest man made harbour, the entrance of the port encloses 166 hectares of sea. It has 5 km of breakwaters; 12 deep-water berths; an oil tanker berth and a dockyard; warehouses and transit sheds. The port of Tema also serves to some extent as a gateway for the landlocked countries of Mali, Niger and Burkina Faso. Historically, these countries depended on road and rail links to the port of Abidjan in La Cote d'Ivoire for transport of their export and import cargoes (Akamavi et al, 2004). However, since 2002, after La Cote d'Ivoire was plunged into civil war, these landlocked countries have diverted much of their trade to Tema port in Ghana and other ports in the West Africa sub-region (Simpson, 2003) as cited by Caesar (2010). The Port made some significant strides in the area of container exports, as the year 2008 saw an increase of 555,010 Twenty-foot Equivalent Units (TEUs) compared to 489,147 TEUs in 2007. Total export for liquid bulk, dry bulk, general cargo, and container cargo and forest products was estimated at 8,712,982

metric tonnes for the year 2008, as against 8,378,682 metric tonnes in 2007, (Asuliwonno, 2010). The contemporary development of ports all over the world, and for that matter Ghana, is underpinned by its growing importance to the various economies and individual players in the maritime industry.

2.4 International Trade Facilitation

In this section I describe international trade facilitation and then move on to give a brief account of its justifications, before touching on the difficulties faced by developing countries including Ghana and the need for automation or the establishment of the single window. I then turn attention to the processes leading to the adoption of the GCNet as a single window procedure for trade facilitation.

In defining and justifying trade facilitation, I rely extensively on the policy brief released by the Public Affairs and Communications Directorate of the Organization for Economic Cooperation and Development (OECD) in 2003 for its exceptional capturing of the essence of international trade facilitation. International trade facilitation refers to all steps that are taken to enable the flow of trade between one country and another. The term has been used widely to cover all sorts of non-tariff barriers, including product testing and impediments to labour mobility, but in the World Trade Organization (WTO), discussions are limited to “the simplification and harmonization of international trade procedures” covering the “activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade”(Public Affairs and Communications Directorate, OECD, 2003). Consequently, international trade facilitation relates to a wide range of activities at the border such

as import and export procedures (e.g. procedures relating to customs, licensing and quarantine); transport formalities; payments, insurance and other financial requirements (Wulf, 2004).

Trade facilitation as a concept matters because of a number of reasons. An OECD policy brief released in 2004 identifies a number of reasons why trade facilitation is important. One reason is the increased trade volumes brought about by the progressive reduction of tariffs and quotas in international trade through successive rounds of trade liberalisation under the General Agreement on Tariffs and Trade (GATT). The volume of international trade has expanded relative to the size of many national economies, making it more difficult for administrations to cope on the basis of unchanged and limited resources. At the same time, the reduction of other types of barriers brought border-crossing costs to business, such as waiting time and Customs procedures, into new prominence.

Increased trade velocity has also contributed. Modern supply chain management techniques and the rapid spread of information technologies and e-commerce have progressively increased the use of “just-in-time” techniques by manufacturing industry and encouraged the growth of integrated global supply, production and distribution systems. In this environment, where car manufacturers, for example, rely on the uninterrupted reception of the necessary components to meet production contingencies, business cannot afford to have imported or exported goods tied up for long periods because of unnecessary or over-complicated trade procedures and requirements.

There is also the question of costs inherent in the increased complexity of trade. Whereas in the past international corporations might have used just one location for production, today they are encouraged by globalisation and international competition to use a variety of locations for the manufacture and sourcing of components and for the manufacture of final products. At the same

time, procedures and information flows put in place for traditional port-to-port and surface transport operations were unable to cope with the advent of rapid through-movement of containerised goods and jet airfreight. Preferential trade agreements have added to this complexity a proliferation of complex rules of origin.

In these circumstances, even operating methods that used to be satisfactory prove largely inadequate and need to be rethought, while problems posed by methods that were already sub-optimal are exacerbated. And inefficiency in border procedures exacts significant costs, both from the authorities who administer them and from the businesses who have to use them.

For businesses, border-related costs are both indirect, such as expenses related to supplying information and documents to the relevant authority, and indirect, such as those arising from procedural delays, lost business opportunities and lack of predictability in the regulations. Surveys aimed at calculating these costs suggest that they may range from 2% to 15% of the value of traded goods.

Inefficiency costs to governments include unsatisfactory revenue collection and smuggling problems, as well as difficulties in implementing trade policy, for instance because of failure in determining the origin of products or in collecting accurate statistics. Inefficient border procedures are also likely to lead to poor export competitiveness and make the country involved less attractive to investment, reducing the ability of traders, carriers, agents, ports and airports in developing countries to play a full part in global trade expansion. By the same token, taking action to improve the efficiency of border procedures has been shown to produce results. Countries that have carried out reforms in this area have achieved a substantial increase in Customs revenue, despite the

reduction in duties brought by trade liberalisation (Public Affairs and Communications Directorate, OECD, 2003).

For international trade facilitation to function well there is a need for a number of criteria to be observed. Again the OECD policy brief released in 2003 has a number of indicators that need be observed.

The document observes that making the nuts and bolts of trading procedure easier to navigate requires transparency in the regulations and procedures, and consistency, predictability and non-discrimination in their application.

Transparency of relevant domestic regulations, procedures and practices is widely recognised as an essential element for ensuring that regulatory objectives are achieved efficiently while at the same time enhancing the benefits expected from trade and investment liberalisation. Transparency underpins the ability of market participants and stakeholders to fully understand the conditions and constraints for entering and operating in a market; to gain an accurate picture of the costs and returns of their involvement; to have the time and flexibility needed to meet requirements and adjust to potential changes; and to be equipped to deal with any discriminatory or arbitrary treatment.

Transparency is crucial in making domestic regulations and administrative practices more efficient and in enhancing their integrity. This is achieved by revealing the costs and benefits of policy decisions and administrative practices and ensuring that their purpose is clear and appropriately implemented. Transparency can also help remove economic distortions that might undermine domestic policy objectives. Openness about the way the system works also improves public confidence in the government's performance and that of the regulatory system. It can also help to

make a market more open by enabling businesses to make more informed decisions and take maximum advantage of the opportunities created by WTO rules and commitments.

Transparency implies making information on border requirements and procedures systematically available and easily accessible to all interested persons, for example by ensuring that laws and regulations are published ahead of their enforcement. But it also involves giving information on operational aspects, such as standard practices and processes in the operation of Customs and border agencies, guidelines on how requirements should be interpreted and enforced; and any available special procedures, to make sure that all potentially concerned traders are aware of them. Publishing information about forthcoming rules could improve the prospects of compliance by securing the support of stakeholders and improving their readiness to comply, while at the same time allowing operators to take informed decisions on their economic activity.

Consistency and predictability in the application of rules and procedures is also important. Uncertainty in trade operations translates very quickly into unwarranted transaction costs in the form of warehousing and demurrage expenses, transport and insurance fees and financing charges, as traders need to ward off potential disruptions in their production and logistics chain. Such problems can quickly become a strong disincentive for smaller businesses which lack the necessary logistic support to deal with such constraints. But non-discretionary and uniform administration of applicable requirements allows traders to know what to expect in their everyday dealings with Customs and other border agencies and to make informed decisions about their activities in a market. This requires clear and precise procedural guidance that is based on standard policies and operating procedures and is applied consistently whatever the authority or trader involved. Consistent application of the rules guarantees efficiency and integrity in the administration, shielding it from attempts to obtain illegal advantages.

Non-discrimination is about ensuring the impartial and uniform application of all border-related regulations, procedures and practices. It goes beyond equal treatment between trading partner countries, to focus on the treatment of individual traders. Impartiality and uniformity does not mean all products have to be treated in an identical manner, but it does call for effective equality of administration where the same circumstances apply.

Simplifying border procedures helps achieve Customs and other public policy objectives in the most cost-efficient way, both for the administration and for affected traders. It is an essential path to increasing efficiency for Customs and other border administrations seeking to deploy limited resources to enhance productivity, face increasing budgetary constraints and improve revenue collection through more flexible, risk-based and targeted operations. At the same time, simplifying procedures lifts restrictions and burdens that unnecessarily add to traders' cost of doing business as well as generating undue delays at the border.

Measures to simplify border procedures and avoid unnecessary burdens include doing away with unnecessary or outdated requirements, such as requesting information that is already available to the authorities, or requesting the same information more than once for different departments – Customs, food inspection agencies, health and safety authorities, etc. It also involves updating regulations to take account of changed contexts, technologies and markets; and ensuring that the implementation process is in proportion to the desired result. This means, for example, not introducing measures to improve revenue collection which cost more to implement than is actually gained in revenue.

On the other hand, if Customs authorities can partly or totally process shipments before arrival of the goods, based on the transmission of the requested information in advance, or replace border

controls by post-clearance audits, it simplifies the whole process. It reduces bottlenecks, which in turn reduces delays and related expenses for traders such as the risk of spoilage of perishable goods and theft, and reduces opportunities for corruption by minimising direct transactions between officials and traders or their agents.

Due process – the availability of appropriate mechanisms for reviewing and correcting administrative actions related to Customs and border matters – is an important complement to regulatory transparency in ensuring the efficient operation of border procedures. Such mechanisms are often available in general legal frameworks that set out formal avenues for appealing against administrative rulings, actions and interpretation of applicable regulations as well as the general procedures to be followed. The essential quality of such mechanisms should be judged by their accessibility, their impartiality and their efficiency in offering redress in accordance with the legislation of the country.

Such a general framework may sometimes prove unsatisfactory for issues like Customs and border matters, because such matters are often highly technical in nature and urgent, something which is ill accommodated by the long average timeframes of administrative appeals procedures. That is why several countries provide for specific or additional avenues for Customs and border matters, aimed at a more efficient and timely handling of the issue. Specific provisions for appeals are often included in Customs or tariff legislation, especially with respect to the dutiable status of imported goods.

2.4.1 Justification for the Introduction of the GCNet at the Port of Tema

To do all described above demands a dynamic and capable system that may not be offered by anything less than automation. In addition, the previous system of international trade facilitation

was fraught with a lot of problems making trade facilitation at the harbour a big headache for both traders and facilitators. Some of the problems are mentioned below in order to appreciate properly the efficiency of GCNet in trade facilitation at the Port of Tema.

The constant development and change in international transport management over the last few decades, from a fragmented modal approach towards a much more integrated transport concept tailored to meet the pressing needs of customer industries better, is resulting in an increasing pressure on ports to adapt their role and function to this more demanding operational environment (Juhel, 1999). As a result of growing markets for external goods and services, African ports are faced with huge challenges and risk in managing sea ports. The most important of these challenges is the issue of congestion which is facing most developed economies in the ports and harbour nations, particularly the United States, India and much of Europe. This congestion normally undermines the fluidity of business transactions as well as the general operation of the ports and harbours. Similarly, they undermine Africa's export competitiveness by increasing direct cost (e.g., port congestion penalties or surcharges) and indirect costs (e.g., inventory, idle ships and trucks). For instance, in Ghana, the port of Tema until recently suffered from low berth productivity as a result of lack of scaffold and gantry cranes. Increasing container volumes also forced carriers to wait several hours for berths and, in turn, imposed congestion surcharges on shippers. Similarly, in Durban, cargo handling demand had exceeded the terminal's handling capacity, causing berth congestion and forcing carriers to impose penalty surcharges (Amanfu, 2010)

Amanfu (2010) reveals that Africa faces numerous challenges in its ports and harbours, which include increasing tariffs, introduction of new and sophisticated vessels and equipment, deficits of technical know-how, insufficient and inefficient manpower that man various operation terminals.

Considering tremendous increase in cargo volumes that African port terminals receive monthly, it is evidently clear that such volumes do really impede the efficiency of ports in Africa, thereby grinding down their competitiveness from the perspectives of output and return time of vessels and container utilization. There is the need, therefore, within the framework of global trade integration and sustainability, for international ports; especially those on the African continent, to comply with required international security and maintenance protocols. Lack of available land for expansion is among one of the most acute problems; an issue exacerbated by the deep-water requirement for handling ships. Increased port traffic may lead to diseconomies as local road and rail systems are heavily burdened. Environmental constraints and local opposition to port development are also significant (Notteboom and Rodrigue, 2005).

In Ghana, the astronomical increase in international trade over the last decade has resulted in a number of challenges notable amongst them is the inadequate port facility and infrastructure to handle the teaming number of vessels that arrive at the two ports for offloading and loading daily. Another important challenge worth mentioning is the cumbersome and bureaucratic clearing process which brings about vessel traffic and delay in cargo flow leading to congestion and corruption. The GPHA (2006) admits that these challenges and problems hinder the smooth operations of the ports.

2.4.2 The Processes Leading to the Establishment of the GCNet at the Port of Tema

The problems associated with trade facilitation with the manual processing of data provided avenues for inefficiency and corruption. In addition the need to increase internal revenue in Ghana provided the political will for an automation process that would fast track the process of documenting international trade. Consequently, the need to make a turnaround pushed the

government in search of new ideas, and to seek good examples of trade facilitation and promotion programs introduced elsewhere. The government therefore set up and dispatched official delegations to visited New Zealand, Singapore, Mauritius, and Malaysia; countries with which Ghana enjoyed excellent political and economic relation for decades. The private sector was represented on these missions, which invariably included the then Minister of Trade, the Chief Executives of Ghana Investment Promotion Centre, Ghana Export Promotion Council and Heads of Industry. This group transformed into a broader stakeholder group of public and private sector representatives.

Visits to Singapore and Mauritius particularly captivated the delegation. They were particularly impressed with TradeNet. The TradeNet approaching these countries provided the dual benefit of speeding up trade transaction without jeopardizing Government revenues, while streamlining the processes of trade transaction by bringing the various members of the trading community into an integrated network (De Wulf, 2004). On their return to Ghana, the team proposed the establishment of a similar approach to trade facilitation in the country.

According to De Wulf (2004), the key essentials of their proposal included but not limited to the following;

- An Inter- Ministerial Gateway Oversight Committee, with its Secretariat was to oversee the various components of this ambitious initiative, and a capable public servant, was chosen to head this Secretariat.

- After review of proposals from various software and systems integrators, the Singaporean firm, Crimsonlogic (ex-SNS) that managed TradeNet there was invited to provide the electronic data interchange (EDI) system that would become the core of the Ghana TradeNet. Significantly, Crimsonlogic had also successfully transferred this technology to Mauritius, and had convinced the Ghana Gateway team of its capability to do the same in Ghana. It was, however, not prepared to commit investment funds directly for the development of the EDI, as required by the Government; and this was assumed by Societe General de Surveillance S.A. (SGS), which had a strategic partnership with Crimsonlogic, to play the role of the strategic investor and lead technical partner. Incidentally, SGS also had a long expert knowledge, and experience in providing trade assurance services for Ghana.
- Ghana thus adopted the Customs management system that was designed for Mauritius and that was smoothly interfacing with the initial TradeNet from Singapore. .
- As part of the arrangements, a company would be created that would be charged with the implementation of both the TradeNet and the Ghana Customs Management System (GCMS) for CEPS. In fact, this company would be given a de facto Build Own and Operate (BOO) contract.

The GCNet vision was to transform an interlacing type network of connection that has been in operation amongst and between the various agencies and entities involved in the trade facilitation process into an interconnected network of members of a trading community.

The pre-reform years represented a situation where each agency required a unique set of documents, that must be submitted only to it and that are not shared with other members of the trading community. These data are often duplicative and must be transcribed for further

processing. Lots of paper work was involved, multiple copies were required, and the transcription was prone to error. All these was time consuming and costly. Various studies reported processes that range from 25-32 stages that needed to be tackled before a consignment could be cleared. According to De Wulf (2004) these documents included an Import Declaration Form, inspection reports, certificate or permit from the relevant regulatory bodies (e.g. Food and Drug Board, Ministry of Interior, Free Zone Board, certificates of origin issued by the Ghana Chamber of Commerce and Industry, etc.). In meeting these diverse agency requirements, trade operators were obliged to crisscross from one agency to the other to chase documents being processed, as these agencies were neither networked to communicate with each other nor had access to a common database. I provide a diagram below to aid a better understanding of how the situation was before the introduction of the GCNet in Ghana.

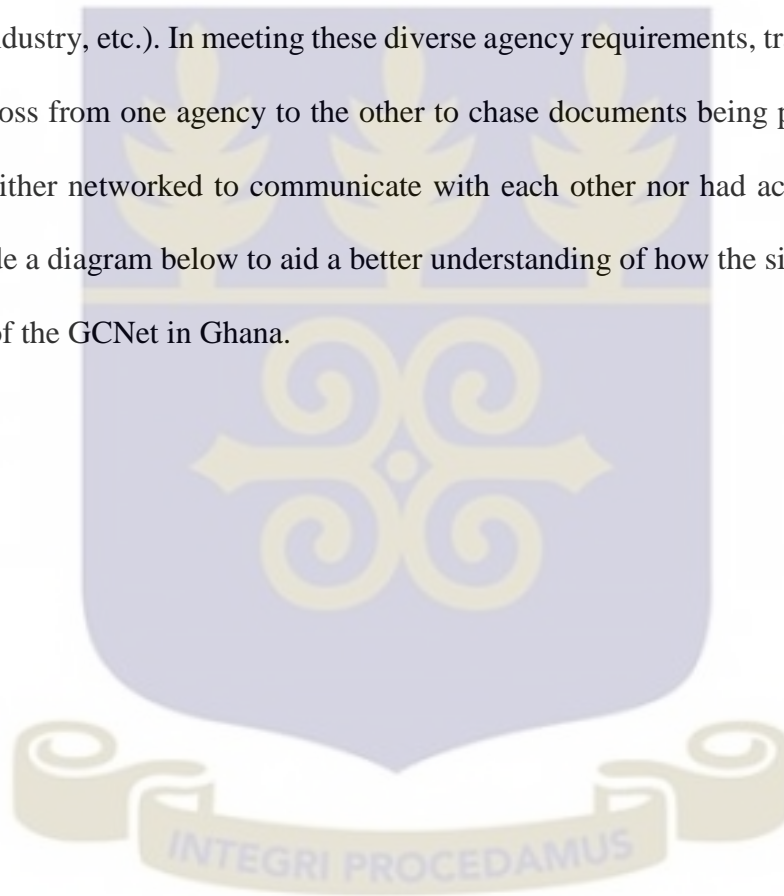
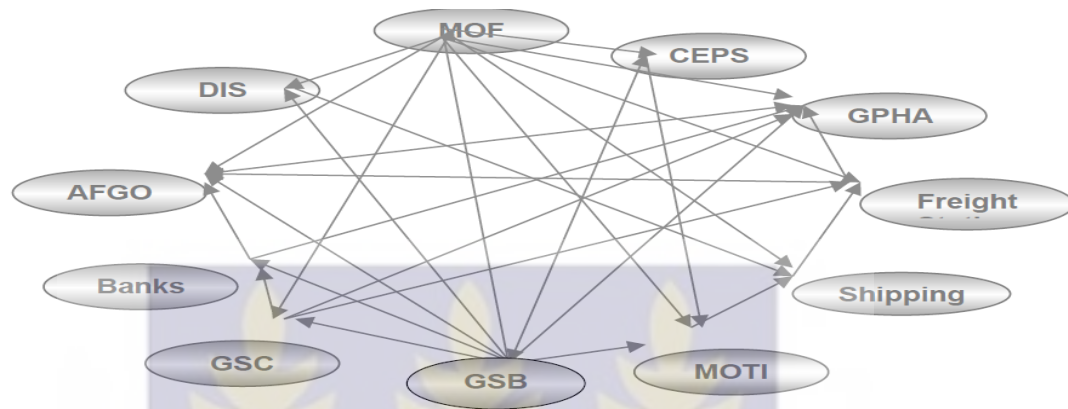


Figure 2.1 The Spider-Like Connections That Depict the Process Of International Trade Facilitation Before the Establishment Of GCNet



Source: TradeNet.

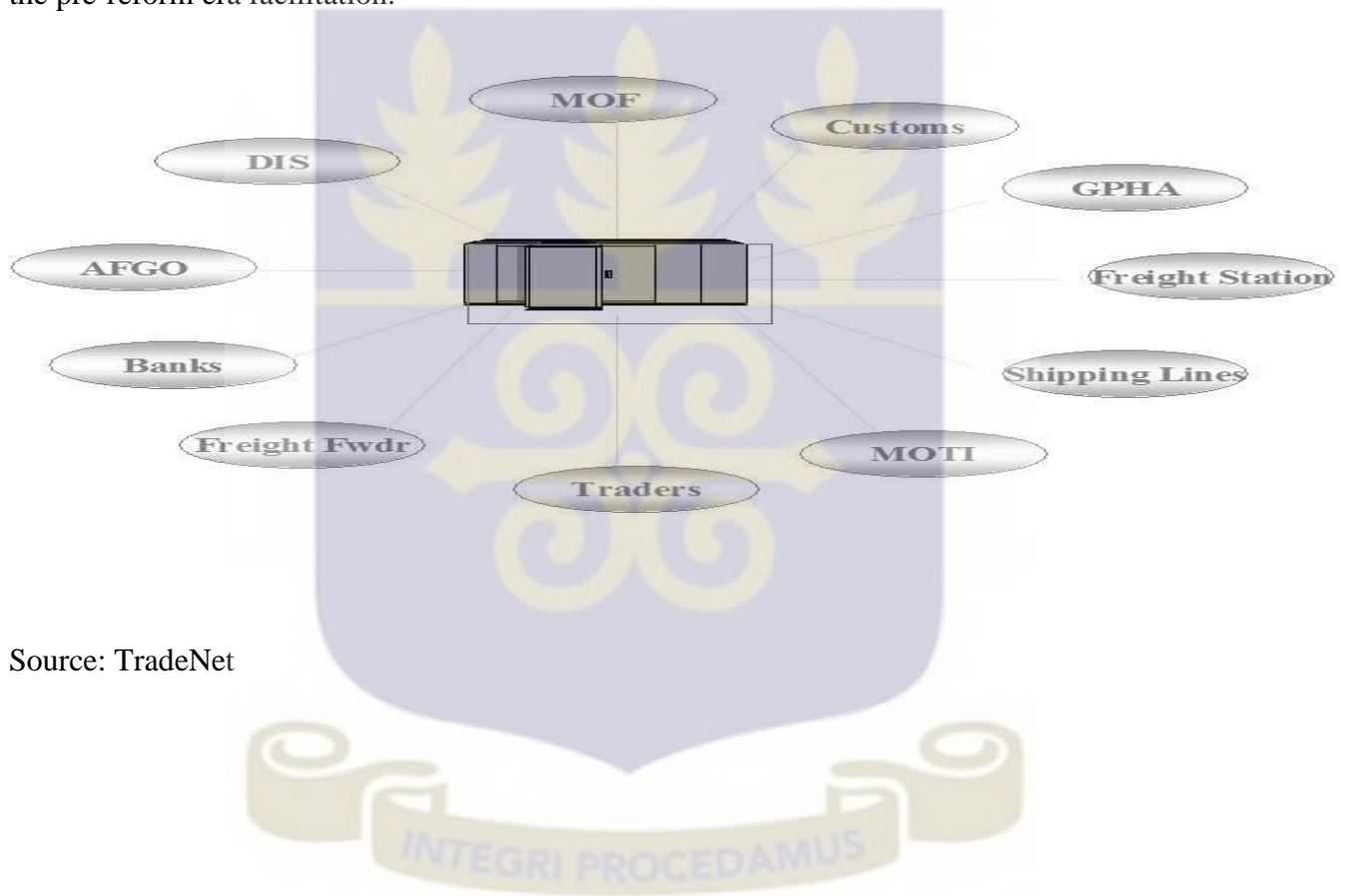
This situation created lots of opportunity for importuning and providing “facilitation money” to speed up transaction, to be permitted to jump the queue, or simply to adjust the Customs declaration to suit the particular objectives of various persons involved in these transactions. The lack of transparency for these transactions left a very weak audit trail, and in most instances none at all. All these impeded the competitiveness of the economy, while hampering the attractiveness of the Port of Tema as a gateway to other West African destinations like Mali, Burkina Faso, Niger, etc.

2.5 GCNet and International Trade Facilitation in Ghana

The GCNet is an international trade facilitation system modelled on the Singaporean TradeNet facilitation system to provide a single platform often referred to as a ‘single window’ of export-import processing system. It allows importers and exporters to process their documents at one point cutting off the need to shuttle and move between different points to process documents for import and export. This brought an end to the old regime of paper processing at ports which was

characterized by a multiplicity and duplicity of documents and processes between different agencies. I provide below a diagram that aids a better understanding of the GCNet trade facilitation procedure.

Figure 2.2 the GCNet served as a fulcrum that received and distributed trade facilitation documents between the various agencies taking out the multiplicity and duplicity associated with the pre-reform era facilitation.



Source: TradeNet

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter explains the methodology used in the study. As stated earlier in chapter one, a quasi-experimental method is employed in the conduct of this research. The chapter therefore, details the methodology used explaining research design, population under study, sample size and techniques employed in sampling, the data collection instruments used, data collection procedures and tools of analysis.

Research methodology is very important as it forms the nerve centre of every successful research. According to Buame (2006), methodology is very crucial to every research as it ensures that the validity and reliability is attained which invariably allows for the generalisation and replication of research results.

To assess how instrumental GCNet has been in facilitating international trade at the Port of Tema, certain indicators which have been reviewed in chapter two as benchmarks signifying the instrumentality of the intervention (GCNet) in fostering augmented trade facilitation at the harbour at Tema were used to assess facilitation at the port of Tema. These indicators include transparency, consistency and predictability, non-discrimination, simplification of procedures and due process. These terms have been explained in chapter two echoing the meanings imbued by the OECD (Public Affairs and Communications Directorate, OECD, 2003)

3.2. Research Design

The research is a quasi-experimental design, which permits in-depth and comprehensive assessment of the situation at the Tema port “before” and “after” the implementation of GCNet, as an intervention that seeks to better facilitate international trade at the Port of Tema. A quasi-experiment is an empirical study used to estimate the causative impact of an intervention on its target population.

3.3. Population

In research population is “... the group that is of interest to the researcher, the group to whom the researcher would like to generalize the results of the study” (Fraenkel and Wallen, 1993). Polit and Hungler (1999) contend that population can best be defined to mean the collection or the entirety of all the subjects, objects or members that conform to a set of specifications. In the same vein, Jankowicz (1995) points out that in order to draw a sample; you have to know how many people are in the population, and how this total is made up from people falling into various sub groups in which you might be interested.

The population for this study comprise stakeholders who use GCNet in their operations at the Tema port. They include commercial banks such as Ghana Commercial Bank, and Ecobank; state and private institutions like, Ghana Ports and Harbours Authority (GPHA), Customs Division of Ghana Revenue Authority, Ghana Community Network Services Limited, GIFF, Shippers Authority, etc. the population also include Freight Forwarders, Shipping Agents, Clearing House Agents, Importers and Exporters, organisations and agencies involved in the use of GCNet connectivity at the Tema port.

3.4. Sample Size

According to Johnson and Joslyn (1991) researchers make inferences from what they know about a sample and use that to describe the population from which the sample was drawn. Fraenkel and Wallen (1993) also refer to a “sample” in a research as any group from which information is obtained. Jankowicz (1995), explained sampling to simply mean the deliberate choice of a number of people the sample provides data from which to draw conclusions about some larger group, the population, whom these people represent and also it is considered economically feasible to use part of the population to save time and resource. Therefore, not all the members of the study population were sampled for this study.

But, in order to avoid sampling bias or to avoid arriving at erroneous conclusions, probability sampling methods were used in selecting the elements or sampling units. Probability sampling methods include processes that offer each sampling unit an equal and calculable opportunity of being selected randomly (Johnson & Joslyn., 1991). Non-probability methods however are procedures for drawing a sample without each element having a known and calculable chance of being selected randomly. This is useful in selecting samples for purposive surveys or interviews.

On the question of how much of a population is representative enough for a scientific study, Alreck and Settle (1985) in their book, *The Survey Research Handbook*, suggested that 10% sample size is representative enough of an entire population. But Fraenkel and Wallen (2002) differed in their view. To them, however, the researcher should rely on a sample size that is not too large or too small to obtain the needed data at less cost and within an affordable time. In this study, one hundred and twenty respondents were selected for questioning.

3.5. Sampling Techniques

The sampling for this study was restricted to specific group of people in various institutions whose activities are affected or influenced by GCNet and therefore is able to provide the requisite information needed. To select the participants for the study, non-probability sampling methods were used. A non- probability sampling method is defined as a situation where elements of the population do not have equal chance of being selected, or where the probability of being selected cannot be accurately determined.

Specifically, convenience sampling technique was used to sample clearing agents, shippers and freight forwarders, importers and exporters since all of these stakeholders converge at various terminals at the port to do business daily. Purposive sampling method was used to sample GPHA, GCNet, GRA (Customs Division), Ecobank and Ghana Institute of Freight Forwarders (GIFF), Ghana Shippers Authority and Ghana Commercial Bank. With this type of sampling, the researcher selects a convenient sample from a population with specific set of characteristics for the study (Bryman and Bell, 2003). Purposive sampling method is appropriate at this point because, the location of these companies, organisations and agencies was easy to find.

3.6. Data Collection Procedure

Questionnaires were administered on the selected population personally by the student. Various methods abound for the collection of data from primary and secondary sources during research. The primary source refers to data that would be gathered through observations and questionnaires administered on the population. In this case the GCNet, Ghana Shippers Authority, Ghana Commercial Bank, Ecobank, Ghana Ports and Harbours Authority, Customs Division of Ghana Revenue Authority, GIFF, Ghana Shippers Authority, Freight Forwarders, Shipping Agents,

Clearing House Agents, Exporters and Importers. The advantage of using primary data is that they are more reliable since they come from the original sources and are collected especially for the purpose of the study (Johnson & Joslyn., 1991).

Primary data for this study was collected using questionnaires and observations. Questionnaires entailing largely pre-coded or close-ended questions with few open-ended questions were used to collect primary data for this study. Close-ended questions are known to provide control over the participant's range of responses by providing specific response alternatives (Borden and Abbott, 2002).

This made it easy to code, summarize and analyse responses. The reasons for using the questionnaire method as an instrument of data collection was based on the fact that it provided a wider coverage of the sample and also facilitated easy collection of large amounts of data (Fraenkel and Wallen, 1993). Secondary data such as; the volume of traffic handled at the Tema port by GPHA and annual revenue figures from GRA (Customs Division) respectively formed the core of secondary sources for the research.

3.7 Data Processing and Analysis

Qualitative procedures combined with some quantitative procedures were used to analyse data collected. Simple frequency tables were the main data processing medium. Secondary data on annual revenue collected from GRA (Custom Division), annual volumes of traffic collected from GPHA was subjected to trend analysis using Microsoft Excel.

3.8. Summary

For broad analysis of the question of the study, the quasi-experimental design which is widely used by researchers for similar study sufficed. The instruments for collecting primary data from the sample of companies, organisations and agencies who are users' of GCNet drawn from the Tema port as indicated were questionnaires and observation.



CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

In this chapter I present and analyze empirical data collected by way of questionnaire, and analysis of documents related to the variables. Consequently, the chapter discusses how the introduction of the GCNet has facilitated international trade at the Port of Tema. The chapter is divided into three sections. Section one discusses the background of the respondents with a brief profile of the study area. Section two discusses responses to questions over how the introduction of the GCNet has facilitated international trade at the Port of Tema. Section three discusses conclusions drawn from responses by respondents to questions posed.

4.2 Background of Study Area and Respondents

The study area includes the port of Tema, and the GCNet. The respondents are all those who partook in the study by responding to questions from the questionnaire. Though the construction of the Port of Tema was proposed by the British who ruled the Gold Coast before its independence the construction of the port started in the 1950s and was commissioned in 1962 by the government of the newly independent Ghana. The port lies along the Gulf of Guinea and is 18 miles (30 km) from Accra. The port has a water-enclosed area of 1.7 million square meters and covers a total land area of 3.9 million square meters. The port lies on a 410 acres (166 hectares) of sea and has 5 kilometers of breakwaters, 12 deep-water berths, one oil-tanker berth, one dockyard, warehouses, and transit sheds. In the east of the lee breakwater is a fishing harbor with cold-storage and marketing facilities that handles fishing processing (wikipedia, 2015).

Figure 4.1 The Port Of Tema



Source: (Ghana Ports and Harbours Authority, 2015)

The harbor serves both as a loading and unloading port for goods. It also serves as a major transit point for goods from land-locked countries north of Ghana. It also handles trade for industrial and commercial companies that import and export various goods such as petroleum, cement, food, metals, and textiles. The port has a wide range of industrial and commercial companies, producing or handling among other goods petroleum products, cement, food items, iron and steel, aluminum products and textiles. Most of the country's chief export, cocoa, is shipped from Tema. The port handles about 80% of Ghana's national exports and import (Ghana Ports and Harbours Authority, 2002).

By 1988 the operations at the ports with regards to trade facilitation had become unwieldy. For instance, there were serious bottlenecks such as long processing time, congestion and corruption, cumbersome clearing procedures, technological inefficiencies, hemorrhage of revenue,

etc.(Amanfu, 2010). The need therefore to find a way out of the quagmire of ineptitude, underperformance, and frustration with regards to international trade facilitation at the port of Tema could no longer be sidestepped. In response, and as a solution to the problems at the port, the GCNet as single window of trade facilitation was identified as a plausible solution, on the heels of visits to New Zealand, Singapore, Mauritius, Malaysia, and others. The main incentives for adopting the single window platform may be due to the dual benefits of speeding up trade transaction without jeopardizing Government revenues, while streamlining the processes of trade transaction by bringing the various members of the trading community onto an integrated network (De Wulf, 2004).

The GCNet was therefore created and started operations in November 2000, with the following objectives: Facilitate trade and clearance of goods through customs in a secured manner; Enhance mobilization of trade- related revenue for government; Reduce malpractices associated with import/export trade; and; Reduce transaction costs and delays trade operators encounter in clearing consignments through the ports.

The aim of this study therefore was finding out how the introduction of the single window GCNet has helped in the facilitation of international trade. Consequently, the study found out how the introduction of the GCNet has aided international trade facilitation at the port of Tema by identifying what ITF was like before the introduction of GCNet, and how GCNet has streamlined the practices at the port of Tema with those of international standards.

Relying on the quasi-experimentation and using non-probability methods the study involved one hundred and twenty respondents from agencies affiliated to the GCNet who used the single window for business in the facilitation of international trade at the port of Tema. These include as

shown in table 4.1 (refer to appendix 1), Freight forwarders (32%), Shipping agents (19%), Clearing house agents (9%), Importers/exporters (4%), GPHA staffs (4%), GCNet staffs (20%), Bank staffs (4%), and CEPS officials (8%). Out of the one hundred and twenty participants in the study, an inordinate percentage of eighty seven (87%) were male while 13% were female. It is not a reflection of the percentage of women in the ITF at Tema port, but rather a reflection of the reluctance of women to participate in the study. Over half of respondents were over forty five years but below sixty five years, while a quarter were below thirty five years. None of the respondents was above sixty five years.

4.3 International Trade Facilitation (ITF) at the Port Of Tema before the Introduction of GCNet

Import Clearance Procedures before the Introduction of GCNet

Before the establishment of Ghana's Single Window (GCNet) in 2003, typical cumbersome formalities that import transactions hitherto went through at the Tema port involved twenty three (23) steps. These twenty three (23) steps import clearance procedure before the introduction of the GCNet was characterized with unnecessary delays, extortion, under declaration and diversion of trade related revenue, among others. These deterring developments made business at the Tema Port not worthwhile. The steps are summarized as follows:

I. Shipping Agent submits shipping manifest in 12 copies; ii. Obtain Shipment Notifications; iii. Declarant purchases Import Declaration Form; iv. Declarant submits documents for Destination Inspection; v. Declarant buys Customs Declaration Form in 13 copies; vi. Declarant submits Final Classification and Valuation Report from Inspection Company; vii. Declarant pays self-assessed duties at bank (only 1 Bank accepts payments, located at point of entry (usually overcrowded and

leading to unnecessary delays); viii. Bank issues payment receipts and passes it on to CEPS (located at same point of entry); ix. Declarant submits Declaration with supporting documents to CEPS; x. CEPS reviews declaration (Face Vetting); xi. CEPS enters Declaration into ASYCUDA (takes a minimum of 24 hours); xii. CEPS prints ASYCUDA form and confirm or alter the tax liability; xiii. CEPS “numbers” the Declaration” and affixes a date and hologram seal on the paper; xiv. CEPS “detaches “the 13 copies and "dispatches” them to the various intended recipients; xv. CEPS Verification Unit receives its copy of the declaration; xvi. An Examination officer is allocated the particular shipment; xvii. Results of the inspection are entered in the “Landing Accounts Book”; xviii. “Landing Accounts Book” is signed and given to the Declarant; xix. Declarant pays handling charges to Port Authority and/or Shipping agent as required; xx. Port Authority issues Waybill; xxi. Goods are moved to the Gate, where they are frequently re-inspected, before the release can take place; xxii. Manifest is jerked (strike off); and xxiii. Agents report monthly to CEPS on their activities (Wulf L. D., 2004).

Responses by Respondents to Questions Related to Port Operations with Regards to ITF before the Inception of GCNet

Table 4.2 (appendix 1) shows how unwieldy international trade facilitation was. Respondents were quizzed to describe in a few words what ITF was like before the introduction of GCNet at the port of Tema. Their responses have been summed up and coded into the four themes in the boxes above. About 37% of respondents claimed there was too much paper work in the processing of ITF before the introduction of GCNet. Thirty four percent, (34%) of those interviewed lamented the fact that the process at the port in ITF was very slow and took a lot of processing time. About nineteen percent (19%) of the respondents attested that the processing period took not less than three days.

The process according to ten percent (10%) of respondents was also fraught with risks as the numerous documentations led to loss of documents and unnecessary delays.

Table 4.3 (appendix 1) depicts the situation before and after the introduction of GCNet with regards to number of documents needed for the ITF. Before 2003, over 80% of respondents attest to the need for over twenty documents for the procedure of ITF. However, less than a fifth of the respondents claimed they used less than 20 documents. It is probable that those who claim to have used less than 20 documents might have joined the process when the GCNet had been established or only heard of the procedure from third parties.

4.4 The Operational Model of GCNet and how it Facilitates International Trade at the Port of Tema

TradeNet is an Electronic Data Interchange (EDI) platform with Extensible Markup Language (XML) and functionalities for the transmission of e-messages between traders, The GRA (Customs Division), regulatory bodies, and other users. TradeNet and a Customs Management Software called the Ghana Customs Management System (GCMS) constitute the main components of the Ghana Single Window system. In terms of technology deployed, there is an Advanced Interactive Executive (AIX) operating system and an Oracle database. The network operates through fiber-optic and leased lines, Domain-Specific Language (DSL) and radio (Wulf L. , 2005).

The Front End System (FES) is a part of the software used by importers and exporters, freight forwarders, carriers, and regulatory agencies to communicate with and to undertake relevant processes (such as permits and licenses) electronically. The back-end application is the Ghana Customs Management System that processes input from the FES. The GCMS allows The GRA (Customs Division) to perform all necessary procedures, while TradeNet interfaces GCMS with

stakeholders through the exchange of EDI files. All data are saved on GCMS, which is hosted at customs headquarters and maintained by customs staff.

The GCNet system is operational in both Takoradi and Tema seaports, Kotoka International Airport, and several land border posts. It processes manifests, import/export declarations, release authorizations, delivery order distribution, and ship and aircraft movement information over the web portal, and the issuance of licenses, permits, and exemptions from the regulatory agencies. However, UN/CEFACT (2006) noted that, GCNet processes approximately 350,000 customs declarations per annum (1,000 to 1,500 per day representing 98% of total number of declarations –balance being some minor land borders) and 6,000 manifests per annum (representing 100% of manifests).

Almost all respondents attest to the fact that the establishment of the GCNet single window has a positive effect on ITF at the port of Tema as indicated by table 4.4 (appendix 1). Indeed only one respondent indicated that the single window had a negative effect, but goes on to indicate in a subsequent question that the measures put in place by the GCNet to improve ITF at the port were effective as indicated by all other respondents.

The performance of the GCNet with regards to ITF has been given high grades by the respondents who have indicated in table 4.5 (appendix 1) that the GCNet single window has made drastically reduced processing time, cost associated with the process and congestion levels. For instance, in table 4.4, over two thirds of respondents claim that the amount of time spent on processing documents has reduced and the situation is better now than it used to be. Others asked the same question respond that the situation with regards to amount of time spent on document processing is much better than it used to be. From the same table, we see that all respondents agree that

congestion has reduced and the situation is now better than it used to be before the introduction of GCNet single window. We are also informed in the same table by over three quarters of participants in the study that the congestion situation at the port is better while about a quarter of respondents claim it has got much better. It is therefore clear that, the GCNet single window is meeting the objectives of reducing congestion, processing time, and frustration associated with ITF, even though some of the respondents are less enthused about the gains made by the platform.

Nine respondents did not answer the question related to test their knowledge of the laws connected to documentation as shown in table 4.6 (appendix 1). However, all those who answered the question claimed to be aware of the regulations. Quizzed further to provide details, they mentioned documents like the manifest, bill of lading, permit from specified agencies for the import or export of peculiar items. For instance, an exporter or importer of ammunition needed permit from the ministry of interior which could further delay or complicate issues.

Table 4.7 (appendix 1) shows the challenges associated with the use of the GCNet as identified by the respondents were system breakdowns, slow or no internet connectivity, and problems with the operations of the GCNet system itself. Respondents were permitted to tick more than one option in the multiple choice options provided. More than half of participants indicated difficulty in usage of the GCNet single window platform. About a third of respondents also claim that the GCNet system suffered breakdowns. Most significantly though, almost three quarters of respondents were disappointed with the internet connectivity which rendered the single window platform slow or inoperative.

4.5 How Does the Introduction of GCNet Rationalize International Trade Facilitation at the Port of Tema with International Standards?

The very nature of ITF demands that it be streamlined with international practices if continued international trade is to be carried out at the port of Tema. Consequently, the GPHA has over the years been tasked to adopt and adapt to standards and procedures that rationalize its activities with international best practices. However, certain benchmarks have been identified by the OECD as worthy of the international trade facilitation across the globe. Most of these benchmarks have been discussed in the review section of the study; however, I mention a few of them here to serve as a point of reference for the assessment of the port of Tema.

Though the indicators are numerous, I limit for the sake of this study the indicators to transparency in the regulations and procedures, consistency, predictability and non-discrimination. One of the main motivations for the introduction of the GCNet single window platform is to bring the practices of ITF at the port of Tema in line with international practices at ports across the world. Indeed, the stakeholders made familiarization trips to New Zealand, Malaysia, Singapore, and Mauritius to acquaint themselves of international best practices while shopping for interfaces that would help solve the peculiar problems of the port of Tema and plug revenue leakage avenues as well.

Transparency underpins the ability of market participants and stakeholders to fully understand the conditions and constraints for entering and operating in a market; to gain an accurate picture of the costs and returns of their involvement; to have the time and flexibility needed to meet requirements and adjust to potential changes; and to be equipped to deal with any discriminatory or arbitrary treatment. The GCNet single window at the port of Tema is widely understood by the stakeholders

at the port of Tema. It is instructive to note that all respondents displayed good knowledge of the operations of GCNet single window platform during the study. Their knowledge in the operations of the single window was at play in their responses to questions posed to them during the study.

Consistency and predictability in the application of rules and procedures is also important. Uncertainty in trade operations translates very quickly into unwarranted transaction costs in the form of warehousing and demurrage expenses, transport and insurance fees and financing charges, as traders need to ward off potential disruptions in their production and logistics chain.

Non-discrimination is about ensuring the impartial and uniform application of all ITF regulations, procedures and practices. It goes beyond equal treatment between trading partner countries, to focus on the treatment of individual traders. Impartiality and uniformity does not mean all products have to be treated in an identical manner, but it does call for effective equality of administration where the same circumstances apply.

Other features of the GCNet also provided opportunity for its rationalization with international practices. For instance, the availability of real time data: real time data is a database system providing all features on traditional database system such as data independence and concurrency control, while at the same time enforcing real-time constraints that may confront applications (Lindstrom, 2008). Since the implementation of GCNet a considerable amount of data on all transactions and documents processed is easily kept by the various stakeholders for reference and accountability purposes.

Computer literacy in the words of Liao and Jack (2008), is "... the knowledge and ability a person has to use computers and technology efficiently". GCNet periodically provides training for the

various stakeholders on the use of the system. This has sharpened the computer skills of most employees of these stakeholder groups.

Collaboration with land locked neighboring countries like Burkina Faso, Mali, Niger which use the Tema Port as transit port and other neighboring countries such as La Cote D'Ivoire and Togo who do business through the ports of Ghana have strong collaboration with trade officials and all other stakeholders in the maritime industry through information sharing, training and transit tracking, among others.

4.6 Conclusion

In sum, the mounting problems associated with ITF at the port of Tema necessitated a relook at the mode of facilitation with regard to international trade. The adoption of GCNet modeled on the Singaporean TRADENet provided avenues for the improvement of ITF at the Tema port. Indeed respondents to questionnaires ascertained that the situation prior to the establishment of the GCNet has improved considerably. Turnaround time, amount of money spent on clearing of goods, and congestion levels have dropped dramatically. Yet, some hangovers still exist. For instance, respondents find the GCNet system which is dependent on proper functioning internet connectivity problematic as it stalls and renders activities to a halt should the network and internet connectivity fail. That notwithstanding, the single window platform has brought the practices at the port of Tema in line with international practices as it benchmarked indicators like transparency, consistency, and non-discrimination.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

Whether the introduction of GCNet has aided the better facilitation of international trade at the port of Tema provided the rationale of this study. In this chapter, I summarize the findings of the study, draw conclusions and then present recommendations arrived at by use of the quasi experiment method of research at the port of Tema.

5.2 Summary of Findings

The ills of the operations of the port of Tema relating to the facilitation of international trade by the turn of the last century indeed warranted the need for the introduction of the GCNet single window platform of ITF. Bottlenecks such as long processing time, congestion, technological inefficiencies and corruption which compounded the already cumbersome clearing procedures (Amanfu, 2010) were affirmed by respondents during the study. The frustrations encountered by the importers/exporters, CEPS officials, freight forwarders etc. before 2003 were numerous and debilitating. The respondents indeed recounted how they spent long periods of time undergoing procedures and document processing at the port of Tema. For instance, clearing procedures could extend to three days while they spent high amounts of money trying to circumvent the cumbersome procedures. There were high rates of congestion at the port which in combination with the other problems mentioned above exposed them to risks of losing or incurring damages to their goods as processing time prolonged.

However, the introduction of the GCNet single window brought home a lot of advantages. For instance, respondents attest to the fact that the establishment of the GCNet single window has a positive effect on ITF at the port of Tema as it reduced processing time; the number of documents needed for transactions, and brought congestion levels to insignificantly low points compared to what was prevailed before 2003. Having indicated that, respondents complained though that the issue of congestion was still a problem at the port of Tema. The study also revealed that less money was used in the processing of documents as compared to the era before the introduction of GCNet. Users of the port were also not plagued with the problem of theft or damages to goods as processing time had been drastically reduced. The study also identified a few challenges associated with the use of the GCNet. For instance respondents complained about system breakdowns, slow or no internet connectivity, and problems with the operations of the GCNet system itself.

Issues of transparency, consistency, and non-discrimination projected by the GCNet single window at the port of Tema bring its standard in consonance with international practices. Aside from these, issues of automation, the use of internationally accepted procedures at the port of Tema link the port to others in terms of standard and universality of procedures. To add to that, the collaborative activities between port staff and those of others within the region reinforce its global stature.

5.3 Conclusions and Recommendations

The importance of ports and harbors cannot be overemphasized. Indeed, millennia have proved the political, economic and strategic importance of ports. In Ghana, the economic importance of the port of Tema is well underscored. It is the major entry and exit point for import and export trade between Ghana and the rest of the world. It also serves as an exit point for Ghana's export

of major raw materials. In addition to that, it rakes in a lot of revenue for Ghana from duties and tariffs it imposes on international trade. While it has other importance for the country which are military and prestige related, the port of Tema serves as gateway to landlocked countries in the sub region. Countries like Burkina Faso, Mali, and Niger all rely on the port of Tema for the import and export of raw materials and commodities.

From the study, the GCNet is aiding international trade facilitation by simplifying and expediting the processes of freight documentation and clearance. The research has shown that after the introduction of the GCNet in 2003, processes of freight documentation have been simplified and led to reductions in clearance and turnaround times as compared to the pre GCNet period. Less documents are needed as compared to about twenty three that was needed prior to the introduction of the GCNet single window in 2003. Indeed, it was revealed by the study that, though the number of documents needed had reduced drastically, certain peculiar imports and exports demanded permits from sector ministries. For instance it came out that certain imports and exports that had security implication needed permit from the ministry of interior. Others that had health implications also needed permit from the ministry of health.

One of the main problems of ITF and the reasons that necessitated the implementation of the single window like GCNet is the huge revenue leakages and corruption associated with port operations at Tema with regards to import and export of goods. The swiftness and reduced congestion translated into plugging the avenues of loss of revenue to government. The single window therefore served both the users of the port and the government well.

In moving forward, the study revealed a few challenges to the smooth facilitation of international trade at the port of Tema. While the GCNet has come to reduce these challenges, it needs fine

tuning in order to stay relevant to the mounting demands on its operations. The study therefore recommends that, the platform seek further improvement to reduce difficulty faced by some of its users by developing less cumbersome interfaces that are more user friendly.

It is also recommended that users of the interface be taken through regular refresher courses to sharpen their use of information and communication technology. This would enhance the ability of the single window platform interface better with its clients and users.

It is further recommended that more robust and dedicated communication channels be developed and used for internet connectivity and communication to ensure the avoidance of connectivity interruptions and frequent breakdowns. It would also be very useful to implement a policy of self-reliance with regards to electricity generation to reduce the ills of using the national grid that is plagued with recurring power outages.

In conclusion, while the unwieldy nature of ITF before the introduction of the GCNet single window has now been improved, the need remains for continued refinement and fine tuning of the programme to ensure relevance and efficiency at the port of Tema.



REFERENCES

- Akamavi, R., McKevitt, A., & Boaeng, A. (2004). Assessing the Francophone West Africa Market: An ETOP Analysis. *Marketing Intelligence and Planning*, Vol. 22, No. 4, pp.455.
- Alreck, P. &. (1985). *The Survey Research Handbook*. Homewood: Irwin.
- Amanfu, H. (2010). *The introduction of off-dock terminals and their impact on Cargo Clearance Operations in the Tema Port – Focus on Shippers*. Accra: UCTAD- GPHA Modern Port Management Programme.
- Asuliwonno, C. (2011). Improving Port Efficiency and Custom Operations in Ghana: The Case of Ghana Community Network Services Limited (GCNet) under Customs Excise and Preventive Service (CEPS). *A Thesis Submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Kumasi*. Ghana: Kwame Nkrumah University of Science and Technology.
- Barreto, L. F. (1998). Macau: An Intercultural Frontier in the Ming Period. In L. (. Saraiva, *History of Mathematical Sciences: Portugal and East Asia*.
- Borden, K. S. (2002). *Research design and methods: a process approach 5th ed*. New York: McGraw-Hill.
- Broni, K. (2014). *An impact Assessment of GCNet on the operations of the Ghana Revenue Authority (Customs Division) in Tema Port*. Kumasi: KNUST.
- Bryan, A., & Bell, E. (2003). *Business Research Methods, New York*:. New York: Oxford University Press.

Buame, S. K. (2006). *Research Methods: A practical Guide for Students*. Accra: Ghana Universities Press.

Caesar, L. (2010). Trade Facilitation in Seaports – A Thorough Survey of the Ghana Gateway Project. *A Dissertation Submitted in partial fulfilment of the requirements of the Netherlands Maritime University for the degree of Master Shipping and Transport*. Netherlands: Netherlands Maritime University.

Clark, X. D. (2004). Port Efficiency, Maritime Transport Costs, and Bilateral Trade. *Journal of Development Economics*, 75, 417 - 450.

Das, P. (2006). *History of Political Thought*. Kolkata: New Central Book Agency.

De Wulf, L. (2004). *Tradenet in Ghana Best Practice of the Use of Information Technology*. New York: World Bank.

Fraenkel, J. R. (2002). *How to Design and Evaluate Research in Education, 4th ed.* New York: McGraw-Hill.

Ghana Ports and Harbours Authority. (2015, July 20). *Ghana Ports and Harbours Authority*. Retrieved from Ghana Ports and Harbours Authority web site: <http://ghanaports.gov.gh/tm/default>

Ghana Ports and Harbours Authority. (1991). *Ghana International Harbour and Shipping Handbook*. Tema: GPHA Printing Press.

Ghana Ports and Harbours Authority. (2002). *Port News*. Tema: GPHA Press.

Gyebi-Donkor, E. (1986). The Evolution of Tema. Tema Port Newsletter. *GPHA Press, Vol.1, No.2*.

Holland, T. (2003). *Rubicon: The triumph and tragedy of the Roman republic*. London: Abacus.

Jankowicz, A. D. (1995). Business Research Projects, 2nd ed. *International Thomson Business Press.*, 155-182.

Johnson, J. B., & Joslyn., R. A. (1991). *Political Science Research Methods*. Washinton DC: Congressional Quarterly Incorporated.

Killick, T. (2010). *Developmetnt Economics*. New York: Routledge.

Krauss, C. M. (2008). *As Polar Ice Turns to Water, Dreams of Treasure Abound.*, New York: New York Times.

Liao, L. &. (2008, July 20). *Computer Literacy for Everyone*. Retrieved from University of San Diego : liao@sandiego.edu

Lindstrom, J. (2008, July 20). *IBM Corporation*. Retrieved from IBM Company Web site: jan.lindstrom@fi.ibm.com

Marriner, N., Morhange , C., & Doumet-Serhal, C. (2006). Geoarchaeology of Sidon's ancient harbours, Phoenicia. *Journal of Archaeological Science*, 33, 1514 - 1535.

Microsoft® Student 2009 [DVD]. (2008). Citizen. Redmond, WA.

Notteboom, T. E. (2005). Port regionalization: towards a new phase in port development, Maritime Policy & Management. *Journal Of International Shipping and Port Research* 32:3, 297-313.

Owusu-Mensah, B. (2007). *Ghana Ports Handbook: Our Aim is Quality Port Services for Ghana and Her Neighbours*. Tema.

Public Affairs and Communications Directorate, OECD. (2003). *Trade Facilitation: The Benefits of Simpler more Transparent Border Procedures*. Berlin: OECD.

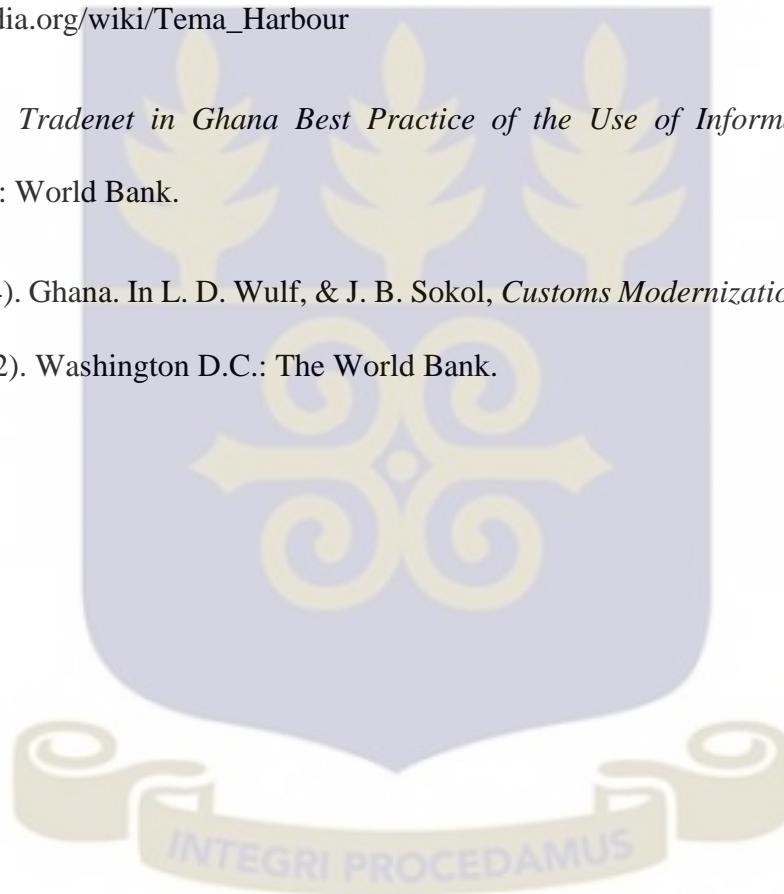
United Nation Conference on Trade and Development. (20087). *Review of Maritime Transport*,. New York: United Nations.

wikipedia. (2015, July 20). *wikipedia*. Retrieved from wikipedia website:

https://en.wikipedia.org/wiki/Tema_Harbour

Wulf, L. (2005). *Tradenet in Ghana Best Practice of the Use of Information Technology*. Washington D.C.: World Bank.

Wulf, L. D. (2004). Ghana. In L. D. Wulf, & J. B. Sokol, *Customs Modernization Initiatives: Case Studies* (pp. 19-32). Washington D.C.: The World Bank.



APPENDIX 1

Table 4.1 profile of respondents

		Frequency	Percentage (%)
Age	18-24	7	6
	25-34	23	19
	35-44	20	23
	45-54	32	27
	55-64	30	25
	65-74	-	-
	75+	-	-
Gender	Female	16	13
	Male	104	87
Nature Of Work	Freight forwarder	38	32
	Shipping agent	23	19
	Clearing house agent	11	9
	Importer/exporter	5	4
	GPHA staff	5	4
	GCNet Staff	24	20
	Bank staff	4	4
	CEPS official	10	8

Source: Field Survey, July 2015

Table 4.2 ITF before the introduction of GCNet at the port of Tema

	Responses	
	Frequency	Percentage (%)
A lot of paper work	44	36.6
Long periods in clearing procedure	41	34.2
Not less than three working days for clearing	23	19.2
Process was fraught with high risk	12	10
Total	120	100

Source: Field Survey, July 2015

Table 4.3 How Many Documents Does Your Organization Require During the Clearing Procedure Before and After 2003

No of document	Before 2003		After 2003	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Less than 5	-	0	115	95.8
5 – 9	-	0	4	3.3
10- 14	10	8.3	-	0
15– 19	12	10	-	0
20 and above	98	81.7	-	0
Total	120	100	119	99

Source: Field Survey, July 2015

Table 4.4 how GCNet operations affect ITF at the port of Tema

How Would You Describe The Operations Of The GCNet	Responses			
	Positive		Negative	
	Frequency	Percentage (%)	Frequency	Percentage (%)
	119	99.3	1	.7
Do You See The Effectiveness Of The Measures Put In Place By GCNet To Improve ITF	Yes		No	
	Frequency	%	Frequency	%
	120	100	120	100

Source: Field Survey, July 2015

Table 4.5 performance of the GCNet at Tema Port

	Much worse		Worse		same		Better		Much Better		don't know	
	F	%	F	%	F	%	F	%	F	%	F	%
i. would you say the length of time spent in processing documents at the harbor has got.. ...	-	-	-	-	-	-	81	67	39	33	-	-
ii. Would you say the amount of money used in processing document at the Tema harbor got ...?	-	-	-	-	-	-	93	77	27	23	-	-
iii. how would you describe the congestion levels at the Tema harbor	-	-	-	-	-	-	120	100	-	-	-	-

Source: Field Survey, July 2015

Table 4.6 laws, regulations of ITF at the port of Tema

	Responses			
	Yes		No	
	Frequency	%	Frequency	%
Regulation of Documentation process	111	92.5	-	-

Source: Field Survey, July 2015

Table 4.7 Challenges of using GCNet

Responses	Frequencies	Percentage (%)
Difficulty in usage	62	51.6
Breakdown	37	30.83
Slow or no internet connectivity	73	60.83

Source: Field Survey, July 2015

APPENDIX 2

QUESTIONNAIRE

This pre-coded, multiple-choice questionnaire is on the topic *GCNet and the Facilitation of International Trade at the port of Tema*. Please tick or circle where appropriate from options provided, or fill in the blank spaces. It is important to answer all the questions. Your answers should reflect your experience and perceptions of how the introduction of GCNet has facilitated international trade at the port of Tema. This research is for academic purposes only, and the anonymity and confidentiality of all respondents will be respected, and treated with the strictest confidence.

A. Background Information

1. What is your gender?

Male

Female

2. How old are you?

18-24

25-34

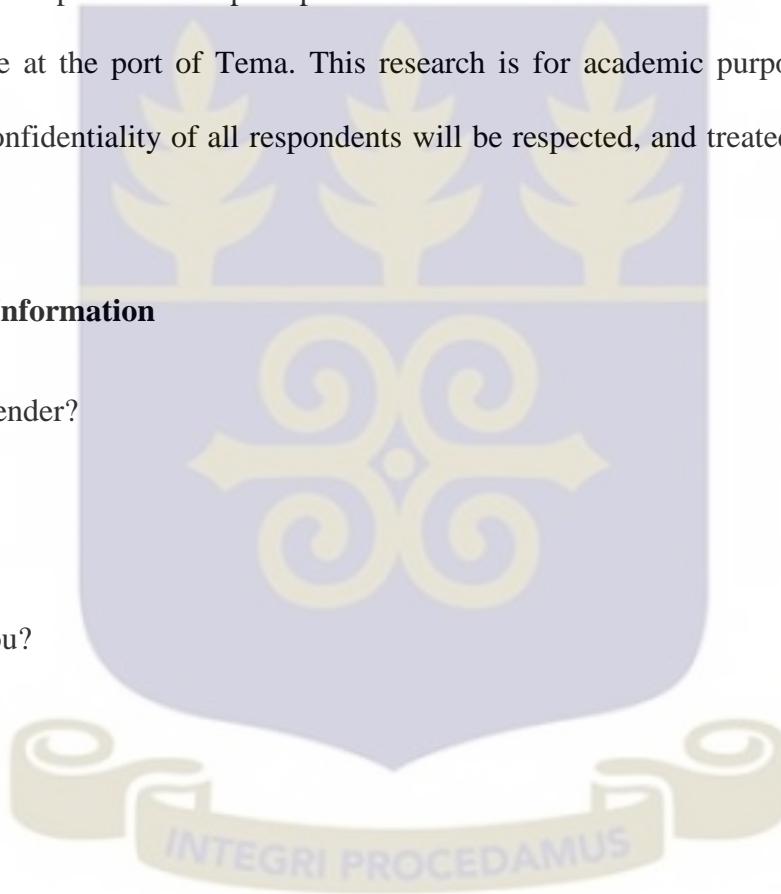
35-44

45-54

55-64

65-74

75+



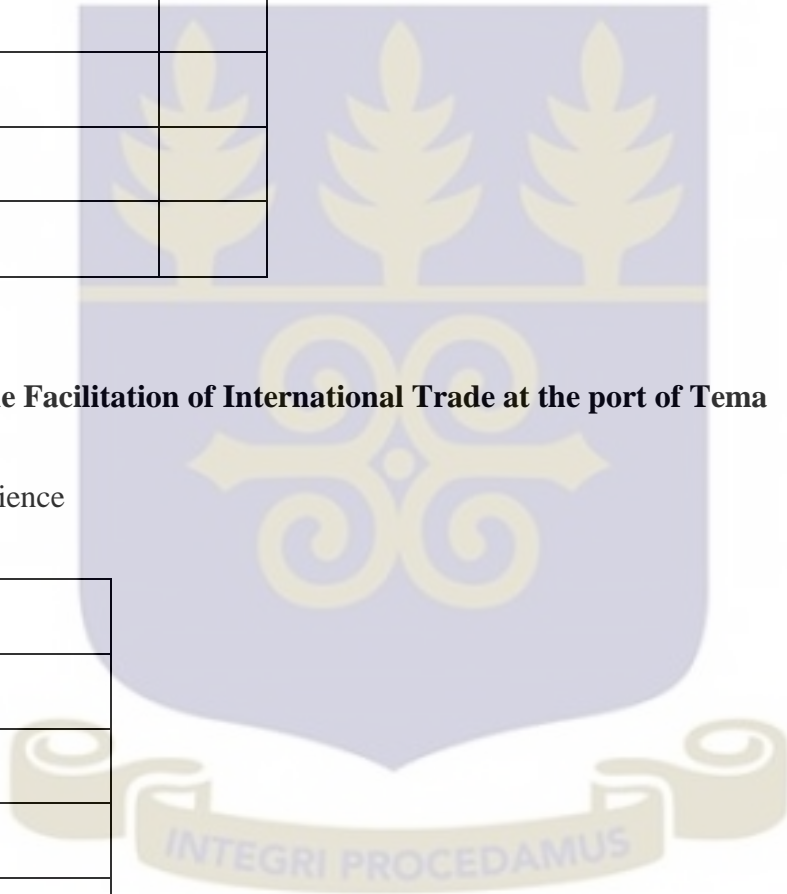
4. Nature of Work

Freight forwarder	
Shipping agent	
Clearing house agent	
Importer/exporter	
GPHA staff	
GCNet staff	
Bank staff	
CEPS official	

B. GCNet and the Facilitation of International Trade at the port of Tema

5. Years of Experience

1 – 5	
6 – 10	
11 – 15	
16 – 20	
21 -	



6. In a few words, how would you describe international trade facilitation before the introduction of GCNet at the Tema Harbour?

.....

.....

.....

.....

7. Does the GCNet have a negative or positive effect on international trade facilitation at the port of Tema?

- i) Positive ii) negative

8. What are some of the measures put in place by the GCNet?

.....

.....

.....

9. Do you see the effectiveness of these measures that have been put in place by GCNet

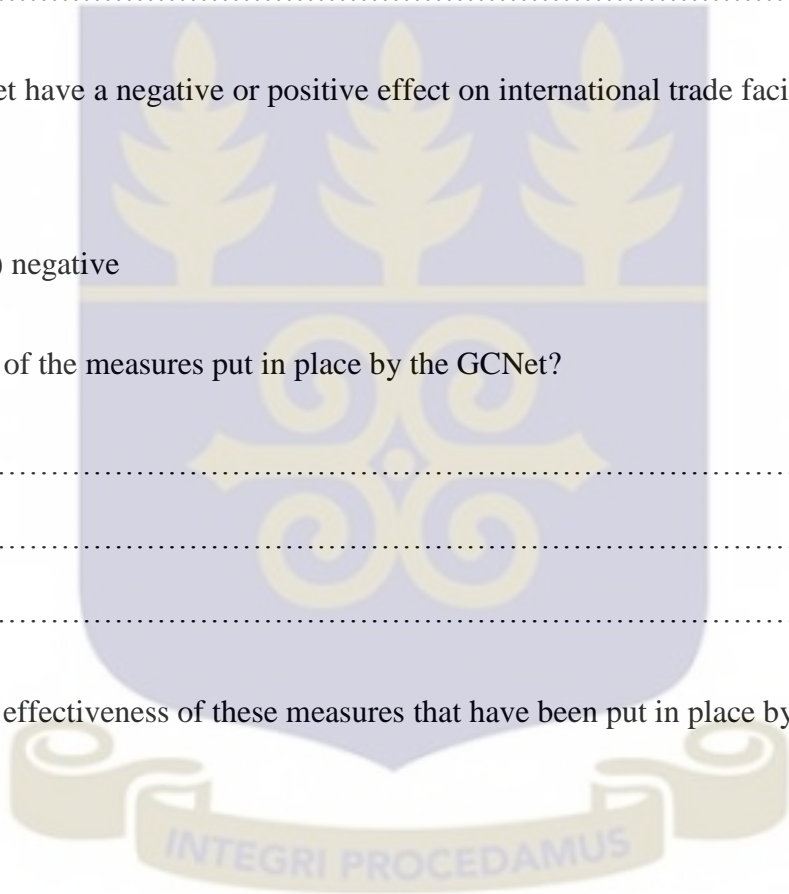
- i) Yes ii) no

10. Briefly explain your answer

.....

.....

.....



11. Please tick where appropriate

	Much worse	Worse	same	Better	Much Better	don't know
i. would you say the length of time spent in processing documents at the harbour has got... ..						
ii. Would you say the amount of money used in processing document at the Tema harbour got ...?						
iii. how would you describe the congestion levels at the Tema harbour						

C. Clearance Process (Exports/Imports)

12. Are you familiar with documentation process (laws, regulations, internal directives and others that regulate your duties related to the clearance procedure?

i) Yes ii) no

13. Briefly provide details

.....

.....

14. How many paper forms does your organization require during the clearance procedure before and after 2003?

.....

.....

15. Does your organization provide information electronically or automatically to other public agencies? i) Yes ii) no

16. Does your organization have computer systems that allow the exchange of information electronically without human intervention?

.....

.....

17. Briefly state some of the challenges you face in the use of GCNet

.....

.....

.....

