UNIVERSITY OF GHANA

AN ASSESSMENT OF REFORMS TO REDUCE CONGESTION
AT TEMA PORT

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DECLARATION

I, the undersigned unreservedly declare that except for references to other people's works which are duly acknowledged, this research is my own work under the supervision of Professor Max Assimeng and Mrs. Ankomah-Sey.

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DEDICATION

This work is dedicated to my elder brother Mr. Ndifang Samuel and wife Mrs. Ndifang Lydia for their immense support they showed towards me in the realization of this work.
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ABSTRACT

The research dealt with the reforms that were put in place by the Ghana Ports and Harbor Authority (GPHA) to reduce congestion and make Tema Port a favorable environment for doing business. The reasons for the reforms were the high cost of doing business at the Port and attempts to make Ghana the gateway to the West African sub region; congestion being a central issue. Despite all the measures put in place, it appeared there was still congestion.

The research examined the extent to which the reforms had been successful by looking at improvement of congestion at the harbor area, how berth occupancy had improved, and shippers’ perception about the reforms, adequacy of the measures and challenges to the reforms. All these meant to contribute to knowledge on the adequacy of the reforms which could be helpful to port authorities.

The research was carried out at the Tema Port where the survey method was use to collect data from the field. Shippers formed part of the target group for the study and were issued with questionnaires. Five staff members from GPHA, precisely from the Monitoring and Control Department were interviewed with the use of an interviewer’s guide for the researcher to have an in-depth knowledge about the research problem. Seventy questionnaires were issued and 42 were retrieved.

The result of the research indicated that some of the measures had been implemented and had helped in reducing congestion especially in terms of clearance procedures, devanning of
containers and the handling of specialized traffic through a dedicated container terminal. All these constituted improvements at the land ward side. At the sea-ward side which deals with berth occupancy, the improvement was insignificant because the figures showed high berth occupancy from 2003 to 2008. In view of this, some recommendations have been made. Shippers recommended the installation of more scanners at the off dock terminals, need for more exit points at the ports for trucks. The staff of GPHA also recommended the extension of the railway line linking the transit corridors and the creation of distriparks and districentres. Lastly, the researcher recommended continuous dialogue between port managers and customs officers and the adoption of total logistics in the port among others.
1.1 BACKGROUND INFORMATION

Port congestion is the buzz-phrase in the maritime industry today. Every time we open a trade journal that covers our community, there are articles on relieving port congestion. What is it all about? Why are we so concerned about it and what can we do? Can congestion be equated with the proverbial elephant which lacks an adequate definition but, can be recognized when seen? This doesn’t mean we will not attempt a definition.

This port congestion means ships being delayed in port. The generally accepted one is when a ship’s lay time at the port is longer than the expected schedule of sailing. According to shippers and ship owners, the lay time is the difference between the time needed for goods to be cleared and the time needed to transfer cargo between ship and shore (Bhuiyan Amed 1995 p733).

Congestion has affected so many ports, especially in the developing countries, for example the Port of Douala (Cameroon in Central Africa), has been suffering from this malaise for many years. The situation at the Port of Lagos (Nigeria) and Tema (Ghana) is not different.

The early days of port activities in Tema were purely handling of conventional cargo. Then came the advent of containerization and the port rehabilitation projects which witnessed
the disbursement of over hundreds of millions of US dollars. As part of the Rehabilitation Project, the Ghana Port Authority (GPA), Ghana Cargo Handling Company Ltd (GCHC) and Takoradi Literage Company were merged into a single administrative body called GPHA (Ghana Port and Harbor Authority). Another aspect of the rehabilitation was to provide sufficient equipment to handle additional traffic that came to the Port of Tema. The container traffic grew from 31,000 TEUS in 1987 to 425,408 TEUS and 489,147 in 2006 and 2007 respectively (Port of Tema News Letter, 2007, vol 16). The rapid traffic growth coupled with the increasing demand in the containerization industry, required optimum business strategies to be developed by management to tackle the challenges associated with the changing trends and the increasing rate of congestion which was part of the reason for the initiation of the Gateway Project in 1995. Amongst other things the project dealt with the following; Reducing the cost of doing business at the Port especially container handling from $168 per box to $80 per box, increasing container loading and unloading rate from 12 boxes per hour to 24 boxes per hour and the reduction in dwell time of containers from 25 days to less than 7 days.

The Gateway Project that was set up to achieve these objectives consisted of two phases. The first phase consisted of infrastructural works such as construction of a new dedicated container terminal, dredging of the approach channel to 12.5m, deepening of berths 1 and 2 from 9m to 11.5m, extension of the quay by 200m to bring the total length of the quay to 570m with the capacity to accommodate 2 container ships of 250m each in length at the same time and to provide 4 rubber tyre gantry cranes and 3 ship-to-shore cranes. This terminal has a stacking capacity of 1900 TEUS.
The second phase includes, among other things, the construction of an office complex and an electronic security gating system, creation of off dock terminals/clearance depots, increased private sector participation, installation of scanners and Ghana Community Network (GCNet).

1.2 RESEARCH STATEMENT

The research seeks to investigate the extent to which the measures have reduced among other things, berth occupancy and clearance procedures in relation to the measures that have been addressed to eradicate congestion at the Port of Tema.

1.3 RESEARCH OBJECTIVES

The general objective of the research was to provide an assessment of the reforms to reduce congestion at the Port of Tema.

The specific objectives were to:

1. Identify respondents' (shippers) background

2. Assess the knowledge of respondents (shippers and Port officials) about the reforms

3. Evaluate the shippers’ attitude toward the reforms
4. Assess the adequacy of the reforms

5. Evaluate the impact of the reforms on berth occupancy

6. Identify the challenges to the reforms

7. Make recommendations to stakeholders (port authorities, shippers) in order to improve upon measures to decongest the Port.

1.4 RESEARCH QUESTIONS

The following questions were addressed;

1. What is the respondents' background?

2. What is the respondents' knowledge about the reforms?

3. What is the shippers' attitude towards the measures?

4. Are the measures adequate?

5. How has it affected berth occupancy?

6. What are the challenges to the reforms and what is still to be done?
1.5 SIGNIFICANCE OF THE RESEARCH

This research would contribute to knowledge among other things in specific issues like measures that can be used to ameliorate the problem and knowledge on the adequacy of the reforms which can be helpful to port authorities and other stakeholders of the Port.

1.6 SCOPE OF THE STUDY

This work was carried out in Tema Port. It lies in Southeastern Ghana along the Gulf of Guinea (Atlantic Ocean), 18 miles (29km) east of Accra. Tema Port is the bigger of two sea ports in Ghana. It has water-enclosed area of 1.7 million square meters. The port community has a total population of about 209,000 inhabitants. It is a traffic junction where goods are transshipped and transit cargo destined for the hinterlands and land locked countries of Burkina Faso, Mali and Niger are handled.

Tema harbour encloses about 410 acres of sea and is Africa’s largest man-made harbour. There are 3 miles (5km) of break waters, 12 deep water berths, an oil tanker berth, a dockyard, warehouses and transit sheds. The Port is capable of holding over 8000 TEUS at any given time. There are 290 reefer points, a separate fishing harbor with cold storage and marketing facilities located east of the break waters.

Target groups were;

1. Five officials from the Monitoring and Control Department of the Ghana Ports and Harbours Authority stationed at the Tema Port. They included the Port Operations Co-
coordinator, the Traffic Manager, Head of Claims, Documentation, Research and Development, Supervisor of Terminal and Vessel Operations and the Officer in Charge of Terminal and Vessel Inspection.

2. Shippers which included importers, exporters and freight forwarders. Freight forwarders were put into the category of shippers because they usually work on behalf of importers and exporters (shippers).

1.7 DEFINITION OF TERMS

Some important terms used in the study are reform, assessment and port congestion.

- Reform; to improve or correct a system.

- Assessment; to give an evaluation

- Port Congestion; refers to a delay in clearing goods at the port due to high traffic of persons and vehicles.

- Traffic; movement of persons and vehicles

- Devanning; means to unstuff goods from a container

- TEU-Twenty foot Equivalent Unit.
1.8 ORGANIZATION OF THE WORK

This work consisted of five chapters; Chapter one was a general introduction of the study and involved the background of the research, the research statement; the research objectives, justification, scope and definition of terms in the chapter and subsequent chapters.

- Chapter Two focuses on the reviewed relevant literature on the subject, in terms of causes, effects and their plausible solutions.

- Chapter Three looked at the sampling procedures, methods and techniques that were used in collecting data on the field.

- Chapter Four dealt with presentation of data from the field and

- Chapter Five consisted of a summary, conclusion as well as recommendations needed to address the research objectives.

The next chapter is the chapter on literature review.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

In the previous Chapter, the background information, research statement, objectives, research questions, justification of the study, the study area of the study were discussed. In this Chapter, the relevant literature on the causes, forms, effects and solution of congestion are reviewed.

2.2 BACKGROUND ON PORT CONGESTION

In the past eight years, global trade has increased dramatically in value (45%) and in volume (50%). The growth has strained the trade related infrastructure of many countries. This is especially true of ports. Maritime transport today handles about 90% of world trade by volume – about 13 billion tons of cargo a year (United States Agency for International Development (USAID 2005) report.

In developed countries, ports with longstanding reputations for efficiency are challenged in handling the increase in cargo volumes. Likewise in developing countries, with poorer port facilities and fewer resources, the burden is even greater. In Africa in particular, port congestion is undermining attempts to improve international competitiveness. The USAID
2005 reports show that, Africa’s shipping volume has risen more rapidly. Consequently, Africa is facing the type of congestion that India, USA and much of Europe have faced. Before we proceed, it will be important to attempt other definitions of port congestion.

Port congestion arises when port users interfere with one another in the utilization of port resources, thereby increasing their time in port. It may be intentional or unintentional. It may be intentional when it arises from preemptive priority. For example, when a port grants priority to ships or vehicles transporting another types of cargo. While unintentional interference arises in the normal utilization of port resources where the demand for use of port resources exceeds its supply. (Kevin Cullinane, Wayne K Talley, 2006).

Moreover, taking from the UNCTAD Monograph on Port Management, 1995, port congestion arises when there is high berth occupancy. That is, when a berth is over utilized beyond 80%. This is usually common with general cargo berths. But in my opinion, port congestion arises when port capacity is insufficient to cope with the traffic arriving at the port.

After the oil price rise in 1973, many of the Organization of PetroleumExporting Countries (OPEC) spent their increased revenues on extra imports which caused severe congestion in many cases. Likewise in 1976, ships carrying cement to Nigeria were waiting over 200 days at the Port of Apapa, Lagos (Patrick M Alderton, 2005). Tema Port also recorded serious congestion during the Code d’Ivoire crisis since its traffic was diverted to Tema Port, in effect increasing the volume of import and export trade. This will be shown in the table below;
From Fig 2.1, it was recorded that the Port of Tema suffered from severe congestion during the crisis in Cote d’Ivoire (OTAL 2008 report). Most of its traffic drifted to Tema which served the landlocked countries of Mali, Burkina Faso and Niger. This increased the volume of trade coming to Tema. From 2000, cargo throughput kept on increasing from 6,219,517 to 8,046,838 in 2006. But before 2006 the crisis had ended. This means that even after the crisis Tema has still been transiting goods to the landlocked countries.
2.3 FORMS OF PORT CONGESTION

There are various forms of port congestion as discussed by Kevin Cullinane, Wayne K Talley (2006, pp 55-58). This will be discussed below;

a) Ship berth congestion

When two ships are expected to berth at the same time, port resources such as tugs and pilots may not be available in sufficient numbers for the berthing and unberthing. Therefore one ship will have to wait until resources are deployed from servicing another ship. Also, tugs and pilots may be sufficient in number but, the width of the port’s channel is not sufficient to be traversed by more than one ship at a time. This is usually the case with container ships and bulk ships.

b) Ship work congestion

This arises when labor and equipments may not be sufficient to handle work load be it loading or off-loading.

c) Vehicle gate congestion

Occurs when vehicles involved in transporting container and bulk cargoes may utilize the same entrance and departure gates. Hence increasing waiting time.
d) Vehicle work congestion

This occurs when port resources such as labor and equipment may not be sufficient to load or unload cargo to and from two vehicles simultaneously. Thus one vehicle will have to wait for work to be completed on another vehicle before carrying out its own operation.

From the above discussion on the forms of congestion, it is only ship work congestion and ship berth congestion that are directly related to this work because they are indicators of service and utilization (berth occupancy and turnaround time).

2.4 CAUSES OF PORT CONGESTION

Because of the severe nature of congestion in the early 1970s, UNCTAD in 1975 set up a small group to analyze the situation - Baltic and International Maritime Conference (BIMCO). They came out with some causes of congestion. Though it has been for about 30 years, the analyses are still valid.

1) Planning

This involves investment in new berths without ensuring that back-up areas, port access and operating capabilities such as trained manpower, cargo handling equipments and warehousing space are able to service these new berths. Also, inadequacy of inland transport, both in capacity and efficiency in relation to trucks, wagons, highways and port access routes are issues related to planning, which could cause congestion.
Moreover, political and social interference which bear on the decision making processes, failure to keep traffic forecasts updated to reflect changes in the pace of major economic developments, late completion of port and transport development projects, such that expected capacity is not available on time among other things are possible causes of congestion.

2) Management

This deals with lack of continuity in senior port management positions and the problem of senior port management chosen without regard for the qualifications required by the job and the adequate provision for upgrading knowledge.

3) Labor

This is also one major cause of congestion which includes problems caused by too much or too little labor and lack of training of dockworkers, especially in the use of sophisticated equipments.

4) Co-ordination

Inadequate consultation between the port authority and users of the port in relation to operations and development.
5) Operations

Lack of inland or port warehousing facilities, lack of sufficient finance for modern handling equipments and necessity of handling bulk cargoes at general cargo berths among other things have been identified as part of operation problems which could cause cargo to remain too long in the port transit facilities.

6) Clearance Procedures and Documentation

Congestion can also be caused by a delay in clearance procedures such as late arrival of documents, outmoded documentation requirements and processing methods, outmoded clearance facilities for vessel and cargo and importers allowed to order shipments without sufficient funds to take delivery on arrival.

7) Function and Location of the port

The location of the port plays a part in causing congestion such as impossibility of improving back-up land accesses in ports because adjacent lands have been occupied by urban developments, example, the Port of Tema which is unable to expand because adjacent lands have been used by indigenes. Also, activities carried out in the port area not related directly to cargo handling may conflict with higher port throughput, for example, customs’ inspection procedures.

8) Lastly, congestion can be caused by emergency diversion and transshipment of cargo destined for another port which can bring temporary peaks in quantities of cargoes, which a port has to handle and periods of exceptionally bad weather.
2.5 EFFECTS OF PORT CONGESTION

There are some consequences of congestion as indicated below;

The first effect is that ship owners will charge demurrage cost. This is charged to shippers due to delay of the ship in port.

Moreover, when there is congestion, there is little or no time to plan and prepare operations, insufficient time to consolidate exports, clear imported cargoes from quays, sheds and yards before the next ship arrives. Working during congestion, exerts pressure on labor, management and equipments as well.

Note should be taken of the fact that some of the causes of port congestion might still be the same as the effects of port congestion.

2.6 MEASURES TO REDUCE CONGESTION (COMPARATIVE ANALYSES)

In the past four years, 55 countries have undertaken reforms to speed measures to reduce congestion hence speeding trade. Pakistan reformed every year. Austria, China, Egypt, Ghana, Guatemala, India, Jamaica, Mauritius, Rwanda and Yemen reformed twice. Tema Port before the Cote d'Ivoire crisis carried no major reforms to reduce congestion (World Bank Research Digest 5, 2008). Information from the Public Relations Department of GPHA reveals that everything concerning measures to curb port congestion was only in theory. Nothing was implemented since the volume of trade was not that much. It is only
when the tonnage of transit goods increased, especially during the Cote d’Ivoire crisis that serious reforms started. These reforms have been listed in the previous chapter.

The researcher wishes to make a comparative analysis of the measures that other countries have implemented with that of Tema.

Imports and exports need to undergo several types of inspections for tax, security, environment, and border control and health and safety reasons. There is no reason these cannot be done at the same time. At the Port, there are 5 government agencies that stop your cargo-Quality Control, Port Security Police, State Security and Bomb Squad.

In Pakistan, physical inspection was limited to the riskiest consignments. These inspections dropped from 100% of cargo before reform to less than 5% today (UNCTAD News Letter, no.38, 2007). Now 70% of cargo is cleared in one hour compared to an average of ten days in 2004. Likewise in Kenya in 2005, an electronic system for processing custom declaration was installed. In two years, clearance time dropped by half. This system is also practiced by the Tema Port with the use of the GCNET. But despite this, the manual system of handling documentation is still used.

India was the top reformer in trading across borders in 2006/2007 (Douglas H Brooks 2008). It introduced online custom declarations for imports and exports. Arriving ships now submit their cargo manifests electronically, allowing the clearance process to begin even before the ship docks. These reforms helped cut delays for exporters and importers by seven days.
In Bosnia and Herzegovina, customs clearance sped up thanks to a new online system. Traders submit their customs declarations electronically and get their response within 30 minutes (World Bank Research Digest 2008). Before, this was done face-to-face with custom officials, a long process and a great opportunity to extort bribes. Some reformers set up or improved electronic exchange of information between traders and customs.

Several African countries reformed as well. Uganda extended online declarations for traders across the borders and is linking its system with Kenya. In Ghana, delays at the Tema Port were cut to 3-7 days from the initial 14 days with the construction of a new terminal and the creation of a system that allows into the port area only trucks ready to load or unload cargo (Douglas H Brooks). This infrastructural development by the Port of Tema, reduced the trading time for its landlocked neighbors (Burkina Faso, Mali and Niger).

Mauritius introduced a computerized risk management system for customs clearance. Now, less than 30% of cargo undergoes physical inspection. Rwanda partially privatized the customs bonded warehouse, making it cheaper for traders to store goods there.

Countries in Eastern Europe and Central Asia continued to reform. Armenia introduced electronic transmission of trading documents, reducing the time to prepare and submit documents to customs by 3 days (UNCTAD Monograph 2003).
2.7 PORT REFORMS

With its sweeping tides of deregulation and liberalization, globalization changed the structure of the world economy during the 1990s. The port industry, too, came up against new challenges and opportunities, as ports were increasingly called upon to function as integrated transport centres and logistical hubs, at the same time coping with developments within the industry itself (containerization, bigger ships, new communication technologies, etc.) that required major capital investment. In order to adjust to this new environment, characterized in part by mergers and corporate partnerships and alliances, the maritime industry devised strategies for encouraging innovation, enhancing productivity and reducing costs.

Given the extent and high cost of the investments required for port development, particularly with the expansion of containerization, Governments and port authorities around the world must now, as a matter of urgency, undertake further reforms and put effective strategies in place to attract private finance. Partnership with the private sector will improve the efficiency of services and ensure the maintenance, renewal and efficiency of equipment (UNCTAD 2008, 12th session).

Throughout the past decade, both developing and developed countries have launched port management reforms involving the private sector, using methods ranging from divestment of management and various forms of concession, to partial or full privatization. Developing countries such as Argentina and Chile have spearheaded the privatization of port infrastructure and operations. Traditional management methods have been re-
examined and private participation in management has prompted a redefinition of the institutional framework of ports. The private sector has gradually become involved in all port operations - traditionally the responsibility of the State - and port authorities, as “landlords” have increasingly adopted a regulatory role.

By opening up in this way to private operators, both domestic and foreign ports have been able to take advantage of private sector know-how - mainly that of the major multi-port operators - in the areas of management, networking, modernization of information systems and attracting funds for infrastructure investment and maintenance. According to the World Bank, private sector investment in port projects in developing countries in 2000 alone totaled US$ 2,632 million, as compared with US$ 304 million in 1992 (Shemmy Simuyemba 2002). The main benefits of private and public sector cooperation include enhanced operational performance, increased traffic and reduced port charges. It is now recognized that public-private partnership in port operations also lightens the administrative burden and cuts out various layers of control, as shown by several successes such as Buenos Aires and Panama.

The World Bank is the international financial institution most developing countries turn to for advice and/or funding when implementing strategies to open up port operations to the private sector, particularly in the context of structural adjustment programmes. Tema port’s reform in an attempt to make Ghana the gateway to the sub region had to seek sponsorship from the World Bank and other foreign donors.
Africa’s ports are vital to the continent’s domestic economies: they play a fundamental role in facilitating Africa’s integration into the international marketplace, for 90 per cent of its international trade is seaborne trade. The existence of a functioning port is thus essential. Africa has seen its share of reform, albeit somewhat less far-reaching than that observed in Latin American countries and East Asia. The trend began gathering pace in early 2000. But that of Tema had started conceptually as far back as 1995 and started materializing in 2001.

An Overview of African Maritime Transport

The continent of Africa with an area of 30,328,662 km2 comprises 53 countries, of which 38 have a coastline and 15 are landlocked and 80 ports handling international and regional trade. In 2001, these ports handled 750 million tonnes of merchandise and petroleum products (South Africa accounting for 27%), that is, 6.3% of world trade (UNCTAD Report 2003). These volumes are very small by comparison with those handled by other developing countries like Asia (29% of world trade) and Latin America (21% of world trade), but still, Africa is experiencing higher rate of port congestion.

African port supervisory authorities have undertaken reforms and involved the private sector in varying stages, depending on whether the dominant port management model is French or Anglo-Saxon. Generally speaking the first step has been to implement institutional reforms giving ports the status of an independent enterprise managed along commercial lines. In a considerable number of cases, countries have then brought in private enterprises to operate and manage the ports. Mozambique led the way: privatization
began in the late 1990s and has since spread to all the ports in the country. In sub-Saharan Africa only eight countries had leased out their port equipment by the end of 2002.

Most of these reforms were undertaken as a result of pressure from regional competition or from the international financial institutions, chiefly in order to boost the efficiency and productivity of port services. In Africa, port reform has been bolder than reforms in other transport sectors such as airports and railways, owing to the geostrategic location, economic importance and sheer complexity of port operations requiring the involvement of multiple operators.

The UNCTAD survey (2003) showed that the private sector is a participant in nearly 70.6 per cent of ports (that is, 24%); seven ports (17.6 per cent) had plans to bring in private operators by 2005; while the remainder (11.8 per cent) has given no precise indications. In entering into partnership with the private sector, African port authorities have sought primarily to enhance the productivity, efficiency and quality of their services (45 per cent), modernize their infrastructure (17 per cent) and attract private investors (17 per cent). Secondary aims have been to attract private investors (25 per cent) and, in equal measure, to enhance productivity (20 per cent) and cut port costs (20 per cent). This accounts for one of the reasons for Tema’s port reforms in 1995; by increasing private sector participation to enhance port efficiency. A practical example from the Nigerian port reform shall be considered in the subsequent paragraphs.
The Nigerian Port Reform

It started as far back as 1970 during the post war era. The Federal Government drew up its Second National Development Plan, 1970-1974. This was the first major policy thrust in reconstructing and rehabilitating the civil-war damaged economy. The sum of N4.1 million was initially made available for the rehabilitation of port structures and necessary mechanical handling equipment. This sum was donated by the Nigerian Government to fund the project that was to be completed within the first two years of the plan (1970-1972). The rehabilitation and reconstructed Ports include Port Harcourt, Bonny, Calabar, Koko and Lagos. These initial post war Ports development efforts were however not adequate to prevent congestion. It has for a long time been globally recognized that Nigerian Ports are one among the least efficient and carrying high cost as noted by Jamese Leigland and Gylfi Palsson (2007). Some of the reasons for the reforms were:

To increase efficiency in Port operation thereby reducing congestion, decrease cost of Port services to stakeholders, decrease cost to the Government for the support of viable Port sector and attract private sector participation so as to free public resources for public services.

In 2005, a reform process was initiated, with the adoption of the “Landlord” model, where the public sector is responsible for regulation of the sector and Port planning, as well as remaining owner of Port land and infrastructure. Alan Harding et al (2007) explained that, the private sector would be responsible for marine and terminal operations, superstructure and equipment. The agreed institutional reform included:
Creation of two Autonomous Port and Harbor Authorities, creation of a National Transport Regulatory Commission (NTC), limiting the role of the Government (Ministry of Transport) and encouraging private operators to perform Port operations,

Preparation and implementation of the reform followed three main parallel processes: Legal and regulatory reform, labor reform, competitive and transparent transactions to select private operators.

A new Port bill and a NTC bill were introduced and signed in 2007 with labor redundancies severance package undertaken (reducing Nigerian Port Authority staffing from 13,000 to 3,000), and 26 terminal concessions granted. In 2006 the initial concessions became operational. While the long term benefits took time to manifest, it is clear that improvement in Port operations is already having positive impact. Within a few months of private operation of the Lagos container terminals, productivity went up. Chronic delays for berthing space had nearly vanished, forcing shipping lines to reduce their congestion surcharge from Euro 525 in March 2006 just before concessioning to Euro 75 in January 2007 (James Leigland and Gylfi Palsson 2007). Using rough estimates, just the reduction in congestion charges is saving the Nigerian economy about US$200 million annually.

From the Nigerian Port Reform (privatization and the adoption of the landlord Port model) above, it can be said that, it was necessary for the Port of Tema to undertake reforms for competitive reasons because it was already a general trend for Ports within the Sub region to start reforming. Becoming a gateway, demands a favorable environment for business, less congestion, rapid clearance procedures, good road linkages and private sector
participation. Nevertheless, comparing the Nigerian Port Reform and that of Ghana, we can see that there are some similarities between the two. They both have adopted a landlord port model and increase in private sector participation.

2.7 BERTHS AND TERMINALS

This actually deals with the number of berths required in a port. Ideally, the ship operator would like to see empty berths to ensure that there are no delays for his ship when it arrives. The Port operator on the other hand would like to make judicious use of his capital invested and have only one berth with a queue of ships. This would enable him to earn adequate returns on his investment (funds invested in the development of the berth). But practically, it would be to the advantage of both of them to keep the total costs to the minimum. Also, it is seldom easy to establish the given conditions as ports suffer from the old transport problems of peaks that are one day the port is empty and the next experiences a queue. Since there is now usually competition between ports, many have adopted the maxim that “the berth must wait for the ship and not the ship for the berth.” To better understand the operations at any berth, it will be better to present an analysis on berth occupancy. This will also help to better the understanding of data on berth occupancy presented in chapter four.

Berth occupancy is an indicator of utilization. It indicates the intensity of utilization of berth facilities and resources. Before explaining the dynamics of berth occupancy, it is important to examine some theories on berth occupancy.
Queuing theory; it evolved between 1910 and 1920 by the Danish statistician Erlang for queuing problems at telephone exchanges. It can be used where queuing situations occur. But this has some limitations for a modern port because of the following;

It assumes that ships arrive in a random fashion, whereas in most ports, liner ships arrive to fixed schedules, as do many other ships.

Moreover, some ships may also arrive in waves due to seasonal or other demand considerations.

It also assumes that all berths are interchangeable and it can only cope with individual berths. It cannot cope with berths which might take say three large ships or four small ones.

Simulations theory; It is composed of two types;

Computer simulation. This is not frequently used because it is very costly. And physical manual simulation which is the most commonly used because it is simple, cheap and understandable.

After explaining the above theory on berth occupancy, it will be preferable to analyze some issues on berth occupancy. It effectively indicates the level of demand for port services. It can be measured over various time intervals, (a week, a month, a year) and is normally expressed as a percentage. Extracting from UNCTAD Monograph on Port Management (1995), the following formula is given to calculate berth occupancy;
The number of hours (days) the berth is occupied in a given period (whether cargo is being worked or not) divided by the total number of hours (days) in that period, multiplied by 100 (to convert the ratio into a percentage).

That is; \[ \text{Berth occupancy} = \frac{\text{hours (days) berth is occupied}}{\text{Total possible hours (days) in a period}} \times 100 \]

High berth occupancy depicts over utilization of resources and it does not indicate an efficiently run berth. This is usually the case when figures go above 80%. High berth occupancy is accompanied with some operational disadvantages.

It may lead to little or no time to plan and prepare cargo handling operations, insufficient time to consolidate export, insufficient time to clear imported cargoes from quays, sheds and yards before the next ship arrives and it may put considerable stress on labor, management, storage space and equipment.

High berth occupancy therefore causes a decline in the quality of service rendered by the port. It is an indication of a congested port, noticeable when ships queue for a berth. This leads to increased turnaround time, congestion surcharges and demurrage. This was the case with Tema Port before the advent of the reforms where ships had to queue for berths, no dedicated berth to handle containerized traffic and insufficient space for cargo.

On the other hand, low berth occupancy (say 50% or less especially with general cargo berths) indicates that resources are being underutilized or may be lying idle for longer time and that there is spare ship and cargo-handling capacity. So, berth occupancy values of 60% and 70% are usually considered to be the safest. This depends on a number of factors.
such as the arrival pattern of ships, number of berths in the port, how effective the berth allocation system is and the average ship's time at those berths.

According to UNCTAD Monograph (1995), if ships arrive at regular intervals, with a few days' gap between the departure of one vessel and the arrival of the next, giving time to plan effectively and to prepare for the next ship while the berth is vacant, then a relatively high berth occupancy value is not particularly dangerous. But, unfortunately, the arrival patterns of general cargo trade are not often regular. Ships often arrive at irregular intervals for one reason or the other. But it is somehow controversial because it is specifying only the general cargo situation. Nothing is said about liner traffic whether it is regular or irregular.

Having reviewed some of the works of some writers in relation to this topic, let us move to the next chapter which is chapter three. In this chapter, sampling procedure, research design and some field problems have been discussed.
CHAPTER THREE

3.0 METHODOLOGY

3.1 INTRODUCTION

This Chapter deals with sample selection, sampling procedure, data collection techniques (research design) as well as the field problems.

3.2 POPULATION AND SAMPLE SELECTION

Shippers and the Monitoring and Control Department of GPHA formed the target groups in relation to the study. The shippers included exporters, importers and freight forwarders. The shippers were used because they are the direct users of the Port and often suffer from the effect of congestion. Freight forwarders could be considered as shippers because they represent shippers as importers or exporters. The Monitoring and Control Department was particularly used because they are those who control the operations of the Port hence could give in-depth information about the study.

The Ghana Shippers’ Council was contacted for the list of shippers within the Greater Accra Region of Ghana. From the database of the Shippers’ Council, a list of 108 registered shippers was given. The registered shippers included importers, exporters and some freight forwarders.
The population of the study therefore relates to the total number of registered shippers (108) as per the database of the Shippers' Council. A sample size of 70 shippers was selected.

From the Monitoring and Control Department of Ghana Ports and Harbours Authority (GPHA), 5 senior staff members were interviewed. Purposive sampling technique was used to select them. The researcher was of the belief that those officials were well placed to furnish him with relevant information needed in relation to the research statement. They included the Port Operations Coordinator, Traffic Manager, Head of Claims, Documentation and Research, Supervisor of Terminal and Vessel Operations and the officer in charge of Terminal and Vessel Inspection, all from the Monitoring and Control Department.

3.3 SAMPLING PROCEDURE

The researcher used the following in selecting the sample;

a) Purposive sampling method: This was used in selecting respondents from the Monitoring and Control Department. This method was used because the respondents had the best of information required for the study. These respondents included the Traffic Manager, Port Operation Coordinator, Head of Claims, Documentation, Research and Development, Supervisor of Terminal and Vessel Operations and the Officer in Charge of Terminal and Vessel Inspection.
b) Random sampling method: This was used in getting the actual sample size from the shippers’ registration list of the Shipper’s Council by the use of the sample frame. This was to eliminate bias or ensure that each shipper had a fair chance of being selected to assist the study. This method was also used because the shippers share a common characteristic.

3.4 RESEARCH DESIGN

a) Method

This refers to the procedure used to collect primary data (Kwabia 2005: p 99). It consists of the survey, case study and experimental method. But for the purpose of the study, the survey was used to collect data from the field. This is because the respondents were scattered all over the area.

b) Instruments

The main instruments used by the researcher were questionnaire and interview (interviewer’s guide). Questionnaire was used (both open ended and closed ended questions) to gather relevant data from shippers, to minimize bias and to compare the data collected with the relevant literature obtained. This instrument was also used because the shippers constituted a larger sample size. The knowledge, attitude and practice (KAP) format were used in designing the questionnaire.
The interviewer’s guide was also used to collect information from the senior staff of GPHA since they formed a smaller sample size. The interviewer’s guide also was intended to give an in depth information that could improve the quality of the research. This was made possible by the opportunity the researcher had during the field work.

3.5 DATA ANALYSIS

The data obtained from the field was analyzed into tables and graphs in order to be able to draw appropriate conclusions from them.

3.6 FIELD PROBLEMS

Procrastination was one of the problems encountered during the course of the research. Respondents kept on giving promises about date the researcher should collect questionnaires which they did not fulfill. The unfulfilled assurances given to the researcher about dates for collection of the questionnaires by some respondents also affected the time for the field work and the number of questionnaires that could be completed. Further, there was some resistance from some of the respondents who claimed that the exercise had been done repeatedly but no improvement had been noticed.

The next chapter presents the analysis of findings. It is done in two parts; the first part begins with the questionnaires while the second part presents the interview. All these have been analyzed with the use of the Knowledge, Attitude and Practice (KAP) format.
CHAPTER FOUR

4.0 PRESENTATION OF FINDINGS AND ANALYSIS

4.1 INTRODUCTION

This chapter presents information collected from the field. The first segment of the presentation deals with questionnaire while the second part deals with the information collected by interviews. The background information of the questionnaire is followed by the knowledge, attitude and practice (KAP) of the respondents. The interview information is in KAP format as well. Seventy (70) questionnaires were issued and 42 were retrieved.

4.2 ANALYSIS OF QUESTIONNAIRE

Background

The background information involved gender, age, education, working experience, type of business and the nature of business (sole proprietor) or company. The background aspect of the respondent is important because most of their responses will be given in respect of their various backgrounds. Each will be presented below;

Out of the 42 respondents, the majority (91%) were males while 9% were females. The large number of males may be due to the nature of work which is characterized by a lot of pressure and stress. This may not be favorable to women.
The Table below (4.1) shows the age distribution of the respondents (shippers).

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>30-39</td>
<td>07</td>
<td>17</td>
</tr>
<tr>
<td>40-49</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>50-59</td>
<td>09</td>
<td>21</td>
</tr>
<tr>
<td>60+</td>
<td>04</td>
<td>09</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

From the Table (4.1), out of the 42 respondents, 12 shippers representing 29% were less than 30 years. Also, 7 shippers making 17% were within the age range of 30 – 39 years; 10 of the shippers representing 24% were within the 40 – 49 age bracket whilst 9 of them, forming 21% had attained ages between 50 – 59 years. Lastly, 4 shippers were 60 years or more.

Therefore, most shippers (24%) in Ghana are within 40-49 age groups.
### Table 4.2: level of education of shippers

<table>
<thead>
<tr>
<th>Education</th>
<th>ABS</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Junior high</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Senior high</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Tertiary</td>
<td>28</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

From Table 4.2, the number of respondents who had undergone tertiary education were 67% whilst those who ended at senior high school were 33%. None of the shippers had ended his or her education at the Primary or Junior High School level. This depicts the high literacy rate being demanded by this profession.

The majority of the shippers (67%) had had tertiary level of education. Tertiary level of education refers to any qualification a shipper had attained beyond Senior High School. This includes degrees, diploma certificates and other certificates awarded by professional institutions.

The level of education could serve as an indicator for measuring the knowledge base of shippers in relation to the research.
Table 4.3 depicts the years of working experience of the shippers.

**Table 4.3: Years of working experience of shippers**

<table>
<thead>
<tr>
<th>No. of years</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>5-9</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>10-14</td>
<td>17</td>
<td>41</td>
</tr>
<tr>
<td>15-19</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>20+</td>
<td>03</td>
<td>06</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

From the Table above (4.3), out of the 42 shippers, 5 of them making 12% within 0 and 4 years of shipping experience. Also, 7 of the shippers forming 17% had been in the shipping business between 5 and 9 years; 17 of them representing 41% had been in the shipping business between 10 and 14 years. Additionally, 10 of the shippers had been in the profession between 15 and 19 years whilst 3 shippers making 6% had 20 years of shipping experience or more.

This shows that 71% of the respondents had shipping experience of more than 10 years. This level of experience might make it possible for the respondents to provide adequate information about what has been going on at the port since 1995 when the measures to reform the port started.
Table 4.4 shows the nature and type of business of the respondent. They were either importers, exporters or both. An exporter is one who ships goods out of the country while an importer is one who ships goods into the country. A respondent may be involved in either activities or both.

<table>
<thead>
<tr>
<th>Type of business</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exporter</td>
<td>08</td>
<td>19</td>
</tr>
<tr>
<td>Importer</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Both</td>
<td>23</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

The above Table shows that the number of respondents dealing in both export and import was 55% while those dealing in imports or exports business were 26% and 19% respectively. This might be because the shippers dealing in both are big businessmen while the others do not really import or export more because of the intensive capital involved in doing the business.

Some of the respondents were company workers while others were private business people (sole proprietors). The numbers of respondents from company were 60% while those for private were 40%.
Knowledge

This part of the questionnaire looks into the respondents' awareness about the topic being researched into.

Table 4.5 shows the various responses of shippers in relation to activities which could reduce congestion at Tema Port.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Frequency</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated container terminal</td>
<td>09</td>
<td>19</td>
</tr>
<tr>
<td>Off dock terminal</td>
<td>06</td>
<td>13</td>
</tr>
<tr>
<td>Improvement in clearance procedures</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>All of the above</td>
<td>17</td>
<td>36</td>
</tr>
<tr>
<td>Others, specify</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>100</td>
</tr>
</tbody>
</table>

The total number of shippers who responded to the question was more than 42 because some of them selected more than one response. From the Table (4.5), out of the 47 responses, 19% of the shippers were of the opinion that the dedicated container terminal was one of the measures meant to reduce congestion at the Port. Also, 13% of them had the view that the off dock terminal was a measure to reduce congestion; 30% opined that improvement in cargo clearance procedures could reduce congestion whilst 36% believed that all the aforementioned activities could reduce congestion at the Port. This could be
because of their levels of awareness about the recent reforms that have been going on at the Port. The respondents might have been reading recent publications like newsletters, journals just to mention a few to enrich their knowledge about the recent happenings in the Port.

However, 2% of the shippers indicated that the purchase of additional cargo handling equipments could reduce congestion at the Port.

Table 4.6 indicates the responses of the shippers in connection with the reasons for the activities (as outlined in Table 4.5) which could reduce congestion at the Port.

<table>
<thead>
<tr>
<th>Reasons for the activities (reforms)</th>
<th>Frequency</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient space to keep cargo</td>
<td>03</td>
<td>07</td>
</tr>
<tr>
<td>Inadequate handling facilities</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Less no. of berths for bigger ships</td>
<td>06</td>
<td>14</td>
</tr>
<tr>
<td>Longer time to clear cargo</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>All of the above</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The Table (4.6) shows that out of the 43 responses that were elicited from the shippers, 7% of them cited that insufficient space to keep cargo at the Port induced the reasons for the
activities to reduce congestion at the Port. Moreover, 23% of the shippers indicated that inadequate handling facilities; another 23% indicated longer time to clear cargo whilst 14% stated that the lower number of berths for bigger ships motivated the reasons for the activities. Also, 33% of the shippers were of the opinion that all the above stated options (from the Table) were the reasons which informed the activities meant to reduce congestion at the Port.

To conclude, the responses provided by respondents in this section was an indication that they know about the measures taken to reduce congestion as well as the reasons for the reforms.

Attitude

This portion seeks to know how congestion has affected the respondent and his or her perception about the reforms (activities).

Concerning the question as to whether congestion had been a serious problem to the shippers, 83% of them said it affected them whilst 17% stated that it did not have any effect on their operations.

In respect of the question as to whether the activities (reforms as indicated in Table 4.5) had helped to reduce congestion, 50% of the shippers answered in the affirmative whilst 43% responded that it had no effect. Additionally, 7% provided no answer to the question.
The number of days which goods took to leave the Port before the start of the reforms was equally important. This is displayed on the Table below.

Table 4.7 number of days goods took to leave the Port before the reforms

<table>
<thead>
<tr>
<th>Number of days</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>08</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td>41</td>
</tr>
<tr>
<td>10</td>
<td>09</td>
<td>24</td>
</tr>
<tr>
<td>Others</td>
<td>05</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100</td>
</tr>
</tbody>
</table>

From Table 4.7, the total numbers of responses are lesser than the number of respondents because five of the shippers did not attempt the question as to the number of days goods took to leave the port before the reforms.

Out of the 37 shippers, 8 of them making 22% were of the opinion that goods took 25 days to be cleared from the Port before the reforms. Also, 15 of the shippers constituting 41% stated that it used to be 14 days for goods to be cleared from the Port before the reforms. In addition, 9 of them making 24% expressed their view by indicating 10 days' duration for goods to be cleared before the reforms whilst 5 of the shippers had different views in relation to the question. Some opined that it took 12 days; some also stated 17 days whilst the others stated 30 days duration for goods to be cleared from the Port before the reforms.
Table 4.8: Number of days goods took to leave the Port after the reforms (since 2002)

<table>
<thead>
<tr>
<th>Number of days</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>02</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>01</td>
<td>05</td>
<td>12</td>
</tr>
<tr>
<td>Others</td>
<td>04</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100</td>
</tr>
</tbody>
</table>

The total number of respondents who answered the question was 41. This is because one shipper-respondent did not offer any response in connection with the question (as stated in Table 4.8).

From Table 4.8, out of the 41 shippers who answered the question as to the number of days goods took to leave the Port after the reforms (since 2002), 20 of the shippers making 49% were of the opinion that it took 7 days for goods to leave the port after 2002. Moreover, 12 of the shippers forming 29% pointed to the fact that it took 2 days for goods to leave the Port. One shipper constituting 12% was of the opinion that it took one day for goods to leave the Port. Other shippers constituting 10% shared different views. Some shippers cited 4 days while others said it took between 3 and 7 days for goods to leave the Port after the reforms (2002).
The respondents also rated the level of improvement in decongestion which is presented on the Table below

Table 4.9: The rate of improvement in decongestion.

<table>
<thead>
<tr>
<th>Rate of improvement</th>
<th>Abs</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>27</td>
<td>64</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>15</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

From Table 4.9, out of the 42 shippers who rated the level of improvement in decongestion, 27 (making 64%) of them were of the view that the rate of improvement was satisfactory while 15 shippers forming 36% viewed the rate of improvement of decongestion as unsatisfactory. However, none of the shippers was of the opinion that the rate of improvement in efforts towards decongestion was excellent.

In connection with the question as to whether there had been any improvement in cargo clearance procedures at the Port, out of the 42 respondents, 36 of them (making 85%) responded to the question. Out of the 36 respondents, 24 of them (representing 67%) answered in the affirmative whilst 12 of them (representing 33%) indicated that there had not been any improvement in cargo clearance procedures.
Additionally, in relation to the question concerning the direction to which there had been improvement in cargo clearance procedures at the Port, out of the 24 respondents who answered in the affirmative (as indicated in the analysis of the paragraph above), 14 of them (making 58%) were of the opinion that the GCNet system had helped to reduce the cumbersome documentation processes. Also, 2 respondents (making 7%) attributed the improvement in cargo clearance procedures to the operations of the off dock terminals at the Port. Moreover, 8 of them (representing 35%) linked the improvement in cargo clearance procedures to installation of the scanners at the Port.

Table 4.10 relates to the viewpoints of the respondents on the one-shop documentation (a system of clearance where all documentations are done in the same building).

<table>
<thead>
<tr>
<th>One-shop documentation</th>
<th>Frequency</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very effective</td>
<td>04</td>
<td>11</td>
</tr>
<tr>
<td>Effective</td>
<td>20</td>
<td>56</td>
</tr>
<tr>
<td>Ineffective</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100</td>
</tr>
</tbody>
</table>

From the Table (4.10), 36 respondents gave responses to the question. Out of the 36 respondents, 4 of them representing 11% rated the one-shop documentation as very effective; 20 of them making 56% graded the one-shop documentation as effective whilst
12 of the shippers constituting 33% rated the one-shop documentation as ineffective. The opinion of shippers on the one-shop documentation invariably shows how well shippers have appreciated the after effects of the reforms on cargo clearance at the Port.

Further, with respect to the question as to whether the reforms had addressed all the issues of congestion, out of the 42, thirty-four (34) of them representing 81% said it had not addressed all the issues whilst 8 shippers representing 19% indicated that it had addressed all the related issues of congestion at the Port. Some of the related issues that the reforms were expected to address were cumbersome cargo clearance procedures, inadequate cargo storage space, insufficient cargo handling facilities, etc.

Relating the issues to which the reforms had addressed, out of the 8 shippers who stated that the reforms had addressed all the issues, 2 of them (making 25%) were of the opinion that the reforms had addressed the undue delay in cargo clearance procedures. Also, 5 of them (making 63%) stated that the off dock terminals had solved the problem of inadequate cargo storage space at the Port whilst one respondent (representing 12%) opined that the lesser number of berths for bigger ships had been solved by the advent of a new container terminal.

In relation to the issues to which the reforms had not addressed, out of the 34 respondents (81% of 42) who said that the reforms had not addressed any of the issues, 30 of them gave further responses in connection with the question. Out of the 30 respondents, 5 of them making 17% stated that the manual system of cargo clearance was still in use; 10 of them making 33% indicated that though the GCNet came to improve cargo clearance
procedures, it still suffers from persistent breakdowns of two to three days a week. Moreover, 15 shippers, forming 50% were of the opinion that physical inspection of cargoes was still practiced despite the installation of scanners at the Port.

In relation to the question concerning the negative aspects of the reforms, out of the 28 respondents who attempted the question, 14 of them (representing 50%) stated that, there had been delays in clearance procedures, constant internet failures hindering the GC Net performance. Also, 6 of the respondents (representing 21%) stated that there had been persistent loss of containers at the off dock terminals; 8 of them (making 29%) indicated the problem of insufficient cargo cranes to facilitate the rapid loading and offloading of cargoes at the Port.

In conclusion, from the above responses, there is an indication that congestion has been a serious problem. The reforms implemented to reduce congestion have had some slight improvement in respect of cargo clearance procedures at the Port. The number of days goods took to leave the Port before 1995 was 14 days. Since 2002, it has reduced to 7 days. The rate of improvement in decongestion from respondents point of view generally showed that it had been satisfactory. The clearance procedures had also improved in the domain of the GCNet which came to reduce the paper work and the scanner to reduce physical inspection. The one shop documentation is effective only in the domain of the electronic system of handling documents (GCNet). The measures to reduce congestion have not addressed all the issues of congestion. Some of the negative aspects about the measures have been identified. This is in the domain of the off-dock terminals which has
helped to decongest the Port but has brought in the issue of missing containers and slow delivery system.

**Practice**

In connection with the question in relation to the measures to reduce congestion at the Port, out of the 42 respondents, thirty-one (31) of them making 74% responded to the question. Out of the 31 respondents, 7 of them (representing 23%) stated that physical examination should be stopped since there are scanning machines at the Port. Also, 10 of the shippers (forming 32%) addressed the need for more scanners at various container terminals to augment the existing ones and that there should be the total elimination of manual documentation procedures. Moreover, 11 of them (making 35%) recommended the need for infrastructural development (rail network connectivity, more exit points for trucks and more berths and more cargo handling facilities). Lastly, 3 of the respondents (forming 10%) called upon stakeholders (such as the Ghana Shippers’ Council, the Ghana Ports and Harbours Authority, Customs, Excise and Preventive Service, Ghana Maritime Authority, etc) to design better measures of decongesting the Port.

Furthermore, in relation to the question as to how the recommendations could be implemented, 27 of the respondents answered the question. Out of the 27 respondents, 8 of them (making 30%) proposed that there should be the organization of more workshops and seminars. They further explained that this would bring in stakeholders within the port community to discuss on better measures and how to implement them. Also 11 of the
shippers (representing 41%) suggested that there should be an increase in private sector participation in order to increase the number of off dock terminals at the Port. Additionally, 3 of the shippers (forming 11%) proposed that the Government of Ghana should ask for foreign aid to fund projects like railway construction to link the transit corridors of the country, expand the Port sea-ward (water shed area of the Port) and to purchase more gantry cranes. They also explained that the axle load of vehicles should be properly checked so as to avoid depletion of the roads. Lastly, 5 of the shippers (constituting 19%) proposed that there should be mutual understanding and trust between Custom officials and shippers. They stated that it is because of lack of trust that goods go through unnecessary checks, leading to duplication of functions, thereby causing delays.

In conclusion, a majority of the shippers (35%) recommended the need for infrastructural development (rail network connectivity, more exit points for trucks and more cargo handling facilities). This could be done by increasing private sector participation as suggested by 41% of the shippers.
This section presents information gathered from those who were interviewed. They were some staff of the Monitoring and Control Department of GPHA; Traffic Manager, Port Operations Co-coordinator, Supervisor for Terminal and Vessel Operations, Head of Claims, Documentation, Research and Development and Acting officer for Terminal and Vessel Inspection.

Background

The Port officials at Tema Port had varied educational backgrounds. All the Port officials had had tertiary level of education. Tertiary level of education, for the purpose of the study, was limited to educational qualification(s) one had attained after Senior High School. This included diploma certificates, degrees and any other academic attainments beyond Second Cycle education.

All the Port officials but one had worked with the Port for more than eight (8) years. The Port Operations Coordinator and the Traffic Manager had been working with the Port for about 22 years. Also, the Supervisor for Terminal and Vessel Operations had been working with the Port for 10 years. The Acting Officer for Terminal and Vessel Inspection had worked with Tema Port for 8 years. However, the Head of Claims, Documentation, Research and Development had been working with the Port for 4 years.
Knowledge

This part was to find out how much knowledge the interviewees had about the reforms that were implemented by GPHA.

With respect to the question concerning the number of reforms that had been implemented since they became GPHA, the Port Operations Coordinator, the Traffic Manager and the Supervisor for Terminal and Vessel Operations stated that there had been about 7 reforms to reduce congestion. They further outlined the reforms to include the following:

1. Creation of a dedicated container berth
2. Off dock terminals
3. The introduction of the GCNet system
4. Dredging of the approach channel to 12.5 metres
5. Privatization of stevedoring operations
6. Construction of 8-lane gate complex
7. Introduction of the scanners

Moreover, the Acting Officer for Terminal and Vessel Inspection and the Head of Claims, Documentation, Research and Development indicated that three reforms had been implemented since they became GPHA. They stated that the landlord status of the Port was one of the reforms. Also, they pointed out that the creation of a dedicated container
terminal and the creation of off dock terminals were the major activities meant to reduce congestion at the Port.

In addition, concerning the reasons for the reforms, all the port officials stated that the high cost of doing business at the Port accounted for the initiation of the reforms. The Supervisor for Terminal and Vessel Operations cited insufficient cargo handling equipment as being one of the reasons for the reforms. The Traffic Manager stated that the Port needed to adapt to the handling of specialized cargo, hence the creation of a dedicated container terminal. He further explained that there was a problem of insufficient storage facilities. Also, the Port Operations Coordinator explained that the draft limitation of the Port was too low to accommodate bigger ships. The Acting Officer of Terminal and Vessel Inspection said because of the Code D'Ivoire crisis, the Port was consequently used as transshipment Port to serve the landlocked countries of Burkina Faso, Mali and Niger. This compelled the Port to embark on reforms such as the creation of off dock terminals.

The question as to whether all the reforms were part of the Gateway Project, the Traffic Manager, the Port Operations Coordinator and the Supervisor for Vessel and Terminal Operations responded that not all the reforms were part of the Gateway Project. They specifically stated that the creation of the off dock terminal was not part of the Gateway Project. However, the Head of Claims, Documentation, Research and Development and the Acting Officer for Vessel and Terminal Operation were of the view that all the reforms they listed (the landlord status of the Port, the creation of container terminal and off dock terminals) were part of the Gateway Project.
Attitude

In respect of the question as to whether congestion had been a central issue in the reforms, all the port officials indicated that it had been the reason for the reforms. The Traffic Manager stated that congestion is like a chain - where one system is affected, the whole system becomes affected.

Also, in connection with the question concerning what existed before (1995-2002), the Port Operations Coordinator and the Traffic Manager indicated that before the reforms only general cargo berth existed at the Port. The Acting Officer stated that there were no off dock terminals; the Supervisor for Terminal Inspection and the Head of Claims, Documentation and Research indicated that there was no scanning machine at the Port.

Additionally, with respect to the question concerning what had been the situation since 2002 (after the reforms), the Port Operations Coordinator and the Traffic Manager indicated that the second scanning machine was installed in 2004 to solve the problem of physical inspection which led to delays in cargo clearance at the Port. The Acting Officer in charge of Terminal and Vessel Inspection also stated that the Tema Container Terminal was created in 2003 to solve the problem of insufficient space to keep containerized cargoes. The Supervisor for Terminal and Vessel Operations also said the improvement in clearance procedures was actually facilitated by the advent of the GCNet to handle documentation formalities electronically. The Head of Claims, Documentation and Research also stated that dedicated berths were developed in 2003 with a draft of 11.5
metres to accommodate bigger vessels (berths 1 and 2), though they were later privatized in 2007.

Furthermore, in relation to the question as to whether the reforms were over or on-going, the Traffic Manager indicated that reforms would never be sufficient because the Traffic keeps on increasing annually. Also, the Head of Claims, Documentation and Research stated that the reforms were still on-going. He specifically cited the case of the uncompleted 8-Lane Gate Complex. The Supervisor in charge of Vessel and Terminal Operation also indicated that the off dock terminals were not adequate to accommodate the volumes of cargo that passed through the Port. He therefore concluded that the reforms were not over. The Port Operations Coordinator also answered that the reforms were on-going. Knowing the status of the reforms (whether they were over or on-going) enabled the researcher to appreciate the level of implementation of the specific projects or activities of the Port in connection with the reforms.

Additionally, in connection with the question relating to the berth occupancy from 1995 to 2002 (before the reforms), only one respondent answered, namely, the Head of Claims, Documentation, Research and Development. The other four respondents referred the researcher to the Head of Claims, Documentation and Research because he had the statistics relating to the berth occupancy of the Port. In answering the question, he rather gave information on berth occupancy relating to between 2003 and 2008. He explained that the statistics concerning berth occupancy from 1995 to 2002 were not readily available. He however estimated that in the year 2000, it was about 90%. The statistical information
relating to the berth occupancy of the Port from 2003 to 2008 as furnished by the Head of Claims, Documentation and Research are indicated in the Table (4.11) below;

Table 4.11: Berth occupancy from 2003 to 2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Berth occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>86</td>
</tr>
<tr>
<td>2004</td>
<td>67</td>
</tr>
<tr>
<td>2005</td>
<td>77</td>
</tr>
<tr>
<td>2006</td>
<td>79</td>
</tr>
<tr>
<td>2007</td>
<td>82</td>
</tr>
<tr>
<td>2008</td>
<td>78</td>
</tr>
</tbody>
</table>

Source: Claims, Documentation, Research, and Development (Tema Port)

From the Table (4.11), the berth occupancy in 2003 registered 86%. It however reduced to 67% in 2004, but further increased to 77% in 2005, and then increased marginally to 79% in 2006. It significantly increased to 82% in 2007 and reduced marginally to 78% in 2008. Knowing the level of berth occupancy could be used to evaluate the improvement in decongestion at the sea-ward side of the Port.

A more detailed study of the level of berth occupancy for the period reviewed (from 2003 to 2008) can be seen on page 72 (appendix 1).
Moreover, concerning the challenges that were encountered in connection with the reforms, the Port Operations Coordinator and the Traffic Manager cited the problem of insufficient capital. They further explained that the 8-Lane Gate Project was not completed partly due to the problem of finance. Also, the Acting Officer for Terminal and Vessel Inspection indicated that there was a problem of lack of trust among Customs officers which led to numerous physical inspections despite the installation of scanners at the Port. The Head of Claims, Documentation and Research also stated that the privatization of 75% stevedore activities resulted in the laying off of workers, thus creating unemployment in the economy.

Practice

Further, in relation to the question concerning what was to be done to improve on the implementation of the reforms, the Traffic Manager and the Port Operations Coordinator responded that there should be the demolition of unused warehouses and offices to create space for cargoes at the Port. Moreover, the Port Operations Coordinator said there should be a sea-ward expansion of the Port to accommodate bigger ships. The Supervisor for Vessel and Terminal Operations stated that the Kpone Project should be hastened up to create more space for vehicles which is in connection with the creation of distriparks and districentres. The Kpone Project is a customs-free area that was to be developed to create parking spaces for vehicles. Also, the Acting Officer for Vessel and Terminal Inspection proposed that clearance of goods should be done every hour of every day (24/7).
From the above discussion, one can conclude that GPHA undertook these reforms partly because of the attempt of making Ghana the gateway. However, these reforms had to address the issue of congestion because achieving this could not be without making the port a favorable place to do business. Looking at congestion at the landward side from the above analysis, there have been some improvements. The level of improvements is greater than the level of improvement of congestion at the seaward side. By the landward side the researcher means, improvement in clearance procedures, off-dock terminals and physical inspection. Seaward means the dedicated container berths and its draught limitation. The seaward side deals with berth occupancy which shows that there is still much to be done in this respect because of the high figures.

In the next chapter, a summary of the major findings, conclusions and recommendations has been given. The knowledge, attitude and practice format is still maintained there.
CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter, we dealt with the presentation of findings from the field. Questionnaires issued and interviews made were presented. This chapter deals with a recapitulation of the findings presented in the previous chapter, conclusions drawn and appropriate recommendations made. The KAP format has been used in this chapter. The summary of questionnaire has first been presented followed by presentation of interviews.

5.2 SUMMARY OF FINDINGS

5.2.1 SHIPPERS

Background

Majority of the shippers (91%) were males whilst 9% of them were females.

A high number of the shippers (24%) were within the 40-49 age group. Also, about 54% of the shippers were above 40 years whilst 29% were below 30 years.
Majority of the shippers (67%) had had tertiary education. Tertiary education included certificates shippers had acquired after Senior High School.

Also, the highest number of shippers (41%) had between 11 and 15 years of shipping experience. Also, the majority (71%) had had shipping experience of more than 10 years.

Additionally, majority of the shippers (55%) dealt in both exports and imports of merchandise. Nineteen (19%) of the shippers were exporters whilst 26% were importers.

Moreover, majority of the shippers (60%) worked with companies whilst 40% of them worked as sole proprietors (private business).

Knowledge

Majority of shippers (36%) identified all the activities connected with the reforms as being effective in the reduction of congestion at the Port. The activities included the development of a dedicated container terminal, off dock terminals and improvement in cargo clearance procedures. Also, 30% of the shippers identified improvement in cargo clearance procedures in relation to the reforms that could reduce congestion at the Port.

Additionally, most of the shippers (33%) identified insufficient space to keep cargo, inadequate handling facilities, less number of berths for bigger ships and longer time to clear cargoes as being the rationale for the reforms. However, 23% of them cited inadequate handling facilities as a reason for the reforms. Another 23% identified longer time to clear cargo from the Port as the reason for the reforms.
Attitude

Majority of shippers (83%) viewed congestion as a serious problem which affected their operations (cargo clearance procedures) at the Port.

Also, half of the shippers (50%) stated that the reforms had helped to reduce congestion at the Port. In addition, a high number of them (43%) were of the view that the reforms had no effect on congestion.

Additionally, the highest number of shippers (41%) indicated that goods took 14 days to be cleared from the Port before the reforms.

Moreover, the highest number of shippers (49%) stated cargo clearance period reduced from 14 days to 7 days after the reforms (after 2002).

Majority of the shippers (64%) viewed the rate of improvement in the reforms to decongest the Port as satisfactory. However, 36% of them graded the rate of improvement in the reforms as unsatisfactory. None of the shippers was of the view that the rate of improvement in the reforms had been excellent.

Further, the majority of the shippers (67%) were of the opinion that there had been an improvement in cargo clearance procedures at the Port whilst 33% of them opined that there had been no improvement.

The highest number of the shippers (58%) cited that the GCNet system had helped to reduce the cumbersome cargo clearance procedures at the Port.
In addition, a high number (35%) of the shippers linked the improvement in cargo clearance procedures to the installation of scanners at the Port. However, 7% of them related the improvement in cargo clearance procedures to the operations of the off dock terminals at the Port.

Furthermore, the majority of the shippers (56%) considered the one-shop documentation as effective whilst 33% of them viewed it as ineffective. However, 11% were of the opinion that it was very effective.

Also, majority of the shippers (81%) were of the viewpoint that the reforms had not addressed all the issues of congestion whilst 19% were of the opinion that it had addressed the issues of congestion.

Moreover, majority of the shippers (63%) were of the opinion that the off dock terminals had solved the problem of inadequate cargo space. In addition, 25% of the shippers opined that the reforms had solved the unnecessary delay in cargo clearance procedures whilst 12% of the shippers stated that the new container terminal had resolved the problem of lack of berth to take bigger ships.

Additionally, half of the shippers (50%) were of the view that physical inspection of cargoes was still in practice at the Port of Tema. However, 33% of them indicated that the GCNet suffered from persistent breakdowns whilst 17% of them stated that the manual system of cargo clearance was still in use.
Also, half of the shippers (50%) stated that there had been delays in cargo clearance procedures and constant internet failures, hindering the performance of the GCNet. Twenty-nine percent (29%) of the shippers cited that there were insufficient cargo cranes at the Port to facilitate the rapid loading and offloading of cargoes.

**Practice**

A high number of the shippers (35%) recommended the need for infrastructural development (rail network connectivity, more exit points for trucks, more berths and more cargo handling facilities).

Moreover, 32% recommended the need for more scanners at the Port to augment the existing ones.

Twenty-three percent (23%) of the shippers suggested that physical examination should be stopped since scanners were already available at the Port.

Also, 10% of the shippers called upon the stakeholders (Ghana Shippers Council, Customs, Excise and Preventive Service, Ghana Maritime Authority, etc.) to design better measures of decongesting the Port.

Furthermore, a high number of the shippers (41%) recommended that there should be an increase in private sector participation in order to improve the number of off dock terminals at the Port.
In addition, 30% of the shippers proposed that there should be the organization of more workshops and seminars which could help in the design of better measures and how to improve them at the Port.

Also, 19% of the shippers recommended that there should be the mutual understanding and trust between Custom officials and shippers to avoid duplication of functions and unnecessary checks which cause delays.

Further, the minority of the shippers (11%) proposed that the Government of Ghana should seek for foreign aid to fund projects like railway construction to link the transit corridors.

5.2.2 PORT OFFICIALS

Background

All the Port officials had had tertiary level of education. Tertiary level of education, for the purpose of the study, was limited to educational qualification(s) one had attained after Senior High School. This included diploma certificates, degrees and any other academic attainments beyond Second Cycle education.

All the Port officials but one had worked with the Port for more than eight (8) years. The Port Operations Coordinator and the Traffic Manager had been working with the Port for about 22 years. Also, the Supervisor for Vessel and Terminal Operations had been working with the Port for 10 years. The Acting Officer for Terminal and Vessel Operations had
worked with Tema Port for 8 years. However, the Head of Claims, Documentation, Research and Development had been working with the Port for 4 years.

Knowledge

The Port Operations Coordinator, the Traffic Manager and the Supervisor for Terminal and Vessel Operations stated that there had been seven (7) reforms to reduce congestion at the Port since 1995 (when the reforms started). They generally stated the seven (7) reforms to include;

1. Creation of dedicated container berths
2. Development of off dock terminals
3. The introduction of the GCNet
4. Dredging of the approach channel to 12.5 metres
5. Privatization of stevedoring operations
6. Construction of 8-Lane Gate Complex and
7. The introduction of the scanners

Moreover, the Acting Officer for Terminal and Vessel Inspection and the Head of Claims, Documentation, Research and Development indicated three reforms. They cited the
reforms to include: the landlord status of the Port, the creation of a dedicated container terminal and the off dock terminals.

Also, all of the Port officials stated that the high cost of doing business at the Port was one of the reasons for the reforms. The Supervisor for Terminal and Vessel Operations reasoned that insufficient cargo handling equipment was another reason for the reforms. The need for a specialized container terminal was one of the rationales for the reforms, the Traffic Manager stated. The Acting Officer for Vessel and Terminal Inspections indicated that the Port needed to start transshipment because of the Cote D'Ivoire civil war in 2002.

The Traffic Manager, the Port Operations Coordinator and the Supervisor for Vessel and Terminal Operations stated that not all the reforms were part of the Gateway Project. They cited the creation of the off dock terminal specifically as not being part of the Gateway Project.

Nonetheless, the Head of Claims, Documentation, Research and Development and the Acting Officer for Vessel and Terminal Inspection were of the viewpoint that all the reforms they listed (landlord status, creation of container and off dock terminals) were part of the Gateway Project.
Attitude

All the Port officials indicated that congestion had been a central issue of the reforms.

The Traffic Manager and the Port Operations Coordinator stated that before the reforms (1995-2002), only general cargo berth existed at the Port. Also, the Acting Officer for Vessel and Terminal Inspection stated that no off dock terminals existed before the reforms. In addition, the Supervisor for Terminal Operations and the Head of Claims, Documentation, Research and Development stated that there was no scanning machine.

Additionally, the Port Operations Coordinator and the Traffic Manager stated that after the reforms (2002) a new scanning machine was installed. The Acting Officer in charge of Terminal and Vessel Inspection also indicated that the Tema Container Terminal (TCT) was created to solve the problem of insufficient space for containerized cargoes. The Supervisor for Vessel and Terminal Operations also indicated since 2002, there had been improvement in cargo clearance procedures at the Port owing to the advent of the GCNet system. Also, the Head of Claims, Documentation, Research and Development also stated that since 2002, there had been the creation of dedicated berths at the Port.

Moreover, the Traffic Manager and the Head of Claims, Documentation, Research and Development were of the opinion that the reforms were on-going. They explained that the following projects had not been completed: the 8-Lane Gate Complex, efforts to simplify the cargo clearance procedures and the development of the off dock terminals.
The berths generally registered the highest occupancy rate in 2003, recording 86%. However, the lowest berth occupancy rate occurred in 2004, registering 67%.

Also, the Port Operations Coordinator and the Traffic Manager indicated the problem of insufficient capital as posing a challenge to the reforms.

Further, the Acting Officer for Terminal and Vessel Inspection stated that there was a problem of lack of trust among Customs officers, leading to numerous physical inspections.

The Head of Claims, Documentation, Research and Development also stated that privatization of stevedore activities led to the retrenchment of workers, contributing to unemployment rate in the country.

Practice

The Traffic Manager and the Port Operations Coordinator recommended the demolition of unused warehouses and offices to create spaces for more cargoes at the Port.

Moreover, the Port Operations Coordinator suggested a sea-ward expansion of the Port to accommodate bigger ships.

In addition, the Supervisor for Vessel and Terminal Operations suggested that the Kpone Project should be hastened up to create more spaces for the creation of lorry parks. This is in connection with the creation of distriparks and districentres.
Furthermore, the Acting Officer for Terminal and Vessel Inspections proposed that clearance of goods should be done everyday (24 hours of everyday) without any interruptions.

5.3 SUMMARY OF CONCLUSIONS

5.3.1 SHIPPERS

Background

From the gender point of view, most Ghanaian shippers (91%) are males. Looking at the age distribution of the shippers, a high number (24%) is within the 40 – 49 age group. Also, majority of shippers (67%) have passed through tertiary level of education. In terms of shipping experience, the highest number of shippers (41%) has between 11 and 15 years shipping experience.

Knowledge

A high number of shippers (36%) are aware of activities being undertaking at the Port to reduce congestion.

Also, a high number of shippers (33%) identify insufficient space to keep cargo, inadequate cargo handling facilities, less number of berths for bigger ships and longer time to clear cargoes as being the reasons for the reforms.
Attitude

Majority of shippers (83%) are of the view that congestion affects their businesses (in relation to cargo clearance at the Port).

Also, high number shippers (50%) are of the view that the efforts to decongest the Port have improved.

Moreover, a high number of shippers (41%) are of the opinion that it took 14 days for goods to be cleared from the Port before the reforms (2002).

Additionally, a high number of the shippers (49%) are of the viewpoint that it takes 7 days for goods to leave the Port (since 2002).

Furthermore, majority of shippers (64%) view the rate of improvement in decongestion as satisfactory.

In addition, majority of shippers (67%) view cargo clearance procedures as having improved at the Port.

Also, the majority of shippers (58%) are of the opinion that the GCNet system has helped to reduce the cumbersome cargo clearance procedures at the Port.

Further, majority of shippers (56%) regard the one-shop documentation as effective.

Most of the shippers (81%) regard the reforms as not having addressed all the issues of congestion at the Port of Tema.
Also, majority of shippers (63%) believe that the off dock terminal has solved the problem of inadequate cargo storage space.

A high number of shippers (50%) are of the opinion that physical inspection of cargoes still occur at the Port.

Also, a number of shippers (50%) attribute constant internet failures as one negative aspect of the reforms, hindering the performance of the GCNet.

Practice

A high number of shippers (35%) suggest that there should be the need for infrastructural development at the Port. They propose there should be railway connectivity to the Port, more exit points for trucks, more berths and cargo handling facilities.

Also, a high number of shippers (41%) propose that there should be an increase in private sector participation at the Port.

From the discussion in this section, some of the research objectives have been answered. This is in relation to shippers' background, their knowledge about the reforms to reduce congestion, their attitude towards the reforms and the adequacy of the reforms. Most of the shippers (67%) have gone through tertiary education. A high number of the shippers are also aware of the reforms geared at reducing congestion at the Port. The reforms are not adequate since a majority of the shippers stated that the reforms have not addressed all the issues of congestion.
5.3.2 PORT OFFICIALS

Background

Most port officials have gone through tertiary education.

Moreover, most of the Port officials have worked at the Port for more than eight (8) years.

Knowledge

Most Port officials are of the opinion that there have been seven (7) reforms to reduce congestion at the Port since the reforms started.

In addition, all the Port authorities are of the viewpoint that high cost of doing business at the Port was the rationale for the reforms.

Further, most of the senior staff of the Port are stating that not all the reforms were part of the Gateway project for example, the off dock terminals.

Attitude

The Port officials are of the view that before the reforms, there existed only general cargo berth, no off dock terminals and no scanning machine.

In addition, the Port authorities are of the opinion that after 2002, the Tema Container Terminal was created, dedicated container terminal and the improvement in cargo clearance through the GCNet.

Moreover, the Port officials opine that the reforms are on-going.
The berth occupancy rates are fluctuating. There is no standard rate for berth occupancy. So, the percentage depends on the volume of trade within a particular period or season.

Further, Port authorities are of the viewpoint that insufficient capital, lack of trust among custom officials and retrenchment of workers due to privatization of stevedore activities, are some of the challenges to the reforms.

Practice

Port officials are recommending that, more space should be created for more cargo by destroying unused ware houses and offices.

Also, they suggest that, the Port should expanded sea-ward for bigger ships to be accommodated.

In addition, the senior staff propose that the kpone project be hasten up for the lorry park which is also in line with the creation of distriparks and districentres.

Moreover, the Port officials recommend 24 hours of uninterrupted clearance operation at the Port.

From the above discussion in this section in relation to the objectives of the study, one can say that some of the objectives have been answered. This is in relation to the challenges to the reforms and what is still to be done. The berth occupancy though it is fluctuating, has had a marginal improvement.
5.4 RECOMMENDATIONS

This has been divided into three parts. The first part gives recommendations gathered from questionnaire; the second part presents recommendations gathered from interview and the last is the researcher’s recommendations.

5.4.1 SHIPPERS

The respondents outlined the following as recommendations;

1. More scanners should be installed at the various off dock terminals to reduce delay caused by so much physical inspection.

2. The need for more exit points for trucks especially where the scanning machine is situated, because only one exists which promotes delay.

3. Stakeholders should also be involved to take better measures to fight the problem of congestion.

4. Infrastructural development in the domain railway, more berths and cargo handling facilities.
5.4.2 PORT OFFICIALS

The staff from the Monitoring and Control Department of GPHA also proposed the following:

1. More space needs to be created by destroying some offices and unused warehouses inside the port because the issue of space is becoming a problem.

2. There should be sea-ward expansion of the Port for the creation of more dedicated berth with deeper draughts which can accommodate bigger ships.

3. Creation of distriparks and districentres for transit vehicles.

4. Cargo clearance at the Port should be 24 hours of operation (no interruption of operations).

5.4.3 RESEARCHER’S RECOMMENDATION

1. Introduction and use of punitive measures to discourage shipping lines from delaying submission of documents and inadequacy in handling containers which often leads to loss.

2. Collaboration between Ports to share information and experiences. What is good practice in one Port may be good in another Port to enhance efficiency.
4. Adopt total logistic chain in the Port. This is in relation to the improvement of the railway system to ensure proper delivery within the hinterlands and the transit corridors.

5. Increase storage capacity. This deals with the creation of more space for cargoes entering the port.

6. Building of new berths. It is in relation to the seaward expansion of the Port. There is the need for more berths with deeper draft to accommodate bigger vessels. This is to enable the Port to cope with the increasing traffic.
BIBLIOGRAPHY


20. [www.nigerianports.org](http://www.nigerianports.org) (Nigerian Port Reforms)
APPENDIX 1

Berth occupancy from 2003-2008

Source, Claims, Documentation, Research and Development (GPHA)
APPENDIX 2

INTERVIEWER'S GUIDE (staff of GPHA)

1) Background of interviewee

2) How many reforms have been undertaken since organization became GPHA?

3) What were the reasons behind the reforms?

4) Are all the reforms part of the Gateway Project?

5) Has congestion ever been a central issue in the reforms?


7) What has been the situation since 2002?

8) Are the reforms over or they are ongoing?

9) What was the berth occupancy from 1995-2002?

10) What are some of the challenges to the reforms?

11) What is still to be done?
I am a graduate student of the Regional Maritime University researching into **Reforms to Reduce Congestion at Tema Port**. The research is in partial fulfillment of part of the requirement for the award of an MA Degree. You have been specially selected to assist this study. Your responses will be used solely for the purpose of this research and information given will be treated with utmost confidentiality. Thanks for your co-operation.

**BACKGROUND**

1) Gender Male □ Female □

2) Age < 30 □ 30-39 □ 40-49 □ 50-59 □ 60+ □

3) Education JH □ SS □ SH □ Tertiary □

4) Working experience (years) 0-4 □ 5-9 □ 10-14 □ 15-19 □ 20+ □

5) Type of Business; Exporter □ Importer □ Both □

6) Company □ private business □
KNOWLEDGE, ATTITUDE, PRACTICE

1) Select from the list below one of the new activities you think could reduce congestion.

a) Dedicated container terminal

b) New dock container terminals

c) Improvement in clearance procedures

d) All of the above

e) Others specify__________________________

2) What was the main reason for all the activities?

a) Insufficient space to keep cargo

b) Inadequate handling facilities

c) Less number of berths to take bigger ships

d) Longer time to clear cargo

e) All of the above

f) Others specify__________________________

3) Has congestion ever been a serious problem to you? Yes ☐ or No ☐
4) Has the reform helped to reduce the congestion? Yes □ or No. □

5) How many days did your good take to leave the Port before the reforms (1995-2002?)

a) 25days
b) 14days
c) 10days
d) Others Specify ____________________________

6) Since 2002 how many days do your goods take to leave the Port?

a) 7 days
b) 2 days
c) 1 day
d) Others Specify ____________________________

7) How do you rate the improvement in decongestion?

a) Excellent  b) Satisfactory  c) Unsatisfactory

8) Is there any improvement in clearance procedures? Yes □ or No □

8b) If yes, in what direction? ________________________________
9. How do you consider the one shop documentation?
   a) Very effective b) Effective c) Ineffective

10. Have the reforms addressed all the issues of congestion? Yes □ or No □
   
10b) If yes, which of the issues have been addressed?

10c) If No, which of the issues have not been addressed?

11. Identify some negative aspects of the reforms?

12. What other measures do you think can be implemented?

12b) How do you think it can be implemented?