UNIVERSITY OF GHANA

ASSESSMENT OF THE STATE AND PROSPECTS OF THE PSC TEMA SHIPYARD LIMITED

BY

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JULY, 2012
DECLARATION

CANDIDATE'S DECLARATION

I, Alfredos Nii Anyetei, hereby declare that this research project is my own original work and has never been submitted to any academic institution for examination. All references cited have been duly acknowledged.

Candidate’s Signature..................................................

Date. .................................................................

02 Sept. 2013

SUPERVISORS' DECLARATION

We hereby declare that the preparation and presentation of this research project was supervised in accordance with the guidelines on the project work laid down by the University of Ghana and the Regional Maritime University.

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11 - 9 - 2013

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Name.................................................................

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Date. .................................................................

05/09/2013
DEDICATION

This study is dedicated to God, first and foremost,
For his ever-abundant grace and protection over my family and me,

And to my parents; Nii Magnus Anyetei and Agnes Aggor for their inspiration and support,

I love you all very much.
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May God bless you all abundantly.
ABSTRACT

The study sought to assess the state and prospects of the PSC Tema Shipyard Limited. To achieve this objective, the socioeconomic characteristics of respondents were analyzed. Also, the attitude and perception of the employees were evaluated whilst the employee’s motivational level and the industrial environment of the entity were also investigated. In all, a total number of sixty employees including four management representatives as well as a representative of the workers’ union were contacted. Descriptive statistics was used to describe the socioeconomic characteristics of the respondents and the results show that the majority of the respondents were males. All the respondents strongly upheld that lack of motivation affect their performance. Meanwhile most of the respondents rated recognition as the main motivational package which can promote high team performance. It was deduced from the analysis that, good working environment and attractive wage also play a role in motivating employees to perform well. It was established that the company had been in a bad state and the wellbeing of workers had also been totally ignored to the extent that they found it difficult coping with the current economic situation in the country. Meanwhile most of the respondents vehemently agreed that lack of motivational incentive no doubt generates absenteeism and employees turnover. The impression established is that the situation at the shipyard does not exhibit a healthy industrial environment. It was recommended that management should standardize the workers motivation policies to reflect the desired needs of the workers. Workers salaries and wages should be carefully handled to reflect modern day package. The government needs to make the needed investment into the company to enable the shipyard improve facilities to take up modern construction and fabrication works. The government must also take steps in addressing organized labor’s grievances to ensure good and healthy industrial environment.
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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

According to Watson (1994), the experience of individuals within social settings is interpreted and given meaning by the actions and communications of the fellow constituents to the social setting. In construction sites, the discourse, language and behaviour of the participants form a medium through which the organization expresses itself. For individuals within a site setting then, the sense they make of their experience, and importantly, the responses they give to their experiences is influenced by the discourse through which they experience the organization. “Meaning comes from adherence to key values, with people left free to make choices over particular actions.” (Watson 1994:11)

In industrial settings, higher productivity means seeing the final result sooner, which in turn creates satisfaction. According to Borcherding and Oglesby (1975), job dissatisfaction can be one factor that will increase costs, produce time delays and generally reduce productivity on most types of projects. One way that construction management can influence productivity is by determining how smooth the work will flow and how much work can be accomplished. Another more important way that construction management influences productivity is by how it influences worker’s attitude, which is a major element in worker motivation and determining how much work will be accomplished.

Nevertheless, the mode of sea transport which has shipping embedded in it as a demand derived trade has brought in its wake what is referred to as globalization. The base material by which this
trade takes place is the ship or vessel. This vessel is designed and constructed by experts over a period of time taking cognizance of several factors, chief of which are safety, security and environmental protection. The designing of the ship is usually done by experts called naval architects. Another group of technical experts, known as classification societies, certify from the beginning of construction through the various stages to the end of the ship-building. These bodies ensure that all rules governing ship-building have been adhered to, most significantly those pertaining to safety and security to prospective crew and cargo aboard.

There are quite a number of ship-building yards in the world, most of which are in Asia. These shipyards cater for both construction and repairs of vessels. It is a very lucrative business even though it is quite exceptionally expensive to build one vessel. There are not many countries in Africa that construct and or undertake repairs on shipping vessels. Fortunately in Ghana, we have one ship-building and dry-docking company located just adjacent to the Port of Tema. This company is known as the PSC Tema Shipyards Limited. There is also a dry-docking facility for ship repairs sited just within the precincts of the Port of Takoradi.

Many advantages could accrue the Ghanaian economy should the PSC Tema Shipyards Limited make use of all the resources at their disposal. They can even acquire more sophisticated machinery to augment and assist in the improvement of this very much untapped industry. Judging from the benefits that ship-owners derive from running fleets of ships as business, the Ghanaian government should consider all means by which the ship-building industry could be re-started and to back the investment with some form of guarantee for business. It is in this light that the PSC Tema Shipyards Limited comes under the microscope for scrutiny.
The Tema Shipyard and Dry-dock Company (TSDC) was established in the 1960s by the first Government of Ghana after independence. It is located on approximately 48.45 acres of land adjacent the Port of Tema. It has over 100,000 DWT (deadweight) dry-docking capacity and has been in operation all this while but practically undertaking repairs and refurbishments of large sea-going vessels. The Government of Ghana divested 60% of her shares in 1996 to the Penang Ship-building and Construction (PSC) Group from Malaysia. Hence, the company came to be known as the PSC TEMA SHIPYARD LIMITED with the PSC Group at the managerial helm since then. Under the agreement, PSC Group was to rehabilitate the shipyard and also procure such funding as was reasonably required by the company for the operations of the TSDC. They have expertise in ship-building and repair, marine, oil and gas and civil engineering.

PSC Tema is diversifying from its core business of ship repair by expanding its efforts and resources into ship-building and develops additional support services in container repairs, fabrication works and mining. With an excellent industry track record, vast experience in maritime and steel fabrication and improved yard facilities, PSC Tema is able to service both commercial and naval clients. With ongoing transfer of technology and resources from PSC Group, PSC Tema is well poised to be a world class player. With the current trends in maritime transportation and its related issues vis-à-vis the potential the ship-building industry possesses, it is imperative to enquire the prevalent conditions of the shipyard and dry-docks. It would then present the opportunity to prescribe the various ways, if any, that could be suggested to improve the situation. One of the main aims for this research is to seek pragmatic methods that could most appropriately position the PSC Tema Shipyard Limited to commence the construction of sea-going vessels.
In the meantime, we must know the company's mission and vision which would also direct the needed approaches in attaining the set targets of such a promising enterprise. We must find out the present level of employment, number of employees and their expertise, their individual thoughts and plans for the shipyard, the kinds of problems being faced, the present condition of machinery for ship-building business and the way forward.

This notwithstanding, productivity is one of the most important factors affecting the overall performance of any organization, large or small. At the micro-level, improved productivity decreases unit costs and serves as an indicator of project performance. At the macro-level, improved productivity is a vital tool in countering inflationary effects and determining wage policies. Improved productivity is thus always counted among the basic means of solving economic problems. It is increasingly recognized that capital alone is an inadequate means of producing more wealth or for starting a business in developing countries. Improved productivity is also required; if all production inputs are well utilized, capital improvements and enhanced productivity go hand in hand. In other words, increased productivity enhances investments without any burden to governments. In addition to the advantages at this fundamental level, the advantages of productivity improvement can be summarized as follows:

- Decreased total cost and duration of production
- Improved quality
- Growth in market share of product
- Increased employment and wages without inflationary pressures
- Enhanced purchasing capacities among employees, employers, and customers.
1.2 Problem Statement

A feature's article filed published in the Wednesday, April 21, 2010 edition No. 18205 of the Daily Graphic, revealed that twelve years into the execution of the agreement between the Government of Ghana (GoG) and Penang, there have been numerous public outcry that no attempt has been made by the majority share holder (Penang) to fulfill its part of the contractual agreement as stipulated in clauses 7.3 and 7.4 (a) and (b) as above refers. The ownership of the majority shareholdings changed hands from Penang to Boustead Heavy Industries Corporation Berhand in 2006 under circumstances that was not clear to the GoG and many other observers. This change in ownership did not redeem this negative public perception.

Furthermore, the core business of shipping in Ghana has been bedeviled with its own problems, especially with the phasing out of the national shipping line, the Black Star Line. Economic activities with other countries are firmly and heavily boosted by maritime transport and more so when a favorable trade pact exists between countries. The alarming rate of increasing unemployment and seeming rampant retrenchment of people from organizations really calls for great concern even at the end of the first decade of the 21st century (2010). For our country, Ghana, to benefit at a maximum level from global trade liberalization, many opportunities abound for the teeming unemployed youth to be trained to work in this yet-to-peak industry.

Ghana can boast of experienced mariners, navigators, surveyors, marine engineers and other maritime professionals, both serving and retired, who could help train younger people in this regard, to take up the mantle in the foreseeable future. The government, together with the private investors, can pool resources to re-activate the only ship-building yard in West Africa and one of the largest dry-docks on the African continent.
The PSC Tema Shipyard Limited as it stands today would have boasted of much different machinery that aids ship-designing and ship-building for the maritime industry but those available currently are outdated and have become primitive. It is therefore essential to query at this time, the state and prospects of the PSC Tema Shipyard Limited, the value for Ghana’s maritime development.

1.3 Research Objectives

The main objective of the study is to assess the state and prospects of the PSC Tema Shipyard Limited. Specifically, the study seeks to assess the possibility of ensuring the profitability and viability of the venture where the productivity of the activities of the shipyard would be analyzed. The attitude and perception of the employees on the shipyard would be evaluated as well. In addition, the study would investigate the employee motivational level and industrial environment of the entity.

In summary, the prospects of the shipyard itself with regards to profitability as well as the workforce-related issues form the objectives of the study.

1.4 Research Questions

The foregoing leads us to search for answers as to what the possibility of ensuring the profitability and viability of the venture would lead to. We would get to know how productive the activities of the shipyard are as well as what the attitude and perception of the employees have with regards to their working environment. Again, what is the employee motivational level and how does the industrial environment of the entity look like would be found out.
1.5 Justification for the Study

In an effort to understand the ports and shipping industry better, one’s mind is occupied with the thoughts of the workings or activities of the technical department that sees to the repairs done on ships that especially call at the Port of Tema. It is worthy to note that like automobiles that ply our roads and visit mechanic shops or other service centers for bodily or engineering repairs, seagoing vessels do visit dry-docks for routine maintenance on many portions of the vessel. This is geared towards achieving better efficiency of the vessel.

Again, relative to the automobiles industry, the shipyard is equipped with various sophisticated heavy duty machinery to carry out an assemblage of various parts to build a vessel. It is against this belief that I visited the facility to ascertain the potential viability of the entire outfit given the machinery and equipment at their disposal that seemed to have been neglected for a very long time. Though these equipment were outdated, a study is required to find the reasons why these machinery are available but had not been used for the purpose they were intended for.

Additionally, given the fact that not so much is probably known about the potential of the PSC Tema Shipyard Limited, this research study could be one avenue through which that establishment and its activities would be brought to the limelight, perhaps once more.

Lastly, it is imperative to learn from the current management of the PSC Tema Shipyard Limited, their plans for the yard in the middle-to-long term. This would help to aggregate the technical and logistic requirements needed to revamp the whole enterprise for maximum profitability.

With the foregoing firmly grounded, there is no doubt that there would be magnificent results from such a research study. The knowledge from this project would, hopefully, help to advance
the course of the yet-to-be-tapped ship-building industry and place Ghana on the path to relaunch
the ship repair and building facility.
Strategically, we must be anxious to know the long-term plans to set the shipyard to be vibrant
and viable in ship-building business in order to contribute positively to the economy. With the
much trumpeted discovery of commercial quantities of oil in Ghana’s territorial waters, we can
join the global oil trade and take even more active part by going on modern industrialization with
the construction of sea-going vessels besides the exportation of processed or finished goods to
foreign markets outside the continent. This would enable us trade for more capital or revenue
inflows into our economy. Ghana stands to benefit immensely from industrialization in this
regard should the funds generated be channeled into the right sectors of the economy. It is
significant to note that basically, the emphasis should be on ship repair and maintenance first
before shifting focus to design and construction much later.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

Seaports constitute the hub of the maritime sector of a nation's economy. For one thing, they are generally regarded as gateways between their hinterlands and forelands - the overseas territories to which they are linked by commerce and other elements. They thus serve as conduits in the exchange of merchandise between opposite ends of the intervening oceans. Moreover, without them, shipping and ship-building cannot exist and it is the capacity of a port that determines the volume and regularity of its shipping (Olukoju 1996b).

Following from the above, a critical issue that is germane to this study is the state and prospects of the PSC Tema Shipyard. A related issue is the role of human agency in these developments. We may note that the development of the maritime sector and indeed, of the wider economy, reflects the degree of the harnessing together of technological, political, economic, physical and other factors. This is most clearly manifest in the formulation and implementation of policies which achieve port (re)development and foster shipping and industrial growth. Government is more suited to this sort of intervention because it is capable of formulating policies reversing the natural disadvantages suffered by certain ports and regions. Furthermore, governments in many countries now take an active part in the ownership of commercial shipyards (i.e., the United Kingdom, Sweden, Italy, Spain, Portugal, Netherlands, Taiwan, Malaysia, India, Israel, and the Communist bloc nations).
2.1 Characteristics of the Ship-building Industry

The ship-building industry refers to the sector involved in the construction, launching, and outfitting of watercrafts, while the ship repair industry deals with the overhaul, improvement, alteration and reconditioning of water vessels (PDCP 1972). According to the German Shipbuilding and Ocean Industries Association (2003), the world ship-building industry maintained its high production level for the previous two years in merchant vessel new building in 2002. Still, Japan and South Korea are dominating, each having market shares of 31%. Chinese shipyards expanded their share to over 7% while the Germans maintained their fourth position in the global ship-building sector with a share of 5%, making them the leaders in Europe. EU countries' share of the global market dwindled to 17%.

Frankel (1996) revealed that world ship-building is a cyclical industry with fluctuating demand. It has experienced over nine major cycles, each with more than a 40-percent reduction in demand, since 1896. Three of these cycles have occurred since World War II alone. From 1930 to 1933, for example, there was a decline of 84 percent in ship-building output. Again, at the end of World War II, between 1944 and 1947 a decline of 85 percent was experienced because of the glut of ships built for the war. More recently, a worldwide decline of 60 percent occurred from 1975 to 1979. In addition, smaller fluctuations of 10 to 20 percent every 7 to 10 years have become quite common.

The ship-building industry is an assembly industry that is both capital- and labor-intensive. Large capital facilities are required, and major components usually are purchased from many sources.
The assembly process itself, using a mixture of large and small, and single and complex components, is very labor-intensive. As an assembly industry, ship-building has major and significant linkages to many other industries, such as iron and steel, machinery, electrical, and electronic manufacturing. Its assembly process can be expanded to include component, and even machinery, manufacture or contracted to include only ship assembly processes. As a result, integrated shipbuilders with close relations to linkage industries can often more effectively weather large cyclical fluctuations than ship builders who lack integration with their major supplier industries.

Most foreign shipbuilders are gearing up for a revival of the industry by the introduction of more automation, robotics, modern measurement and control techniques, computerized management methods, and facilities that provide for greater product flexibility. Because ship-building is considered an important economic and defense asset, and also because it affects many related or interrelated industries and employment, many governments support their ship-building industries directly or indirectly.

Dealy (1997) posits that total employment in European, Japanese, and Korean shipyards is healthy because there are around 200,000 workers who produce approximately 85-90 percent of the world's commercial ships. The number of commercial ships on order or under construction in the world market rose 15 percent over the previous year. This increase followed an upward trend in new ship construction since 1991. The world order book for merchant vessels 1,000 gross tons (gt) and over consisted of 2,655 vessels totaling 48.5 million gt as of December 1995 (U. S. Department of Commerce 1996).
Ship-building firms in South Korea, Japan, and China, including Taiwan, accounted for the nearly two-thirds of the commercial market share figured as a percentage of gross tonnage; Europe hold nearly 20 percent of the commercial market share, with Germany holding the largest percentage; while the United States ranks 23rd among major ship-building nations. U.S. shipbuilders could not cope with foreign competition in the overall level of technology used specifically in the areas of ship construction, design and engineering, steel work, outfitting, and organization and operating systems (A&P Appledore, 1995). Moreover, Frankel (1996) states that the US shipyards' labor productivity and relative level of applied technology are lagging foreign competition.

In 1984, the world's largest shipyard was in Korea. Operated by the Hyundai Group, the yard's cumulative deliveries reached 10 million deadweight tons (dwt). It was a remarkable achievement because it had been accomplished in ten years by a company that had no prior experience in ship-building; Korea was initially underestimated as a potential competitive threat by both Japanese and Western European shipbuilders (Anderson, 1986). But Korean yards were able to obtain training and technology from competitors, and as a result of the success, competitors in other countries continued to suffer. The success also drew charges of dumping and over-subsidization, which was denied by the Koreans (Anderson, 1986). In 1984, when Hyundai marked its 10 million dwt milestone, the yard had become the most vertically integrated supplier in Korea with activities that included ship-building, manufacture of marine engines, construction of cranes, containers and marine equipment, and ship owning, ship repairing and ship breaking (Anderson, 1986).

Meanwhile, Dealy (1997) posited that if shipbuilders want to be competitive in the international commercial market, they have to adopt a commercially oriented accounting system. Currently, in
the US, government cost-accounting requirements are far more numerous, complicated, and manpower intensive than those required in commercial ship-building. Therefore, to perform commercial work, the shipyards need to significantly reduce their large documentation and accounting teams. For a shipyard to be profitable in the international commercial ship-building market, shipbuilders must overcome the technological advantage enjoyed by foreign competitors. Moreover, management must consider streamlining the organization.

Further, shipbuilders must refocus their attention on their labor force. The greatest impediment to a country where there is an increasing market share in commercial ship construction is that large shipyards are not globally competitive. Any shipyard’s survival depends on their viability in the global commercial market. To regain a dignified market share, shipyards must find the right niche in the commercial market to take full advantage of current opportunities and their own greatest talents. (Dealy, 1997)

2.2 History

The world's earliest known dockyards were built in the Harappan port city of Lothal circa 2400 BC in Gujarat, India. Lothal's dockyards connected to an ancient course of the Sabarmati river on the trade route between Harappan cities in Sindh and the peninsula of Saurashtra when the surrounding Kutch desert was a part of the Arabian Sea. Lothal engineers accorded high priority to the creation of a dockyard and a warehouse to serve the purposes of naval trade. The dock was built on the eastern flank of the town, and is regarded by archaeologists as an engineering feat of the highest order. It was located away from the main current of the river to avoid silting, but provided access to ships in high tide as well.
The name of the ancient Greek city of Naupactus means "shipyard" (combination of the Greek words ναὸς naus ship, boat and πήγνυμι pēgnumi, pegnymi builder, fixer). In the Spanish city of Barcelona, the Drassanes shipyards were active from at least the mid-13th century until the 18th century, although it at times served as barracks for troops as well as an arsenal. During its time of operation it was continuously changed, rebuilt and modified, but two original towers and part of the original eight construction naves remain today. It is currently a maritime museum.

Ships were the first items to be manufactured in a factory, several hundred years before the Industrial Revolution, in the Venice Arsenal, Venice, Italy. The Arsenal apparently mass produced nearly one ship every day using pre-manufactured parts, and assembly lines and, at its height, employed 16,000 people.

However, the Tema Shipyards and Dry-dock Corporation (TSDC) were built during the construction of the Tema Harbour as part of the overall infrastructure requirement for the country's maritime economic development. The Shipyards have two graven docks and a slipway. One of the Shipyards' graving docks is the largest dock between the geographical areas of the Cape of Good Hope (South Africa) and the Southern tip of Europe. As such the Shipyards is strategically placed to take advantage of dry-docking and repair needs of ships up to 100,000 deadweight (DWT) plying the western shoreline of Africa.

Built in the 1960s, before the advent of containerships, when the capacity of an average general cargo ship was 10,000 DWT, and the Arab-Israeli war had not influenced the construction of the modern super oil tankers, it was capable of docking the largest oil tankers of the era. The strategic significance of the Shipyards as part of the country's overall maritime economic
development is never in dispute. Consequently, there is no option but to improve the standard of operations in the Shipyard to enhance its efficiency and make it contribute effectively to the national economy.

2.3 Divestiture

In order to enhance efficiency, the Government of Ghana (GoG) in 1996 divested 60% of its interest in TSDC. The main purpose of the divesture was to attract a strategic investor who would be able to raise capital, as a partner to GoG to physically transform the aging Shipyard into a modern, well equipped one, which should be the first and obvious choice for any ship owner operating on or passing by the entire shoreline of the western coast of the African continent.

2.4 Joint Venture Agreement

It was against this background, that the GoG settled on the divestiture option and executed an agreement with Penang Ship-building and Construction SDN BHD (Penang) as its partner in the divestiture. The aims and objectives of the GoG were clearly stated in the Joint Venture Agreement (JVA) signed on the 8th November 1996 between the GoG and the Penang Shipbuilding and Construction SDN BHD (Penang).

2.5 The Business of Ship Building

Most people tend to view ship construction from a technical perspective: requirements, design, engineering, analysis, production planning, and production. Sometimes forgotten is the fact that
ship construction is a business venture and must succeed financially as well as technically. To succeed commercially, shipyards must be able to accurately estimate costs. Cost estimating is necessary for the bid process, for change orders, and for trade-off studies. Numerous cost estimating approaches exist. They are based on extrapolations from previously-built ships, detailed bottoms-up parametric and integrated physics-based analyses.

Cost estimators may lack timely technical information and face data inconsistencies. Ship engineers and naval architects commonly lack feedback on the cost consequences of their technical decisions. Managers often lack information denoting the level of confidence in cost estimates upon which they must make business decisions. Finally, many approaches to cost estimating are mysterious and not formally validated (each cost estimator has his own black book), complicated (too time consuming to be of use to decision-makers), or difficult to use (steep learning curve).

Because ship-building is considered an important economic and defense asset and also because it affects many related or interrelated industries and employment, many governments support their ship-building industries directly or indirectly. Furthermore, governments in many countries now take an active part in the ownership of commercial shipyards (i.e., the United Kingdom, Sweden, Italy, Spain, Portugal, Netherlands, Taiwan, Malaysia, India, Israel, and the Communist bloc nations).
2.6 Direct, Indirect and Induced Impacts

By considering various channels of impact, economic multipliers may be calculated for three distinct areas of the ship-building industry's overall economic impact: direct effects, indirect effects, and induced effects. Direct impacts are employment and activity in the sector itself—the ship-building industry. Indirect impacts are defined as "employment and activity supported down the supply chain, as a result of a sector's companies purchasing goods and services from" suppliers (Oxford Economics, 2009, p. 14). For example, when a shipyard is building a new Littoral Combat Ship (LCS), it may order a fire-control system to be installed that was designed in California. That same system may have been built with components from Washington State. The purchase of various equipment and supplies from vendors, as well as jobs and sales at those vendors' offices, may be quantified as indirect impacts for investment in the ship-building industry.

Finally, induced impacts are of pivotal economic importance to the study of ship construction. Oxford Economics defines induced impacts as "employment and activity supported by the consumer spending of those employed in the sector or in its supply chain" (Oxford Economics, 2009, p. 14). For instance, the manufacturer of a component ordered by the shipyard for construction of a new vessel has additional revenue from the sale of that component; that revenue is spent in his local economy buying everyday goods and services, which benefits local economic growth.
2.7 Overall Performance

The overall measure of financial competitiveness used for ship-building yards is break-even cost per Compensated Gross Tonnage (CGT). In this case, break-even cost is defined as the amount of income that the yard needs to break even after it has purchased equipment, materials and other bought-in items. Man-hour per CGT is used as the overall measure of productivity. The man-hour calculation includes hours spent by all direct and indirect staff and employees who contribute to the ship-building effort.

These measures allow the performance of individual shipyards to be compared even though they may be building different types and sizes of ships. They also allow the performance of a yard to be easily related to the current and future requirements of the market. CGT is a normalized measure of work content that is calculated by multiplying the gross tonnage by a factor that is representative of the complexity of the vessel. Ships that have a low level of complexity, such as bulk carriers, have lower factors than more complex vessels such as cruise ships and navy combatants. The system has been developed and refined over more than thirty years by leading ship-building organizations under the umbrella of the OECD. Factors have been developed for the main ship types but when a yard has been building unusual vessels, new factors may need to be calculated to support the benchmarking process.

In general, the performance assessment is based on aggregated output over a three-year period. However, in some cases, it is not possible to do this and the performance achieved on an individual ship is calculated and taken to be representative of the performance of the yard as a whole. As these measures are inappropriate for ship repair and conversion, overall performance
for these sectors is expressed in terms of a number of measures that relate to a yard’s competitiveness and profitability. The choice of measures is influenced by the availability of data for comparison purposes. The measures address output, enquiry response times, customer service, tariffs, manpower issues and overall profitability. They include such factors as:

- labor cost;
- charge out rates;
- time taken to prepare bids;
- cost of carrying out a range of routine work;
- time taken to carry out routine work;
- key financial ratios;
- utilization of manpower;
- output;
- delivery reliability;
- quality;
- customer satisfaction;
- time taken to prepare invoices;
- ability to keep within budget.

The ability to estimate ship construction costs is necessary for the commercial success of a shipyard; too high an estimate will place the shipyard out of the competitive range and too low an estimate will result in a financial loss and possible bankruptcy. In practice, an approximate cost estimate is developed during initial discussions with a potential customer. This estimate is refined as the discussions progress and the customer’s requirements are defined in greater detail.
The refined requirements result in higher levels of technical detail (e.g., concept design, preliminary design, contract design, and a specification of increased detail), which enable increased accuracy of the cost estimate. This process culminates in a cost estimate upon which the shipyard can base a fixed price bid.

Developing and refining a cost estimate is a complex and time-consuming process. Obstacles to success include faulty technical information (e.g., obsolete, incomplete, inconsistent), lack of communication among departments (e.g., rivalries, lack of peer-to-peer communication channels, secrecy), lack of a clearly defined process (e.g., ill-defined lines of authority, no freeze dates on design versions, different data formats), and problems with analytical tools (e.g., incompatible software, varying levels of detail, lack of features, too complex, not user-friendly, not capable of being tailored to the needs of the shipyard or to specific projects). Overcoming these obstacles and producing viable cost estimates requires knowledge and skills of management, vendors and most importantly, numerous shipyard departments, including engineering, production, planning, estimating and marketing.

2.8 Summary of Market Share – All Ship Types

According to ships data’s collected from Tolofari (2010) research report, Japan, China (including Hong Kong), the Republic of Korea, Denmark and Sweden are outstanding among the nations with maritime services for cross trades. Other major trading nations are major importers or users of shipping services while maintaining a relevant ownership position and to lesser extent a national flag – for example the United States come into this group. According to UNCTAD (2004) report the United States account for 13% of world trade while owned 5.9 % of world
tonnage with only about 1/4th of such tonnage flying the national flag. Similarly France account for 0.5% of world trade and 3.0% of tonnage ownership with flag having a share of 1/2 of this percentage. Korean yards continue to price ships below cost while others are trying to improve their bottom line. Most major Korean yards managed to show a profit for 2001, due to high sales volume at expense of price.

2.9 Demands for ship-building

Research and Development Forecast under analysis of cargo volume and correlation with fleet ownership generated has also been a useful tool for various decision-making processes to meet market and demands call in maritime industry as well as increased productivity and cost reduction in the construction of ships. So far, because of the complexity of the maritime industry- maritime structures and maritime transport services are largely interrelated, therefore, demands to meet productivities, efficiency of the construction of ships, technology and improvement of competitiveness depends on the following components.

2.9.1 Supply

Tonnage supply in the oil tanker sector increased in 2004 by 12.3 million dwt to 298.3 million dwt as new buildings delivered outweighed tonnage scrapped, laid up or lost. This, combined within increased shipments and extended haulage, brought down overcapacity to 3.4 million dwt or 1.1 per cent of the total world tanker. In 2004, the total dry bulk fleet supply increased by 27.6 million dwt to 325.1 million dwt. Over tonnage for this type of vessel reached 2.1 million dwt, equivalent to 0.6 per cent of the dry bulk fleet. For the conventional general cargo fleet, overcapacity stood at the same level as in the previous year, with supply exceeding demand by
only 0.7 million dwt or 1.6 per cent of the world fleet of this sector. The surplus tonnage of
general cargo vessels has been under 1 million dwt for the last four years.
(http://www.experiencefestival.com/wp/relevance/oladukun-sulaiman)

2.10 Differences between Military and Commercial Ship-building

If the UK commercial market is to expand, military shipbuilders will presumably have to begin
building commercial ships, because the commercial industrial base is so small. The construction
of all but the most complex commercial ships, however, differs dramatically from that of
warships along several dimensions:

• **Ship size and complexity.** The average commercial ship is about three times as big as the
  average military ship and thus cannot be built in facilities sized for military ships. At the same
time, the average commercial ship is much simpler (e.g., no weapon system) than the average
military ship.

• **Acquisition process.** Commercial ship owners are accustomed to much simpler contracting,
  designing, construction, and testing processes than those that pertain in the military world.

• **Design and construction.** Commercial ships are, for the most part, large steel boxes with
  relatively small and simple propulsion and navigation systems. Designing military ships takes
longer because of their high equipment density, the large number of sophisticated systems
involved and a desire to at least match the current state of the art. Construction of commercial
ships is mostly a volume business that depends on simple steel forming and welding processes
repeated over and over. The construction of warships involves the use of exotic materials, the
installation of large amounts of high-value, sensitive equipment, and the satisfaction of more
exacting standards. The testing process for military ships is more involved because it has to
reflect the high technology and technology density of the ships and take account of multiple possibilities for mutual interference of advanced electronic systems.

- Workforce character. In the United Kingdom, military ship-building requires a much higher ratio of white- to blue-collar workers than that found in commercial ship-building. This is because military ship-building demands much more engineering support, as well as the need to interact extensively with the government oversight team. Military ship-building also requires more highly skilled and specialized workers. Such high overhead and high skill base cannot be sustained by any yard that expects to build typical commercial ships at competitive prices.

2.11 Ship Design

Meanwhile, according to IFAW (2009), shipbuilders can also apply different ship designs to improve energy efficiency. One way that this effect can be obtained is by reducing a ship's friction or resistance in water, either through ship modifications such as the application of more efficient propeller designs, or air-lubrication systems, or by entirely re-designing the hull. Hull designs can be optimized for maximum energy efficiency by minimizing friction and wave resistance. This process typically relies on advanced research tools such as computational fluid dynamics (CFD) which can be used to alter the hull's design in a computer-simulated environment. Besides lowering the friction of the ship's hull, this technique also allows for optimizing hull designs across a number of other parameters, including stability, safety, noise and vibration.
2.11.1 Building Greener Ships

It is suggested that in a life-cycle scenario the ship-building industry sits at the heart of improvements to both the economic and environmental performance of the shipping sector, and there are signs that efforts are already being made in this direction. A specific example is the Japanese NYK Super Eco Ship project which seeks to construct a zero-emission ship by combining a long list of energy-efficient technologies. This is a project that is partly a response to strong emission targets set by Japan (EPA, 2005a).

2.12 Productivity and Motivation

The productivity of construction workers in developed countries has been extensively explored over the past decades. For instance, as reported by Kaming et al (1997), Borcherding (1975) investigated the effective utilization of manpower in construction and again he identified potential factors influencing productivity on large projects; whereas Borcherding and Garner (1981) and Maloney and McFillen (1986, 1987) examined workforce motivation and productivity. Furthermore Thomas (1981) employed activity sampling to investigate labour productivity, while Horner et al (19876) elaborated on the relationship between management control and labour productivity. Allmon et al (2000) went ahead to study the U.S. construction labour productivity trends, 1970 – 1998. Goodrum and Haas (2001) while closing discussion on the work of Allmon et al brought up arguments to further establish the fact that construction projects are rarely similar and identical undertakings are virtually non-existent.


2.13 Employee Motivation

Motivation is the set of processes that determine the choices people make about their behaviours. According to Wilbert Scheer (1979) motivation is an abstract term; it imparts incentives that require a response on part of someone else to achieve a defined goal. In business, motivation is not synonymous with salaries; money is a means for accommodating the economic needs of workers. Motivation means an inner wholesome desire to exert effort without the external stimulus of money. Motivation is the ability of indoctrinating the personnel with a unity of purpose and maintaining a continuing, harmonious relationship among all people. It is a force which encourages and promotes a willingness of every employee to cooperate with every member of the team. To maintain it is to create and perpetuate the climate which brings harmony and equilibrium into the entire work group for the benefit of all who are involved – the company as a whole. Since the effective motivation comes from within, by motivating others, the manager can do more than create proper conditions that cause people to do their work with willingness and enthusiasm.

Motivating is the work managers perform to inspire, encourage and impel people to take action (Louis Allen 1986). To motivate the employee, the employee must be reached; to reach him there must be a completed understanding of the complexity of his make-up (Louis Allen 1986). Motivation efforts must be directed towards improving company operations. To be effective, however, they must also be designed to show benefits to the employee. In fact, motivation can best be accomplished when workers are able to merge their personal ambitions with those of the company. According to Robin and DeCenzo (1995; 271) motivation is defined thus. "the willingness to exert high level of effort to reach organizational goals, conditioned by the effort's
ability to satisfy some individual need". Campbell and Pritchard (1976) defines motivation as a set of independent and dependant relationships that explains the direction, amplitude and persistence of an individual's behaviour holding constant the effects of aptitude, skills, understanding of a task and the constraints operating in the work environment.

Schrader (1972) linked construction workers' need to motivation, and it was subsequently concluded by Thomas et al. (1990) that there is evidence supporting the existence of a linkage between an employee's motivational level and his individual performance. Atkinson (1964) defines it as the contemporary immediate influence on the direction, vigour and persistence of action. The relationship between the employer and employee must be one of understanding in order for the employee to identify himself with his work and with the business he is working for. Lack of motivation in return affects productivity.

A number of symptoms may point to low morale: declining productivity; high employee turnover; increasing number of grievances; higher incidence of absenteeism and tardiness; increasing number of defective products; higher number of accidents or a higher level of waste materials and scrap (William Day 1978). A motivated employee is a loyal employee and to be loyal implies that the employee supports the actions and objectives of the firm. The appearance of the job as a whole has, in fact a bearing on the willingness and quality of an employee's performance (Martin Bruce 1962).

According to McClelland (1961) individuals tend to develop certain motivational drives on the cultural environment in which they live and these drives affect the way people view their jobs.
McClelland suggests that achievement, affiliation, competence and power are four types of motivational drives that are found in individuals that are self-motivated and this may be the case for many construction workers. Motivation plays a part in enhancing industrial labour productivity (Smithers and Walker, 2000) and forms the basis for identification of the work environment factors. For example, Laufer and Moore (1983) advocated the use of financial incentive programmes to improve construction labour productivity, reinforcing Maloney's (1982) thesis of driving forces that led to productivity improvements. Autonomy and comradeship (Edwards and Eckblad, 1984) are also found to be important aspects that add to the way construction workers are self-motivated about their work.

However, much work in linking motivation and productivity relied on Hertzberg's sample involving mainly white-collar professionals (Mullins, 1996). Furthermore, Hofstede (1980) decried such motivational theories as merely point made about the ad nauseam emphasis on the managerial perspective in the quest to improve productivity.

John Borcherding and Clarkson Oglesby (1974) discovered that productive job creates high job satisfaction while non-productive job (one which fall behind schedule) produce dissatisfaction at all levels of the management/worker chain. The relationship is believed to be due to the very nature of construction, thus different from the one found in an office or factory setting which states that high job satisfaction leads to greater productivity. In construction, a worker, through his own efforts produces a highly visible, physical structure in which great satisfaction comes from completion. Therefore, jobs that are well-planned and run smoothly produce great satisfaction while jobs with poor management (with scheduling and planning problems). create
dissatisfaction. This illustrates the relationship between job satisfaction and productivity since; well-managed jobs are generally more productive.

A close review of all theories of human motivation reveal a common driving principle that people do what they are rewarded for doing. In general, the theories on motivation can be classified as: employee needs motivation through goal-setting, employee reward/incentives and reinforcement.

2.14 Incentives

The power of incentives is immense and pervasive, which is all the more reason they require careful management (McKenzie and Lee 1998). Heap (1987) has summarized a list of these advantages and disadvantages associated with financial incentives. A study by Sanders and Thompson (1999) showed that those companies that keep their program simple with the main objective of the program in mind (to benefit the project in reference to cost, schedule, customer service, environment and quality) are also deemed success of any incentive program.

Incentives are usually defined as tangible rewards that are given to those who perform at a given level. Such rewards may be available to workers, supervisors, or top managers. Whether the incentive is linked directly to such items as safety, quality or absenteeism, the reward follows successful performance (McKenzie and Lee 1998). Many companies feel that pocket money is no longer a good motivator. Others contend that small rewards such as toasters and blenders do not motivate. Many companies therefore offer profit sharing plans; or companies have abandoned monetary rewards and instead offer lavish trips to such places as Europe and some Caribbean islands.
Because of the expense, these programs require careful monitoring. Some companies merely reward good producers with an extra day off with pay. Other concerns reward top performers with better working conditions. Since incentive programmes aim to increase workers' performance levels, the measure used to decide if a reward has been earned should be carefully set. The performance level must be attainable or workers won't try to reach the goal. That fact underscores the usefulness of having workers themselves contribute their ideas about what constitutes a reasonable level of performance. An incentive scheme may also fail if the measure of success ignores quality or safety. An obvious problem exists when an incentive is applied to work that is machine paced. Incentives should be clearly linked to performance, but not all incentives can be clearly tied to objective criteria. Some incentive rewards are issued on the basis of a subjective assessment by a superior on the merit of particular workers. This method, in particular, may cause conflicts between workers, especially those who do not win rewards.

2.15 Performance

Despite development in the project management technology workers are still the key players in the projects. They determine the success or the failure of a project; they define project goal, they plan organize, direct, coordinate and monitor project activities. They also meet project goals and objectives by using interpersonal and organizational skills such as communication, delegation, decision-making and negotiation (Yvonne du Plessis 2003).

In project environments, people can be viewed as contributing problems and constraints or providing solution and opportunities therefore effective human resource management is a vital component of projects. The emphasis is on the workforce and how they can be managed and led
to increase their overall efficiency and effectiveness as individuals, as project teams and as the members of the organization. It is important therefore, that the right people enter the organization at the right time, which they are organized and motivated as individuals and work as a team to deliver according to the project goals and therefore recognized and rewarded for their achievements.

According to Yvonne du Plessis (2003) performance relates to caliber and commitment. Commitment is a person’s ability to complete a job successfully and caliber is a term used to describe the personal qualities and ability a person brings to the job. They are the qualities of skill that enables a person task, and give him the capacity to cope with the demands of the job. A person’s level of caliber is associated with their inmates’ ability and the amount of training and experience they have acquired. Therefore, performance of an individual depends on his willingness and drive to complete the task, which is his commitment. Unlike caliber, commitment is not a fixed commodity; it may change quite frequently in response, to conditions and situations the individual encounters. Performance = Function (Caliber x Commitment)

The manager must use an appropriate style of leadership to control the working environment in such a manner that the workforce will be committed to do the task and so motivate themselves to achieve the objectives of the project.

2.16 Ship-building Productivity

Ship-building productivity is the efficiency with which the industry transforms its raw and semi finished inputs into ships, using the classical factors of production —land, labor, and capital. The physical sites, fixed capital, and labor force of U.S. shipyards have a major impact on their
productivity. It is accepted generally that the productivity of U.S. yards is in many cases constrained by their sites and by the yards' inability to effect comprehensive replacement of often obsolete physical facilities. However, in many cases, phased facilities development plans are in place and low-cost, high-return pilot human resources programs are being applied. The productivity of U.S. shipyards is definitely increasing. The rate of increase, however, must be improved in order to compete internationally.

2.16.1 The Determinants of Productivity

Ship-building productivity is clearly a function of the interaction of:

- The length of the ship-building cycle;
- The number of man-hours required; and
- The extent of nonproductive peripheral costs.

2.17 The Number of Man-Hours Required

In a recent study by the Maritime Transportation Research Board of the National Academy of Sciences it was noted that, despite increasing mechanization, direct labor costs in U.S. shipyards are between 40 and 50 percent of the finished product cost, depending on type of ship (the) ratio (between labor and material costs) has remained relatively constant since 1961, increases in labor efficiency being largely offset by rising wages. High as these figures are, they tend to underemphasize the total labor component in ship-building. For a ship, labor costs constitute 70 to 85 percent of the value added.
2.18 Measurement of Productivity

Compensated Gross Tonnage (CGT) is the measure of work content that forms the basis of the productivity estimate. CGT is the international gross tonnage (a measure of internal volume) of the vessel multiplied by a compensation coefficient which represents the complexity of the vessel design. It allows the productivity of different shipyards to be compared even though they may be building different types and sizes of ship. This is because the work content is based on the characteristics of the subject vessel and is not expressed in terms of man-hours. The man-hours required by a particular shipyard to execute the work content are determined by multiplying the CGT for the vessel by the productivity of the yard in terms of man-hours per CGT. There are internationally agreed CGT coefficients for commercial vessels but none for naval vessels.

2.18.1 International comparison

Past competitiveness studies have established a correlation between use of best practice, performance and profitability. One of the most thorough of these was the 1992 EC Study of the Competitiveness of European Shipyards carried out by KPMG (UK) and FMI. This study proposed that each yard must maximize its use of resources by ensuring that it is using best practice appropriate to its size, type and individual business objectives. The research program and analysis demonstrated the link between the use of best practice and output performance.

2.19 Industrial Democracy

According to Okorodudu (1986) the concept of Industrial Democracy presupposes that employees or workers in any given enterprise ought and should be afforded an opportunity to
participate in matters and/or decisions affecting their overall well-being at the workplace. The concept of industrial democracy connotes *inter-alia* theories such as 'co-determination, workers representation and/or worker participation. The concept envisages a conducive platform for joint participation in the management and control of industrial corporations by all the parties involved within the industrial regime. The concept seeks to introduce a radical restructuring of the legal foundations of corporate management by accrediting workers the right to be represented by directors in the company in which they are employed.

All industry is interrelated, so much so that it could be said that there is really only one industry - the production of goods and services. Consider your coat and the processes necessary to its production. It required not only the labour and materials used directly in making it, but also the buildings and machinery where it was made. It required the production of the material and the dyes. It required the transportation and the planning for all the trips for all the materials in it, and for the machinery and buildings used in making them. The workers involved in all these processes could not have specialized in making cloth and dyes in building factories and textile machinery, in operating this equipment, in transporting goods, and the like, if other workers had not specialized in building houses for them, providing food for them, and offering the various other services they needed. In fact it is difficult to think of anything the workers do anywhere that does not have some connection with the production of a simple coat. (IWW (2010))

Industrial democracy is the answer to many problems. It can keep alive this democracy that cannot survive when practised only on Election Day. It can free us from want and fear, waste and war or with modern production methods enable ordinary people to get all the material goods they
can use, by working about as much as they want to. It can give us security and freedom, those
two most desirable ends, neither of which is possible without the other for a person driven by
want cannot be free, and the puppet is never secure. It can make organized society a harmonious
whole, intelligently working for the good of all - for it is only when the general run of mankind
can decide what is to be produced and what is to become of the product that it can know what it
is doing. Industrial democracy can be built only by an organized working class that is aware as a
class of what it wants and how to get it, rather than giving decision-making power to "friends of
labour."

For instance, as workers and as members of communities, we want oil storage and chemical
plants kept to safe places, away from where we and our fellow workers live. One method is to try
to get laws passed, and then try to have them enforced. Much simpler, much more reliable, and
certainly much more helpful in developing our capacity to solve our own problems, would be for
us to refuse to build in what we consider unsafe places; for us to refuse to work in plants that
endanger any community. Laws are usually based on actual practice. It is best for labour to
concern itself with controlling actual practice; that makes good lawmaking easy and bad
lawmaking hard. The lawmakers are mindful of the powerful ones in society;

One Big Union makes labour all powerful. Once labour is properly organized, the lawmakers
will be duly mindful of it; and if they aren't, it will not matter, for what happens from then on is
what the organized working class decides to make happen.
To unite the working class industrially, it is of course necessary to avoid such practices as high union dues, closed books, racial, religious, or political discrimination. What is needed is One Big Union of all workers no matter what their language, what their beliefs, or what the colour of their skin may be. In the union, all are equal because we are all equally used by the same system. What the majority decides about any industrial question is the decision by which all must abide. For that reason it is out of order to attempt to reach decisions about questions not related to management in internal union relationships that are none of its business.

2.20 SUMMARY
This chapter sought to review the studies and papers that have been done on issues related to the current study. It has been revealed from the study that ship building, shipping, and ship recycling are three very distinct industrial operations, and are typically treated as such. However, they are highly interlinked activities when considering the impact that ships have on the environment over their life-cycle. Attempting to assess the environmental impact of ship building and its associated activities on this basis is nonetheless a daunting task, not the least because there is so little environmental information available on so many of the industry's activities. This also means that while it is possible to establish the importance and seriousness of many of the industry's environmental challenges, it remains difficult to make judgments as to their significance in terms of magnitude and impact. It is also revealing to state that for there to be peaceful industrial environment and as well, for a firm to be competitive there should be industrial harmony which can only be achieved through industrial democracy and it is the belief of this author those authorities at the PSC Tema shipyard will strive to achieve that. Therefore, it is suggested that there is a clear and timely need for strengthening the focus on environmental
information and transparency in the ship-building industry, including how the industry is linked
to impacts of environmental concern following from its use of raw materials, and through
shipping and ship recycling operations. This need is growing as the industry's environmental
agenda is becoming increasingly visible in the public domain.
CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter discusses the study area, the scope of the study and methods adopted to meet the set of objectives including the theoretical framework, and empirical analysis, the sources of data and the procedure for data collection.

3.1 Research Purpose

Saunders, Lewis and Thornhill (2007) explain that there are three purposes when carrying out a research; exploratory, descriptive and explanatory. Furthermore be it exploratory, descriptive or causal all depends on the nature of the research problem. According to Robson (2002:59) an exploratory study is a valuable means of finding out ‘what is happening; to seek new insights; to ask questions and to assess phenomena in a new light’. Exploratory research requires skills as well as all other types of research, but the type of skill required differs. The main skill requirements in exploratory research are often mostly the ability to observe, get information, and construct explanation that is theorizing. There are three principal ways of carrying out exploratory research: a search through the literature; interviewing the experts in the subject; and conducting focus group interviews. (Robson 2002:59)

Descriptive study or research is to portray an accurate profile of persons, events or situations. In descriptive research the problem is structured and well understood based on a previous understanding of the research problem and descriptive studies may also include more than one
variable. However, it should be thought of as a means to an end rather than an end itself. Explanatory study is referred to as studies that establish causal relationship between variables. Explanatory research most often preceded by exploratory and descriptive research and the emphasis is basically on studying a situation or a problem in order to explain the relationships between the variables. (Saunders et al. 2007:303).

Adopting Robson’s (2002:59) postulations, this study focused on an exploratory approach in order to find out ‘what is happening in the ship-building and ship-repair industry near the Port of Tema in Ghana; seek new insights; question and assess phenomena of productivity and motivation in a new light’. The researcher worked towards exploring all the variables that contributes to the research problems by using all the characteristics of an exploratory research.

3.2 Research Methods

Research methods refer to systematic, focused and an orderly collection of data for the purpose of obtaining information from them, to answer a particular research problem or question. There are two general research approaches known as qualitative and quantitative research methods. According to Jankowicz (1991), the methods and techniques that are most suitable for which research depends on are the research problem and its purpose. Qualitative research methods are less structured and more intense than questionnaire-based interviews. There is longer and more flexible relationship with the respondent so that the resulting data gives the researcher a greater insight and perspectives (Kumar, 2000). Quantitative research method is a formalized and structured method. It generalizes and studies the research problem in a broader perspective.
3.3 Research Design

Mokheseng (2005) mentioned Leedy and Ormrod (2005:94) as postulating that research studies are categorized into two broad categories, quantitative and qualitative research. Qualitative research focuses on phenomena that occur in natural settings and involves studying these phenomena in all their complexity, while quantitative research involves either identifying the characteristics of observed phenomena or exploring possible correlations among two or more phenomena and involves not changing or modifying the situation under investigation. Shao (2002) posited that both qualitative and quantitative research can be used together when carrying out a research. It depends on what the researcher want to study or investigate but that must be clearly defined for the reader in understanding the method used in carrying out the research.

The researcher therefore based on Shao’s (2002) position has adopted both qualitative and quantitative research for this study. Thus for the qualitative aspect for example, respondents were asked about their length of service at the Shipyard and their opinion about the state of the industrial environment; what they know had led to the current state and suggesting ways to remedy the situation, et cetera for instance. Further, in the design adopted for this research work, questionnaires were used. The sources of data collection used were both primary and secondary and that allowed for necessary information to be collected from the appropriate respondents in the study area. The questionnaire designed included both structured and open ended questions to make room for uniform answer and individual opinion of the managers and employees. However, the probable setback of this method is the possibility of the respondents not returning the questionnaires.
3.3.1 Primary Data

Descriptive research was used to collect the primary data. Information was collected through questionnaires and data was gathered by asking the respondents questions about their knowledge, attitudes, preferences and behaviour. The questions were open-ended and closed as well.

3.3.2 Secondary Data

The compilation of literature review and organizational profile were also the sources of secondary data. Such data consists of information that already exists somewhere, having been collected for another purpose. Secondary data was collected through Internet, books, journals and the company's own internal information system for example, the profile of the PSC Tema Shipyard.

3.4 Sample Plan

3.4.1 Sampling Unit

This refers to the demographic, geographic and psychographic characters of the respondents relevant to the study. It also includes the managerial grades at the organizational level. These are the junior and senior staff and the operation managers. Workers’ interviewed were selected from the various divisions, i.e., technical, administrative and senior administrative staff. Their ages range from 18 to 65. The management staff, being the partners (investors), declined giving any information to assist this research.
3.4.2 Sample Size

This entails stating exactly the total number of respondents the researcher intends to use. The sample frame concerns each and every worker from the Tema Shipyard. Out of the group above, a sample 60 employees will be conveniently taken. Four representatives from the Chief Commercial Officer, Chief Financial Officer, Chief Operating Officer and the Chief Efficiency Control & Quality. A representative from the labour union will also be contacted.

Occupants of vessels in the dockyard who had visited for maintenance works did not seem to have much knowledge about the shipyard. Hence, their exclusion from the sample. The wider shipping community was also scanty with knowledge about the workings of the shipyard.

3.4.3 Sampling Procedure

This briefly describes how the samples are chosen. According to Leedy and Ormrod (2005:1999), there are two major sampling approaches, namely probability and non-probability sampling. In this study, non-probability sampling was used since it was impossible to identify the elements beforehand because there is no list available which corresponded with the required elements and so random sampling was not possible. Non-probability sampling relies on the personal judgment of the researcher rather than chance to select sample elements. These sampling techniques do not use chance selection procedures. (Malhotra, 1999)

Two steps were used to sample the population for this study: Firstly, the selection of the sampling units, that is to say the places where the interviews will be conducted. Thus judgmental sampling will be used to choose those units. According to Malhotra (1999), judgmental sampling
is a form of convenience sampling in which the population elements are purposefully selected based on the judgment of the researcher. This method is necessary as the places which are believed to be representative of the target population had to be chosen subjectively. (Crask, et al., 1995)

To select the respondents who were to be interviewed the convenience sampling method was used. “Convenience sampling is a non-probability sampling technique that attempts to obtain a sample of convenient elements; the selection of sampling units is left primarily to the interviewer” (Malhotra, 1999). According to Struwig and Stead (2001) convenience sampling is chosen purely on the basis of availability. Respondents are selected because they are accessible and articulate. Convenience sampling is the least expensive and least time consuming of all sampling techniques. The sample elements are easily accessible, easy to measure, and cooperative. Therefore, for this study, convenience sampling was used to select the respondents who were contacted.

It is important to report that because of the volatile industrial and political environment at the period of data collection it was impossible to access the respondents consistently; therefore, the researcher had to appeal to the conscience of some of the employees who readily agreed to be talked to only during their break (lunch) times. The study took place within eight weeks between the months of April and May of 2012.
3.4.4 Population

Cooper and Emory (2001:769) define population as the study object which may be individuals, groups, organizations, human products and events or the conditions to which they are exposed. In this study the population comprises all the employees of the Tema Shipyard and Dry-dock at the Port of Tema. To have a certain control over the research, a sample of the entire population was selected. Naumann and Giel (1995:97) define sampling as a process of selecting representatives from a population, in order to determine the characteristics of the variables under study. The results obtained from the sample can be used to generalize about the entire population. Leedy and Ormrod (2005:199) say that the sampling procedure should be carefully planned, not to have a distorted conclusion of the data collected.

3.5 Data Collection

According to Leedy and Ormrod (2005:143), researchers can use observations, interviews, objects, written documents, audiovisual materials, electronic documents, and anything else that can help them answer their research questions. The most common type of data collection methods are interviews, questionnaires and written documents. Leedy and Ormrod (2005:144) further say that the potential sources of data are limited only by the researcher’s open mindedness and creativity.

The methods used mainly in this study were written documents (literature) and questionnaires. According to Saunders et al (2000:278), a questionnaire is a technique of data collection in which people are asked to respond to the same set of questions in a predetermined order. Questionnaires often make use of checklist and rating scales. Two types of questionnaires are identified by Saunders et al (2000:278):
• Interviewer administered questionnaires which include telephone and structured interviews. A sample of people is normally interviewed.

• Self-administered questionnaires which include online and postal questionnaires. Here questionnaires are normally mailed, faxed or emailed and a return mechanism is included.

Leedy and Ormrod (2005:185) say that questionnaires have their drawbacks as well in that the majority of people receiving them do not return them and hence a low return rate may occur. There are no interviewer interventions available for probing and explaining. In this research a comprehensive questionnaire is developed with a covering letter to a sample of relevant respondents. The primary purpose of the cover letter is to give a brief reason for the study and also to induce the respondent to complete the questionnaire. Leedy and Ormrod (2005:185) say that questionnaires have their drawbacks as well in that the majority of people receiving them do not return them and hence a low return rate may occur. There are no interviewer interventions available for probing and explaining.

3.5.1 Personal Interview

This refers to the direct interface with respondents through semi-structured or unstructured questions with the view of soliciting the respondents' personal opinions and views on the subject matter. The interviewees were limited to only the administrative and technical employees of the shipyard since they had in-depth knowledge about the issues relevant to this research.

3.5.2 Administered Questionnaire

This refers to a structured questionnaire designed to solicit the respondents' views on the issue under study. Questionnaire was the major instrument used to collect the data. The questionnaire
was used in order to get a standard form of answers or responds. The work places of the respondents were visited in order to distribute the questionnaires during lunch hours.

3.5.3 Data Collection Problems
One of the main challenges was time constraint. Funding, with respect to transportation costs and printing materials were also a challenge. Some of the respondents were not ready to give out information because of the industrial environment (lack of trust, suspicion and agitation) existing at the facility whilst others felt the time given them to answer the questionnaires was too short. In fact, some were quite hesitant and did not want to even get accustomed to the reasons behind the study.

3.6 Data Analysis Techniques
This is a process of converting the collected data into information so that it can serve as the factual base for recommendation and management decision. A computerized statistical analysis of the data was necessary to describe and interpret the data that was obtained from the questionnaires. A conversion was made through a computer package, Statistical Package for The Social Sciences (SPSS version 16) and Microsoft Excel in order to analyze the information. Based on the questionnaire, frequencies and percentages were used for all variables of this study.
3.7 Research Ethics

Due to the gravity of the study and the potential effects it may have on office-holders, it would be a pledge to treat all information elicited from staff and clients of the company with utmost confidentiality. Their individual personal data would be protected and their anonymity granted so as to get authentic information for the study to be complete.

This research is not limited to ship building and ship repairs alone. It could also include, if need be, be associated with ship recycling, that is; the use of scrap in repairs or construction. It does not intend to include other commercial activities, if any, being undertaken by the PSC Tema Shipyard Limited.

3.8 Scope of Study

The study sought to find new avenues, with the aid of modern software and reputable international expertise, to solve the dormancy of the industry. The shipyard and ship-repairs industry is limited in itself due to the specialization of maritime transport as a demand derived trade. Ship-repairs can best be undertaken around the port area. Thus, the location of the PSC Tema Shipyard Limited, adjacent to the Port of Tema. Since there are just two sea-ports in Ghana, Tema and Takoradi, this study would concentrate on the shipyard near the Port of Tema for its analysis.

3.9 Reliability and Validity

According to Leedy and Ormrod (2005:27) the validity and reliability of the measurement instruments influence the extent to which one can learn something about the phenomenon they are studying. They are an indication of the extent to which the researcher can draw a meaningful
conclusion from the data collected. Both validity and reliability reflect the degree to which there may be an error in the measurements. (Leedy and Ormrod, 2005:29)

3.9.1 Validity

Validity is concerned with the soundness and effectiveness of the measurement instrument. Leedy and Ormrod (2005:28) say that the validity of a measurement instrument is the extent to which the instrument measures what it is supposed to measure. There are various types of validity and the most common are (Leedy, 1997:33):

• Face validity which relies on the subjective judgment of the researcher. The researcher has to ensure that the questions are relative to the subject being investigated.

• Criterion validity which is determined by relating performance of one measure to the performance on another measure.

• Content validity is the accuracy with which an instrument measures the factors being investigated.

• External validity which is based on whether the conclusions reached in the study can be generalized.

• Construct validity which observes the honesty of the data collected.

• Internal validity which focuses on the conclusion of the study free of bias.

The literature data collected are valid because they come from reviewed journals and books. The data received from respondents are regarded valid as well because it is from people involved in the ship-repair industry and they know more about the industry as far as this study is concerned.
3.9.2 Reliability

Leedy and Ormrod (2005:29) refer to reliability as the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed. The accuracy of the research data can be measured only when its consistency can also be measured. Reliability can be established by means of different methods, namely the interrater, internal consistency, equivalent forms and test-retest reliability (Leedy and Ormrod, 2005:93). With regard to the questionnaire, Saunders et al (2000:290) describe validity and reliability of a question in terms of whether the question and answer make sense. For a question to be valid and reliable, it has to go through these stages:

• The researcher must be clear about the information and then design the question.
• Thereafter the respondent decodes the question in the way the researcher intended.
• Then the respondent answers the question.
• Lastly the researcher decodes the answer in the way the respondent intended.

The questionnaire served its purpose because respondents were able to answer questions without any difficulties and the responses received gave views of the respondents. The major aspect of this is that the responses helped with addressing the main and sub problems of the research study.

3.10 Limitations

A sample of the population was studied, consequently there is the possibility of sampling error occurring. The research was done at the location of the PSC Tema Shipyards Limited alone therefore it may not be possible to generalize the results of this study to another shipyard in Ghana, the only other being at the Port of Takoradi.
3.11 Delimitations

The study was limited to the port city of Tema but particularly to the locality of the shipyard. The reasons for this are:

- The Port of Tema receives more calls from larger vessels and the busier of the two sea-ports in Ghana, the strategic location of the shipyard.

- The management of the shipyard was given to strategic investors with specific targets to be met at a stated time so the respondents, employees with first-hand experience about the entity, were easily accessible.

The cost and time required to conduct the study was lower because the study was limited to a restricted geographic area.
4.0 Introduction

This chapter presents and discusses the primary data obtained from the field as per the questionnaires which were adopted from the objectives of the study. The main objective of the project is to Assess the State And Prospects Of The PSC Tema Shipyard Limited. In all a total number of sixty employees including four representatives from the Chief Commercial Officer, the Chief Financial Officer, the Chief Operating Officer and the Chief Efficiency Control & Quality officer of the shipyard were contacted.

4.1 Demographic Characteristics of Respondents

The table (4.1) below describes the gender distribution of respondents and according to the data virtually all the respondents 54 of them, representing 90% are males with only 10% of them being females. Margosian and Vendrzyk (1994) corroborates this by stating that their gender, reproductive capability and their sexuality sets women apart from their male peers and often prevents their acceptance as full members of the organization. Women’s biology and sexuality is often used to punish those women who are seen to violate gender or organizational norms. That which constitutes such a violation, however, is subject to constant change over which women has little or no control (Sheppard, 1989, p. 154). Thus women in male-dominated organizations, such as the Navy, are vulnerable to having their status in the organization overridden by their sexual identity. No matter what role they fulfill within the organization, they are first and foremost identified as "female." Sometimes women’s bodies are considered barriers to
their integration without consideration for their actual qualifications. However, it is important to indicate at this juncture that this statistical revelation does not imply the male-female ratio of the entity because there is no evident to that. The revelation may be as result of time, place and sampling regime as well as situation of data collection.

Table 4.1: Gender Distribution of Respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54</td>
<td>90</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data; May, 2012

Table 4.2 below categorizes the age distribution of respondents and the highest distribution falls within the 30-39 year group with a frequency of 21 respondents representing 35% of the people and that is followed by the 20-29 year group representing 25% of the people with a frequency of 15. It is however significant to note that the least recorded respondent group is those within the 60 years and above category with a frequency of 3 people representing 5% of the respondents. The same information is presented in graphical form as depicted in Figure 4.1 which follows the table below. Indeed this empirical evidence is corroborated in the literature. For instance, Mark (1957) and Kutscher and Walker (1960) provide some evidence that mail sorters and office workers kept productivity quite stable at higher ages, while factory workers' productivity fell after the age of 55. A study by the U.S. Department of Labor (1957), based on a broad selection of industries, compares output between individuals of different ages. Job performance increases
until the age of 35, before steadily declining thereafter. However, the slope of the decline was not steep: productivity declined by only 14% in the men’s footwear industry, and 17% in the household furniture industry.

Table 4.2: Age Distribution of Respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>30-39</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>40-49</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>50-59</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>&gt;60</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data; May, 2012

Figure 4.1: Age Distribution of Respondents

Source: Field Data; May, 2012
Table 4.3 below reveals the educational level of respondents and the highest frequency (24) representing 40% have HND/Diploma qualification and the least category of respondents been those with post graduate degrees with a frequency of 3 respondents representing 5%.

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCE 'O'/A' Level/SHS</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>HND/Diploma</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>University first degree</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Post graduate degree</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Professional/Technical certificate</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Source:** Field Data; May, 2012

Table 4.4 depicts data on the number of years respondents have worked in the dry-dock and the highest frequency reveals that the highest frequency of respondents is 24 representing 40% within the categories of 10-14 years and it is followed by those within the 20-24 years with a frequency of 11 representing about 18%. Six people representing 10% have worked above 25 years, with about 8% working less than 4 years.

Skirbekk (2003) corroborates this by postulating that job experience improves productivity for several years, but there does come a point at which further experience no longer has an effect. Ilmakunnas et al. (1999) assessed a broad sample of Finnish manufacturing employees and finds that job duration improves job performance for up to 3.8 years. Ericsson and Lehmann (1996) argue that it takes roughly 10 years to achieve expert competence in games where strategic and analytic competence is important, such as chess. In summary, experience increases individual
productivity up to a given duration, and thereafter, cognitive declines can decrease performance on the job.

Table 4.4: Number of Years in the Organization

<table>
<thead>
<tr>
<th>YEARS</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 4 years</td>
<td>5</td>
<td>8.333</td>
</tr>
<tr>
<td>5 - 9 years</td>
<td>14</td>
<td>23.333</td>
</tr>
<tr>
<td>10 - 14 years</td>
<td>24</td>
<td>40.000</td>
</tr>
<tr>
<td>20 - 24 years</td>
<td>11</td>
<td>18.333</td>
</tr>
<tr>
<td>25 - 29 years</td>
<td>6</td>
<td>10.000</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>99.999</td>
</tr>
</tbody>
</table>

Source: Field Data; May, 2012

4.2 Awareness of the Existence of Motivation Packages in Organizations

4.2.1 Awareness of the existence of motivation packages

Fifty-two (52) respondents representing about 87% said they were aware of the existence of motivation packages in the organization whilst eight (8) representing about 13% said they were not aware. The figure below (pie chart) depicts details of the above information.
Figure 4.2: Are You Aware of The Existence of Motivational Packages in Your Organisation?

Source: Field Data; May, 2012

4.2.2 The Structure of the Motivation Package

Forty-four (44) respondents representing about 73% said they were satisfied with the structure of the motivation packages whilst fifteen (15) persons representing 25% of the respondents negated in their response. However, about 2%, being one respondent, was indifferent. This has been represented in figure 4.3.
4.2.3 Employees Benefit from Motivation

From the survey data gathered which is represented in the table below, it was realized that slightly above half of the respondents, (36) representing 60% have benefitted in one way or the other from a motivation package but the response of their expectations were of mixed reactions. It is significant to note that 40% of the respondents have not benefitted from any motivation package.

Table 4.5: Have you benefitted from any Motivational Package?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>36</td>
<td>60</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data; May, 2012
Table 4.6: Does motivational incentives encourage you to perform efficiently and effectively towards achieving the company’s goals and objectives?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Field Data; May, 2012

The table above shows that all employees of the Shipyard were of the belief and consensus that motivation is a unique vehicle or tool that can energize them to be productive and committed. The study revealed that out of the 60 workers sampled, 100% of the respondents said “yes”. Indeed, this revelation is corroborated by Borcherding and Oglesby’ (1975) report that job dissatisfaction can be one factor that will increase costs, produce time delays and generally reduce productivity on most types of projects. One way that management can influence productivity is by determining how smooth the work will flow and how much work can be accomplished. Another more important way that management influences productivity is by how it influences worker’s attitude, which is a major element in worker motivation and determining how much work will be accomplished. (Borcherding and Oglesby 1975)
Table 4.7: How important are the following Attributes?

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Very Important (%)</th>
<th>Important (%)</th>
<th>Indifferent (%)</th>
<th>Less Important (%)</th>
<th>Not Important (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-life balance</td>
<td>70</td>
<td>15</td>
<td>15</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Better Career Prospects / Development</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Financial Package</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Job Security</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Better Working Environment</td>
<td>90</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Exposure to Leading Technologies</td>
<td>70</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

4.3 General Impressions / Comments by Respondents

Most of the employees contacted indicated that the Shipyard needs high investment outlay to help improve its operations to meet the current requirement of the maritime industry without which the entity will be rendered uncompetitive. They, however, indicated hearing from the grapevine that the management intends to invest about $30 million to help transform the shipyard into a modern and well-equipped facility to meet the nation’s strategic objectives. Meanwhile, it remained a rumour of a sort since the information was not official.

One fact can be deduced from the impression created by the respondents. That is, they are eager and energized to work to improve productivity levels and help ensure that the shipyard is viable but with the state of the industrial environment, they cannot help much except to voice out
through their union. They believe sincerely that should the right investment be put in the organization, the prime objectives of the shipyard can be realized.

When respondents were asked to give their general impression or comment about their views and interest in respect of rewards they expected, majority of the respondents with a frequency of 35 persons representing 58% indicated that promotion and fairness in promoting workers performance was significant to them, while 17% i.e., 10 respondents preferred money. About 12% of respondents chose security, 8% of them wanted recognition and 5% would rather settle on something prestigious like a vehicle for a prize. It is revealing to report, however, that all the respondents strongly upheld that lack of motivation affect their performance.

Table 4.8: Form of Reward

<table>
<thead>
<tr>
<th>Reward</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>35</td>
<td>58</td>
</tr>
<tr>
<td>Money</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Job Security</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Recognition</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Prestige</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Field Data; May, 2012*

Most of the respondents rated recognition as the main motivational package which can promote high team performance. It was deduced from the analysis that, good working environment and
attractive wage also play a role in motivating employees to perform well. Personal need however was not considered as a motivational factor for promoting high performance since it rated as the highest under disagreed option by all respondents at the various management levels. The entire respondents rated job security as not very important motivational factor for team performance. Further, respondents say that employee motivation does not necessarily lead to improved team performance since the goal of the team might be different from the individual’s goal.

The Union Chairman of the PSC Tema Shipyard however, indicated that the company had been in a bad state since the government of Ghana took control of it from the Malaysian investors. According to him, the workers were expecting the government to rejuvenate the ailing company, which has not been done. The wellbeing of workers has also been totally ignored to the extent that they find it difficult coping with the current economic situation in the country. The management representatives were unanimous of the fact that the facility lacks infrastructure, machinery and all the equipment needed for ship-repair to modern standards. The impression being created is that the situation at the shipyard does not exhibit a healthy industrial environment.

Meanwhile most of the respondents, 83% respondents who are 50 in number vehemently agreed that lack of motivational incentive no doubt generate absenteeism and employees turnover, while 17 percent who are only 10 in number disagree with the position of the majority.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 Introduction
This chapter summarizes what the study sought to do, the results obtained and the conclusions that could be drawn from these results. Policy recommendations based on these results are given together with suggestions for further research.

5.1 Summary
The study sought to assess the state and prospects of the PSC Tema Shipyard Limited. To achieve this objective, the socioeconomic characteristics of respondents were analyzed, the possibility of ensuring the profitability and viability of the venture was also assessed and the productivity of the activities of the shipyard was as well analyzed. The attitude and perception of the employees were evaluated whilst the employee motivational level and industrial environment of the entity were also investigated. In all a total number of sixty employees including four management representatives as well as a representative of the workers union were contacted. Descriptive statistics was used to describe the socioeconomic characteristics of the respondents and the results shows that the majority of the respondents were males. The highest distribution falls within the 30-39 year group with a frequency of 21 respondents representing 35% of the people and the least recorded respondent group is those within the 60 years and above category with a frequency of 3 people representing 5% of the respondents.

For educational level the highest was 40% of respondents who have HND/Diploma qualification and the least category of respondents were those with post graduate degrees with a frequency of
3 respondents representing 5%. About 87% said they were aware of the existence of motivation packages in the organization and about 73% said they were satisfied with the structure of the motivation packages. Slightly above half of the respondents, 60% has benefitted in one way or the other from a motivation package but the response of their expectations were of mixed reactions. All employees of Shipyard were of the belief and consensus that motivation is a unique vehicle or tool that can energize them to be productive and committed.

5.2 Conclusions

Majority of the respondents indicated that promotion and fairness in promoting workers performance was significant to them, while others resorted to money, others also opted for job security. Other employees also subscribed to recognition and prestige respectively as significant to them. It is however, revealing to report that all the respondents strongly upheld that lack of motivation affect their performance. Meanwhile most of the respondents rated recognition as the main motivational package which can promote high team performance. It was deduced from the analysis that, good working environment and attractive wage also play a role in motivating employees to perform well. All respondents rated job security as very important motivational factor for team performance.

It was established that the company had been in a bad state which has prompted the government of Ghana to abrogate the sales and purchase agreement. This led to the reclamation of her shares and consequently, taking managerial control from the Malaysian investors. The expectation of the workers is that the government would rejuvenate the ailing company. The wellbeing of workers has also been totally ignored to the extent that they find it difficult coping with the
current economic situation in the country. Meanwhile most of the respondents vehemently agreed that lack of motivational incentives no doubt generate absenteeism and employee turnover.

It was revealed that the facility lacks infrastructure, machinery and all the needed equipment required to repair ships to modern standards. Most of the employees contacted indicated that the shipyard and dry-dock needs a high investment outlay to help improve its operations to meet the current requirement of the maritime industry without which the entity will be rendered uncompetitive. The impression being created is that the situation at the shipyard does not exhibit a healthy industrial environment.

5.3 Policy Recommendations

Management should standardize the workers motivation policies to reflect the desire and needs of the workers. Workers salaries and wages should be carefully handled to reflect a modern day package. Management should reward their workers always with promotion and practice fairness in managing organization affairs. It is suggested that management should conduct more study for further clarification of the findings. This study is restricted from generalization due to limited time and scope of the study; hence it was carried out on one organization. The management should administer rewards that are positively relevant to employees; for instance, rewards should be closely tied to behavior and performance. It should be offered in conjunction with annual appraisals and more importantly, the criteria should reflect organizational goals. Management should also recognize the contribution of employees and aspire to make a match between
employees' interests and the work, get employees engaged as well as diversify employees' work by participation and rotation, if possible.

The government needs to make the needed investment into the company to enable the Tema Shipyards and Dry-dock Limited improve her facilities to take up modern construction and fabrication works. The government must also take steps in addressing organized labor's grievances to ensure good and healthy industrial environment.
QUESTIONNAIRE

This is a thesis project being undertaken by ALFREDOS NII ANYETEI of the Regional Maritime University as part of his Master of Arts (M.A) degree programme in Port and Shipping Administration. The main objective of the project is to assess the profitability and viability of the entity in perspective as well as analyze her productivity and competitiveness in the industrial environment in which she finds herself.

Your co-operation is critical to the success of this project. Kindly answer all the questions as fully and honestly as possible. Please note that there is no "right" or "wrong" answers to any of the questions and it is your initial impression and candid response that I seek.

All the information provided in this questionnaire remains absolutely confidential and would only be seen by the academic researchers involved in this study. Neither your name nor that of your organization will be mentioned in the report.

Please respond to the questions to the best of your ability. Remember, all the information will be kept completely confidential, therefore, do not write down your name. Consent: Would you accept to answer the following questions? (Tick where appropriate)

a) Yes  b) No
INSTRUCTIONS

1. Answer every question with a tick or a short response where appropriate in the space provided.

2. If there are more answers to some questions, indicate with numbers in order of priority starting with 1, 2, 3 etc.

SECTION A: Demographic Characteristics

1. What is your gender?
   a) Female
   b) Male

2. What is your age in years? .....................
   a) Below 20   b) 20-29   c) 30-49   d) 40-49   e) 50-59   f) 60 and above

3. Educational Level?
   a) Post Doctoral
   b) Doctoral
   c) Masters
   d) Degree
   e) HND
   f) Others (Please state) .............................................................

4. For how many years have you been working with the dry-dock? .......

5. Have you ever been employed in any Private/Government/Public service before?
   a) Yes   b) No

6. (i) Terms of employment
   a) Permanent
   b) Contract
   c) Casual

   (ii) If yes, Why did you leave? .............................................................
7. Why did you join your current employment?
   a) Job security
   b) Good career path
   c) Only job which was available
   d) Good collaboration
   e) Others (specify)

8. Which sector do you belong to?
   a) Trade
   b) Administration
   c) Facility Support
   d) Security
   e) Others (please state)

9. (i) What is your Rank?
   a) Senior staff
   b) Junior staff
   c) Others (please specify)

10. Are targets set daily for you?
    a) Yes
    b) No

   i. If yes, do you always meet your target at the end of every day?

   ii. If no targets are set for you, why?

11. How many hours do you work in a day?

12. How many vessels do you repair in a month?

13. Do you always feel happy when you are working?
    a) Yes I am
    b) Not always
    c) Not at all.

   i) If yes, do you always give out your best when you feel happy?

   ii) If no, do you always give out your best when you feel happy?
iii. If not at all, do you always give out your best when you feel happy? 

14. Have you ever gone on a strike? Yes / No
15. If Yes, why?

SECTION B: Motivational Effects for Productivity

(Please if you provide more answers than one indicate with numbers in order of priority)

16. What is your view about the reward system at the dry-dock?
   a) Good
   b) Better
   c) Best

17. What makes you to be satisfied working in Dry-dock? (If more answers, indicate with numbers in order of priority)
   a) Good Reward Management
   b) Good interpersonal relationship
   c) Good leadership
   d) Clean surrounding
   e) Recognition on achievements
   f) A lot of workshops
   g) There is autonomy (independence)
   h) Others (specify)

18. What makes you dissatisfied working in dry-dock? (If more answers, indicate with numbers in order of priority).
   a) Workload
   b) Lack of equipment and resources
   c) Bad attitudes of management
d) Bad attitudes of students

e) Bad welfare package

f) Others (specify)

19. For you to be motivated, what would you recommend the employees at dock to do?

a) Work as a team

b) Help each other in terms of problems

c) Do more tuition

d) Others (specify)

20. What would you require the Dry-dock Management Team to do for you?

a) Increase part time allowance

b) Order more equipment and resources

c) Discipline students and colleague employees with bad attitudes

e) Increase salary

f) Introduce risk allowance

g) Introduce more on the job training

h) Introduce exchange visits with other universities

i) Others (specify)

21. What is your future plan as an employee of Dry-dock?

a) Resign and join other Organizations

b) Resign and join Government/Public

c) Resign and go work abroad

d) Continue serving the dry-dock as it is interesting

e) Continue serving as I have nowhere to go and work

f) Others (specify)

22. Give reasons for your answer in A above

........................................................................................................................................................................
23. What single thing would help to retain you in dry-dock?

SECTION C: Welfare Issues

This section lists factors that normally affect welfare at work in industry. From your experience please indicate your view on the degree of effect in occurrence as well as the degree of significance to productivity on your employees. Tick once () as appropriate the following:

i. In order of effect in occurrence. ii. In order of degree of significance

- Effect: 1 = Very low; 2 = Low; 3 = medium 4 = high; 5 = Very high
- Significance: 1 = strongly not significant; 2 = not significant 3 = average; 4 = Significant; 5 = strongly significant

To what degree would the following non-cash incentive appeal to you:

1. Luxury gift products such as wine baskets or gourmet foods?
2. Winning a trip to an exotic location as a reward for high productivity?
3. Off-site recreational activities funded by RUCST, such as staff dinners or business conference invitations?
4. Merchandise as a reward option, such as Personal Computer or various modern technological products?
5. To what degree do you feel that cash incentives are LESS important than non-cash incentives?
6. To what degree would you prefer increased job autonomy (meaning less management intervention and assessment of your job function and productivity) over that of a small-scale cash incentive?
7. Do you agree that when the current motivation is improved, productivity will improve? Yes / No

8. What are some of the motivation packages do you think should be put in place?
   a) ..............................................................................................................................
   b) ..............................................................................................................................
   c) ..............................................................................................................................
   d) ..............................................................................................................................
   e) ..............................................................................................................................

To what significance will the following attributes affect your performance?

9. Early payment of salaries

10. Job security (Permanent job, Job all the time, payment of SSNIT etc)

11. Safety plans (Availability of first aid, provision of safety kits etc)

12. Provision of equipment for work (Adequate equipment to work with, quick replacement and repairs of broken down and old equipment)

13. Transportation (Vehicle at your disposal, allowance for transportation, transportation from a location to site and back)

14. Salary (Pay, wage, etc)

15. Bonus at the end of project or year (showing appreciation at the end of the project and year)

16. Overtime (Provision of extra money after normal working time)

17. Teamwork (Everyone contributing in the work, all hands on deck)

18. Worker participation in decision making (Making suggestions)

19. Promotion (elevation, example from lecturer to senior lecture or junior staff to senior staff)

20. Disrespect from co-workers (use of abusive language from colleagues, impolite speeches etc)

21. Communication (Easy flow of information, being well communicated)
22. Canteen for employee (cafeteria) (having a place within the premise where food are given at
break for free or at a reduced price)

23. Medical Care (Having a particular hospital to attend in case of illness or subsidizing the cost
of hospital bills)

24. Accommodation (Provision of physical accommodation, package as subsidy to rent
apartment)

Thank you very much for your time and attention.
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