

**THE MARITIME INDUSTRY OF GHANA: ROLE OF OUR PORTS,
CHALLENGES AND KEY LESSONS FROM SUCCESSFUL MARITIME
NATIONS**

By

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Thesis submitted to the Department of Business Administration, Ashesi University
College. In partial fulfilment of the requirements for the award of the Bachelor of
Science degree in Business Administration

APRIL, 2015.

Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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Acknowledgements

My immense gratitude goes out to my supervisor, Dr Esi Ansah for her countless sacrifices and input to ensure this paper takes shape. Even though her criticism was harsh at certain points it served its necessary purpose in pushing me to go beyond my comfort zone. Without her hard work and dedication, none of this would have been possible.

Special thanks to Theresa Dzanie, as well as Dr Edgar Cooke, for reviewing my work and giving feedback to help correct certain errors. I would also like to say thank you to the entire team behind the Capstone Workshop for taking time off their busy schedules to stay behind after school hours just to teach us. My very good friends, Akyere Graham, Joseph Nti, Sandra Aminarh, Estalynn Achiampong, Nana Kwame Danso, John Oteng, Amina Kamara and Nana Apau Bekoe cannot be left out. They were there for me in my moments of confusion and despair.

I would like to extend my gratitude to Oscar Kpesese of McDan Shipping Ltd, Ahmed Mohammed Rafik of Meridian, Raymond Agyekum of Conship and Alex Ofori of Clear Freight for taking time off to help me with my data collection.

Finally, I would like to show my sincere gratitude to my mother, Mrs Nadia Khadi for her unflinching support, both spiritual and financial, which has brought me to where I am in life. I love you.

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Abstract

Ghana as a nation largely enjoys natural resources endowment. Resources include gold, cocoa, bauxite, diamond and (in more recent times) oil. However, one resource that is largely understated and underplayed in terms of importance and role is Maritime Resource Endowment (MRE). Maritime Resource Endowment is the proximity of a country to a coastline which allows for the presence of a maritime industry.

This study aims to identify the role of our ports in the growth and development of the Ghanaian economy. The main aim of this research was to identify major challenges being faced by the maritime sector. A comparative study was also employed using successful maritime examples that faced similar challenges and were able to overcome them.

This study gathered information through the use of archival and literature analysis. Certain major stakeholders were not left out as their views were culled through semi structured interviews. Data collected through interviews and literature analysis was merged to come out with the findings of this research.

From the research done, countries like Singapore and The Netherlands have taken certain steps such as huge investment in human resource and infrastructural developments. This study in conclusion highly recommends the methods employed by the developed maritime nations i.e. Singapore and the Netherlands to the relevant Ghanaian authorities as a source of framework in drawing up effective maritime policies for the country.

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

The Maritime Industry in the Global Context

In broadest terms, the maritime industry includes all enterprises engaged in the business of designing, constructing, manufacturing, acquiring, operating, supplying, repairing and/or maintaining vessels, or component parts thereof. It also includes managing and/or operating shipping lines, stevedoring, customs brokerage services, shipyards, dry docks, marine railways, marine repair shops, shipping and freight forwarding services and similar enterprises.

Historical Importance

Historically, maritime resource has been a very important factor in the development of countries and has shaped the world immensely as we know it today. Ever since trade between the first civilizations begun about 5000 years ago, the contribution of maritime resource has been largely emphasized. In the same way subsistence and self-sufficiency among people living in cities and towns started to fade away and barter trade begun to take place, cities realized they did not have to produce all they needed. Cities started trading with each other in commodities such as gold, silver, minerals, spices and fabrics, just to name a few. Even though this form of trade was slow and risky, it was rather profitable and led to the rise of the merchant class. At that time they did not have the luxury of developed road networks as present today so most of the trade was seaborne. As expected, this led to the rise of many cities and civilizations along

trade routes and sea ports. Many cities grew to prominence as a result of their ports being a hub for trade.

By the second millennium BC, for example, certain notable cities had risen to prominence as a result of their resources. Cyprus had become a major Mediterranean nation by trading its abundant copper resources to the Near East and Egypt, who themselves were wealthy owing to their own natural resources such as papyrus and wool. Phoenicia, which was noted for its maritime capability traded its resources such as cedar wood and linens dyes all over the Mediterranean. China in the east became wealthy by trading jade, spices and later, silk. Britain was not left out of the foray as they shared their tin with the rest of the world. Alexandria, which grew to be one of the largest cities the world had ever known at the time, was founded by Alexander the Great after sweeping Syria in 332 BCE. It was a small port town which grew to prominence by attracting trade from India and Arabia. According to the scholar Mangasarian, it served as the port of Europe (Cohen, 2002).

Political and Security Role

Politically, the presence of a maritime industry gives nations leverage over other landlocked countries in the region. In spite of technological improvements in transport, landlocked countries still face challenges in accessing international trade. This compels them to depend on neighbouring countries with maritime infrastructure to facilitate their export and import needs. This creates the political and diplomatic link between nations with a maritime hub and landlocked countries, leading to a myriad of benefits for both parties involved. The relationship between landlocked and maritime nations has been grouped into four main types:

- Dependence on Neighbours' Infrastructure;
- Dependence on Sound Cross-Border Political Relations
- Dependence on Neighbours' Peace and Stability
- Dependence on Neighbours' Administrative Practices.

The presence of Maritime Resource Endowment can also benefit a country in times of conflict. Countries possessing Maritime Resource Endowment can utilize its naval corps and ships to defend the nation from external attacks. Historically, the presence of a very strong naval force has benefited many nations such as Great Britain in spreading their territories.

Socio-Economic Benefits

Port cities have often been a basket of mixed cultures. This is due to the regular influx of foreigners who often share their culture and experiences with the natives living there. Some even go a step further by having children in these port towns leaving more than just their parcels behind.

The maritime industry has shaped civilization in so many ways. Notable among them is the adoption of the Phoenician phonetic alphabet considered to be the ancestor of almost all modern day alphabets by the Greeks. This dissemination was as a result of the maritime trade between Phoenicians and North Africa and Europe which was transmitted to the Greeks and later the Romans.

In fact, transportation has been called one of the four cornerstones of globalization, along with communications, international standardization, and trade liberalization (Kumar and Hoffmann, 2002).

Maritime Resource Endowment has over the years given countless countries an economic advantage due to the presence of a maritime industry. Many countries have leveraged that advantage to reap numerous economic benefits, some of which include contribution to GDP, foreign exchange from international trade, revenue generation from duties, taxes on maritime just to name a few.

Successful Maritime Examples

Some countries have been able to capitalize on their Maritime Resource Endowment and develop, if not all, then some aspects of it to become internationally recognized players in the maritime industry. Notable among these countries are:

- Liberia

Liberia which was once plagued by civil wars has been involved in rebuilding process since the last war ended in 2003. One of their major areas of focus is the development of their maritime industry. Currently, Liberia has the second largest merchant marine fleet internationally and Africa's largest merchant marine fleet with 3144 vessels. This has boosted job creation immensely as well as made a significant contribution to their GDP (Central Intelligence Agency (US), 2014).

- Netherlands

The Port of Rotterdam is the largest port in Europe. As of 2013, it was the 8th largest container port in the world (Central Intelligence Agency (US), 2014).

- Panama

Panama is located in-between Costa Rica and Colombia in South America. Its two terminal ports are ranked second and third in terms of container units handled in Latin America. Panama also has the world's largest merchant marine fleet comprising of 8580 vessels. (Central Intelligence Agency (US), 2014)

- Singapore

Singapore has a budding maritime industry and is largely considered the shipping hub of Asia. The maritime industry plays a key role in the Singaporean economy contributing approximately 7% of Singapore's GDP and providing employment for over 96,000 people. The maritime industry of Singapore comprises more than 5,000 maritime establishments. The port of Singapore is recognized as the world's busiest port in terms of shipping cargo tonnage and container throughput. It also has the 5th largest merchant fleet by flag of registration (Central Intelligence Agency (US), 2014).

The Evolution of Maritime Ports

Ports and harbours primarily provide shelter for ships and other vessels docking and also provide facilities for the handling and storage of the goods carried by such vessels. Maritime ports all over the world have undergone evolution in terms of their features and services they provide as well as their impact on economic growth and development in their regions.

Varied definitions and theories have arisen as a result of the constant evolution of port and port systems. According to Alderton (1999), sea ports are areas where there are facilities for berthing or anchoring ships and where there are equipment

for transferring goods between ships and ashore. Alderton (1999) also further stated that custom facilities were important when talking about ports because ports were the main meeting points for vessels plying their international trade. Alderton (1999) also proposed that ports are economic catalysts for the prosperity of nations. His reasons for these assertions stemmed from the fact that many other businesses such as banks and industries, ship agencies, ship brokerage, ship surveys among others are linked to ports.

According to the UNCTAD Maritime Review (2009), ports were defined as “ a geographic and economic entity, having a specific name, located on the seaside, a river or a lakeside, serving ships, and where transfer of goods and passengers takes place from water to land transport and where facilities could be found on land and water to render complementary services required by the ships, goods and for developing international trade, industry and more generally the economy of the countries under the zone of influence of the port”.

Ports have long been recognized for their primary function in the handling of ships, cargo and other related activities. Alderton (1999) and UNCTAD (2009) however incorporated a much wider dimension in their description of ports by including economy and industry development of maritime nations.

Maritime and Port Development in the History of Ghana

The first Europeans to arrive on the shores of Ghana then known as the Gold Coast were the Portuguese in 1471. The purpose of the expedition was to expand geographic knowledge, to find the source of the famous gold said to be found in Africa, and to circumnavigate a possible sea route to acquire valuable Asian spices. At that time most of the settlers in Ghana had yet to establish their

territories and set their boundaries. Their trade expedition was so successful that they built their first permanent trading post in Elmina which still stands to this day. The trading success being enjoyed by the Portuguese piqued the interest of other European nations and soon after the Dutch, English, Danish and Swedish emissaries landed on the shores of the Gold Coast. Eventually, only the British remained and they went on to colonize the Gold Coast. The Gold Coast was the first West African country to receive European presence. This would not have been made possible without the existence of Maritime Resource Endowment. Even though many would argue that the arrival of the Europeans did more harm than good it is still an integral part of Ghana's history which cannot be ignored.

Port development in Ghana, on the other hand, can be based on a three phase model which is applicable to the rest of the West African coast. This model starts from the arrival of the Europeans. Even though there was considerable fishing and trade along the coast there is no suggestive evidence that there was a systematic movement of goods and human resource to lend enough credibility to the use of the word port. The arrival of the Portuguese in 1482 sparked the first phase which is known as the **Primitive Surf Era**. However this has largely been criticised by African scholars because it is quite suggestive of the fact that Africans did not have a developed port system prior to the arrival of the Europeans.

In 1898, Ghana was ushered into the second phase known as the **Lighterage Port Era** with the construction of a pier at Sekondi. Accra also followed suit in 1907 when it also gained a pier to accommodate lighters

However it was not until 1928 with the construction of the Takoradi harbour that Ghana entered its final phase known as the ***Deep-Water Era***. Another harbour was constructed at Tema soon after.

Ghana's evolution was a bit different from that of other maritime nations such as Britain and Australia. Usually the transition from one stage to the other usually takes place along the same geographical region. However with Ghana out of the many surf ports which had forts and some trading activity only two i.e. Sekondi and Accra progressed to the lighterage era. The transition from the lighterage era to deep water activity did not also take place in Sekondi and Accra as the first deep-water port was built in Takoradi while the second was constructed in Tema. Although these locations are not far from each other they still differ. This can be attributed to structural challenges as well as the physical inadequacies of the geography.

Ghana is touted to be a special case of outport development. It does not follow the neatly ordered evolutionary process propounded by the various transportation models (Hilling, 1977).

The Present-Day Ghanaian Maritime Industry

Ghana is located off the West African coast, with a land mass of 238,535 km², with 2,093 kilometres of international land borders. It is bordered on the north by Burkina Faso and closed off on its eastern and western borders by Ivory Coast and Togo respectively. Its southern borders ease into the shoreline of the Atlantic Ocean. Ghana has a population of 27 million as last recorded in 2014. (Central Intelligence Agency (US), 2014)

Ghana has two main harbours namely the Tema and Takoradi harbours built in 1962 and 1928 respectively.

- Takoradi Harbour

The Takoradi harbour is the oldest harbour in Ghana, situated within the industrial district of Sekondi-Takoradi in the Western Region. The idea for this harbour was advocated by British consulting engineers. They proposed that the construction of this harbour could benefit in two major ways; a terminal point for the Tarkwa railway project and a naval port of the British Empire in times of war. The construction of the port begun in 1921 by then governor of the Gold Coast, Sir Gordon Guggisberg, and was completed in 1928

It is strategically located 225km west of Accra, the capital city of Ghana, and 300km east of Abidjan the capital city of La Cote d'Ivoire. It is well connected to its hinterland, which makes it the preferred and ideal gateway to the middle and northern parts of Ghana and the Sahelian landlocked countries of Burkina Faso, Niger, and Mali.

The port in 2012 handled 31% of Ghana's seaborne traffic, 66% of national Exports and Handled 19% national Imports. Leading exports include Manganese, Bauxite, Forest Products and bulk and bagged Cocoa beans, mining equipment; while leading imports include Clinker, Wheat, Petroleum Products and Containerized cargo. In 2007, Ghana discovered oil in commercial quantities at Cape Three Points in the Western Region. Due to the proximity of the port to the Oil and Gas Fields, it is strategically located to support exploration and production activities at the Oil and Gas fields. It serves as the main port of call for oil vessels to discharge equipment, chemicals and other supplies that are stored in port

sheds as well as private warehouses near the port. These vessel calls have contributed significantly to the increase in calls to the port (Ghana Ports and Harbours Authority, 2014).

- Tema Harbour

The Tema harbour is the bigger of Ghana's two sea ports. It was opened formally in 1962 by Osagyefo Dr Kwame Nkrumah after he commenced construction in the 1950s. An initial brain child of Ghana's colonial rulers, the British Empire, final construction was carried out by Kwame Nkrumah after independence. The harbour lies along the Gulf of Guinea and is 18 miles from Accra, the capital of Ghana. It also serves as a major transit point for goods from land-locked countries to the north of Ghana. It also handles trade for industrial and commercial companies that import and export various goods such as petroleum, cement, food, metals, and textiles. Most of the country's chief export, cacao, is shipped from Tema. The harbour handles 80% of Ghana's national exports and imports (Ghana Ports and Harbours Authority, 2014).

SWOT Analysis of Ghana's Ports

Strengths	Weaknesses
Port Safety	Long waiting times Bad infrastructure

Opportunities	Threats
Recent oil find Gateway programme Stable political environment Hinterland connected road	Pirates Neighbouring ports Maritime security

Strengths

One key feature the Ghanaian ports can boast of is port safety. In the past few years there haven't been any recorded major incident that has claimed lives.

Weaknesses

The former Director-General of Ghana ports and Harbours Authority, Mr Nestor Galley in 2011 made a few remarks about the current state of the Ghanaian maritime industry in an interview with Our World, a periodical published and distributed by USA TODAY. Some of the problems he identified have been outlined below:

- **Infrastructural Challenges**

Since the ports were constructed no major overhaul has taken place. Expansion work on the Takoradi ports has proved to be virtually impossible as it is hemmed by the municipality. The equipment present has also not been upgraded and technology is out-date (USA Today, 2011)

Opportunities

The maritime industry of Ghana could receive a boost due to certain factors which have been identified. Chief among them is the recent oil find in Ghana. With the recent oil find off the western coast of Ghana, the maritime sector has been under the microscope lately. The Takoradi harbour especially, has received a lot of traffic with oil vessels calling at the port. It has also become the main port of importation of equipment for oil drilling. The gateway programme which aims to make the ports of Ghana the major gateway to Africa also could boost the maritime industry. Ghana has enjoyed relatively stable political environment since

the 1980s. This makes its ports very attractive as a port of call for international trade. There is also a functional road network that links the port to the hinterland

Missed Opportunities

Ghana has had numerous opportunities to capitalize on certain opportunities that have been linked to the maritime industry and development of our port systems. Unfortunately, as a nation, Ghana has missed out on these opportunities.

- Collapse of National Shipping Line (Black Star Line)

The Black Star Line which was Ghana's national shipping line was sold off. Currently the country has no national shipping line to facilitate national import and export.

- In Land Port System at Ashanti Region

In Ghana plans to build an inland port facility at Boankra in the Ashanti Region has been a challenge to the government. This project which has been on the drawing board for more than 20 years when completed will to help boost trade to the northern sector of the country. It is also likely to - ease congestion at the ports of Tema and Takoradi. Aside the functions mentioned earlier, the port facility is expected to create jobs, reduce cost of freight and make our ports more accessible to neighbouring landlocked countries.

- Under Exploitation of Waterways

Ghana is ranked as the 57th country with the most kilometres of waterways with our water bodies stretching about 1293 miles (Indexmundi, 2014). However there

is no inland port facility to facilitate transportation of cargo from our ports along water ways. Dredging has begun on the Volta Lake to help facilitate the transport of cargo from our ports to the hinterland.

- Railway

With the construction of the Takoradi harbour the British then constructed a railway line from Takoradi to Tarkwa to facilitate the exportation of raw materials. However this rail project does not operate fully in modern times. Hence it becomes difficult to transport produce for export.

Threats

- Competition from Neighbours

Recently Cote d'Ivoire which is Ghana's closest competitor in providing a maritime hub for landlocked countries within the region passed a new transshipment law. The directives were issued in 2005 but are now being enforced. It makes it mandatory for all cargo originating from non-ECOWAS countries that are coming into Cote d'Ivoire to be discharged only at the Abidjan port. This could bring about a sharp decline in revenue for the ports.

- Maritime Security

Although Ghana has not experienced any form of terrorism on our waterways our ports are still used for illegal activities such as smuggling, drug, human and arms trafficking

Significance of Paper

The significance of this research cannot be understated. First of all it will make a meaningful contribution to the pool of literature relating to the maritime industry of Ghana. This research will make a significant contribution to the already existing scholarly work done around the maritime industry. This will be of immense benefit to people who would want some information regarding the maritime industry and the port systems.

It would be of immense benefit to certain organizations which are connected to the maritime industry such as the Ghana ports and harbours authority, Ghana maritime authority, ministry of transport. The findings from this research could be employed by the government in making informed decisions when it comes to drawing up a policy framework which will improve the maritime industry.

Finally this study would also benefit investors who would want to have a fair idea of the maritime industry of Ghana and how they can best strategize to maximize their profits.

Problem Statement

Ghana by virtue of its Maritime Resource Endowment has the opportunity to develop its port systems to rival developed nations and become the gateway to West Africa. However, our ports are not recognized in terms of productivity and output on the international scene. According to the Review of Maritime Transport 2012 published by UNCTAD none of our two ports i.e. Tema and Takoradi ports

rank in the list of top African ports (Durban, Tangiers) which contribute about 1% to the world total share(United Nations, 2012).

This statistic has influenced the direction of this research to explore the limitations Ghana faces in developing its port systems and maritime industry to meet international standards

Objectives

The main aim of this research was to investigate the major problems being faced by the maritime industry of Ghana.

More specifically it aimed to:

- Provide insight into the maritime industry of Ghana
- Identify some of the major issues faced by the shipping industry and offer helpful solutions using examples from other countries that have been able to overcome similar challenges to develop their maritime industries.
- Highlight how Ghana can take advantage of its waterways and develop its ports to meet international standards and push economic development

Research Questions

Main research question

- What are the major challenges being faced by the maritime industry in the execution of the day to day activities?

Sub research question

- What key lessons can be learnt from countries with efficient maritime industries that may have faced similar challenges?

Theoretical Framework

One of the main theories that drove this research is the resource curse. The resource curse also known as the paradox of plenty refers to the phenomena that countries and regions which are most endowed with resources tend to have less economic growth and worse development outcomes than countries with fewer natural resources. This is particularly rampant in the sub Saharan region where most countries have a large resource endowment but are not able to capitalize on them.

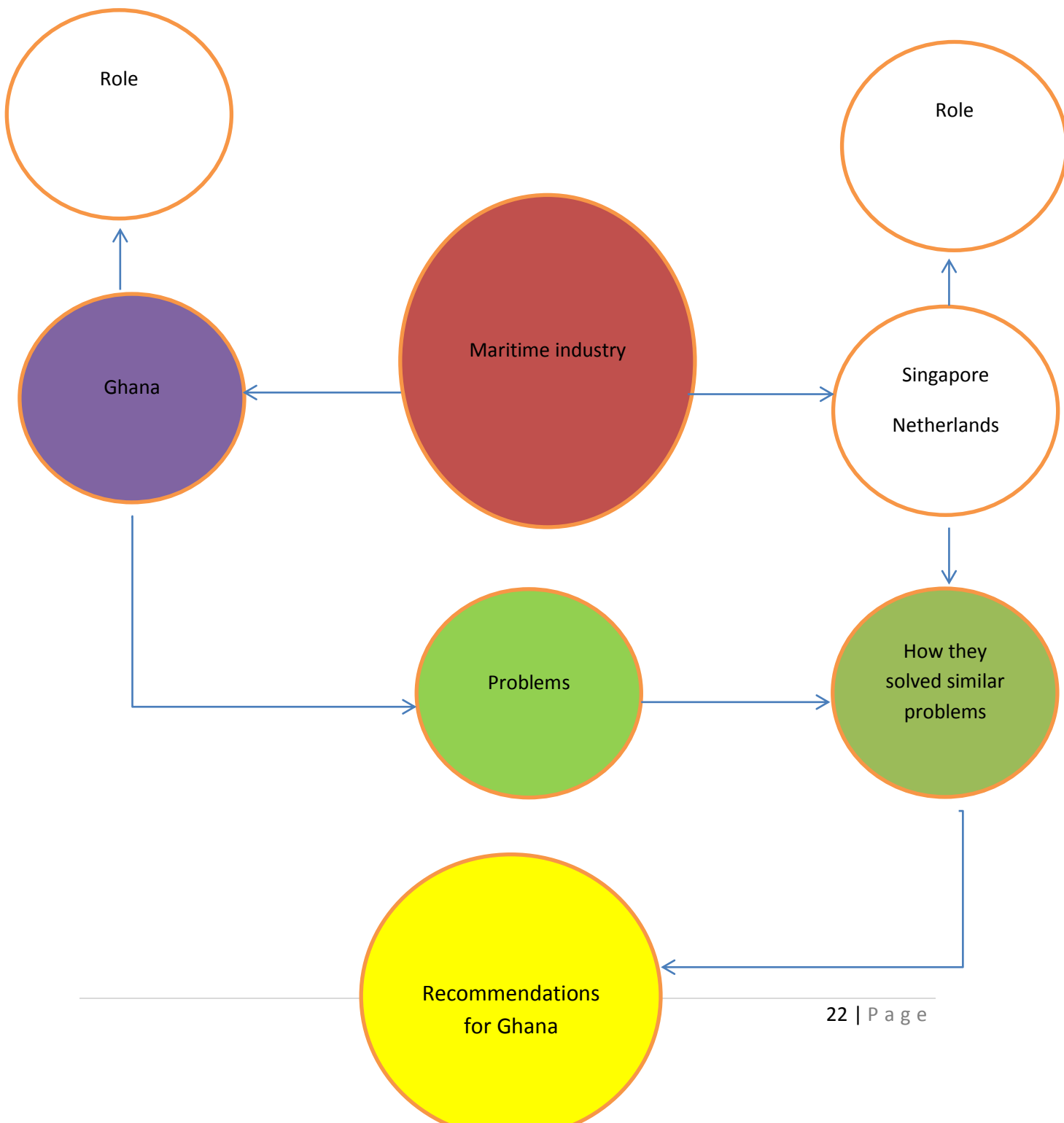
In this case the resource being referred to is Ghana's Maritime Resource Endowment. Maritime Resource Endowment (MRE) is simply a country's proximity to the sea that allows for the existence of a maritime industry. Most countries are gifted with some sort of natural resource. However, research done has shown that Maritime Resource Endowment tends to be largely ignored when listing the resource endowment of countries.

Following the economic theory of the resource curse, this study aimed to investigate why Ghana which possesses significant Maritime Resource Endowment is not ranked among the success stories in the maritime world. It seeks to identify the major challenges being faced by the maritime industry and try to draw similarities with those of developed nations as well as find solutions off their experiences.

Mind Map

The cognitive map is a graphic representation of what the research aimed to discover. The maritime industry is in the centre. It is broken down to the maritime industries of Ghana on the left and Singapore and the Netherlands on the right.

The role of successful maritime nations in this study was to ascertain if they faced similar problems as the ones being experienced in Ghana and how they overcame such challenges.



CHAPTER TWO

LITERATURE REVIEW

This literature review has been segmented into main themes guiding the research.

These themes are

- i. The Resource Curse**
- ii. Maritime Resource Endowment**
- iii. Ghanaian Maritime Industry**
- iv. Lessons From Successful Maritime Examples**

i. The Resource Curse

'Beating the Resource Curse in Africa: A Global Effort' by Terra Lawson-Remer and Joshua Greenstein, talks about the prevalence of the paradox of the resource curse in Africa. It points out examples of many resource-rich African countries that have nothing to show for their vast natural resource endowment. Examples include oil rich Equatorial Guinea where 2010 estimates suggested that 75% of the population lived on less than \$700 a year, but the average per capita income was almost \$35,000, which was the highest in the continent. (Lawson-Remer & Greenstein, 2012)

The literature points out the unfortunate phenomena where instead of creating wealth for the people, leaders often divert proceeds into personal coffers. It also talks about the Dutch disease. The term 'Dutch Disease' was coined by The Economist in 1976 to refer to the negative consequences of North Sea petroleum on Dutch industrial output and connotes the effects of a hard currency inflows

linked with rising resource exports resulting in an appreciation of the real exchange rate (Pegg, 2010). The article identified one major factor as being mainly responsible for the resource curse; Poor governance and management of resources. The report found out that most resource rich countries in Africa had a negative score on the World Bank's control of corruption index. In this article the writers offer certain helpful solutions which they believe will help Africa overcome the resource curse.

Maritime Resource Endowment

The article by Hans-Dieter Evers and Azhari Karim titled 'The Maritime Potential of ASEAN Economies' points out the fact that globally, countries strive to improve their competitive economic positions using available resources. Every nation has its own natural resource endowment. These resources according to the authors may range from minerals, oil and land just to name a few. The number one deciding factor in natural resource endowment is geography. However geography may also influence the structure of a country's economy. Practically a nation without coastline (landlocked countries) cannot have a budding maritime industry.

The article further goes on to talk about the tradeoff which exists due to uneven resource endowment. Some countries which lack natural resource endowment have compensated for it by developing their human resource, talents and knowledge to maintain socio economic and socio political performance e.g. Switzerland.

Resources are usually classified as renewable or nonrenewable with much more emphasis being placed on nonrenewable resources due to their limited life span. In recent times renewable resources have also been largely discussed in terms of

finding solutions to the needs of man. However one resource that has been less emphasized is location. Location by far is a huge determining factor in the socioeconomic and political wellbeing of a country. For example a country with access to the sea has an advantage in terms of foreign trade as compared to landlocked nations.

Hans-Dieter Evers and Azhari Karim further go on to introduce certain key concepts such as the Maritime Potential Index in the articles. The Maritime Potential Index (MPI) is a measure of the geographical dimension of a country's proximity to seas and oceans. This too is often considered a natural resource.

MPI shows the potential of a nation, state or region to make use of this resource. A landlocked state has no natural potential to use maritime resources. In the same vein the potential of an island state or a state with a coast line should be very high.

The "Maritime Economy Index (MEI)" is a combination of various maritime industries like fisheries, shipping, ship building, harbour and other economic fields. Whether or not a country's maritime potential is utilized is measured by the CenPRIS Ocean Index (COI).

In his book the *Wealth of Nations* (Smith, 1776), renowned economist Adam Smith also buttresses the point made by Hans-Dieter Evers and Azhari Karim in their article The Maritime Potential of ASEAN Economies that location is indeed a contributing factor to the development of a country's economy. He put great emphasis on the relationship between geographic location and international trade. Smith observed that a country's proximity to a coastline gave it the opportunity of

developing a more extensive division of labour especially along straits where transport costs were especially low.

“As by means of water-carriage a more extensive market is opened to every sort of industry than what land-carriage alone can afford it, so it is upon the sea-coast, and along the banks of navigable rivers, that industry of every kind naturally begins to sub-divide and improve itself, and it is frequently not till a long time after that those improvements extend themselves to the inland part of the country” (Smith, 1776).

The article Shipping Costs, Manufactured Exports, and Economic Growth by Steven Raddle and Jeffrey Sachs published January 1, 1998 also provide more insight on the impact of geographical location on international trade. They proposed that countries with access to sea ports were able to lower their cost of trade as opposed to countries that were landlocked (Raddle and Sachs, 1998).

Maritime Industry of Ghana

In this section the articles presented talk about the overview of the Ghanaian maritime industry highlighting its contribution as well as challenges it has to grapple with.

‘The Freight Transport and Logistical System of Ghana’ by Poul Ove Pedersen gives some background information on the construction of the Tema and Takoradi harbour. In this article the author details the various stages of evolution of the Ghanaian port systems. It draws the distinction between the Tema and Takoradi harbour whereas the former is used heavily for import the latter is popular for export.

The second article under review in this thematic section is 'Trade in International Maritime Services: How Much Does Policy Matter' written by Carsten Fink, Aaditya Attoo and Ileana Cristina Neagu. The article above sheds light on the management of port systems. Most ports are managed using a number of systems. In this review three management systems would be discussed. A sea port could either be practicing a landlord system of administration, tool system or a service system. Under this landlord system, the port authority owns and manages port infrastructure and private firms provide the rest of the port and maritime services. With tool ports, the port authority owns both infrastructure and superstructure and leases them to private firms through licensing and concessions as is practiced in Antwerp, Belgium. Lastly with service ports, privatization is marginalized with port authority owning and operating both infrastructure and superstructure. With service ports, the authority supplies services by owning assets and directly hiring employees. The service port system is practiced in Ghana with the Ghana ports and harbours authority being the only mandated body to plan, build, operate and regulate ports in the country as stated by the PNDC Act 160 of 1986.

The section titled Ghana in the journal 'Africa Gearing Up' by PricewaterhouseCoopers goes on to outline certain problems being encountered in the maritime industry. According to the journal, West Africa lacks a definite maritime hub. There is no clear port that serves as a gateway to West Africa.

It points out the role of Abidjan in creating a maritime hub for West Africa.

However this could not materialize due to the political crisis in Cote d'Ivoire which disrupted many economic activities. Most major shipping lines were compelled to

divert their West African operations to ports in Malaga (Spain) or Tangiers (Morocco).

It further states that, even though Cote d'Ivoire has an upper hand in terms of port infrastructure currently, Ghana's political stability, better economic policies and strong economic growth give it strong potential to take over the position of being the West African gateway to the rest of the world.

In the article the authors outlined certain problems which were facing shippers and other stakeholders in carrying out their day to day activities relating to the maritime industry. These include

i. ***Cumbersome Procedures to Clear Goods.***

Most shippers face difficulties in clearing their goods from the ports due to bureaucracy and inefficiency. This leads to goods spending more time in the ports at an added cost to shippers.

ii. ***Problems in Dealing with Containerization.***

Most cargo shipped to ports is delivered in metal containers usually measuring 40x 20 or 40 x 40 metres. Developing countries such as Ghana are usually ill equipped to handle the containers which call at their ports.

iii. ***Mass Corruption***

Corruption has become rife at the sea ports. Most clearing agents have to resort to bribes just to clear their goods. Also some unruly customs officials demand bribes before doing their duties.

iv. ***Long Queues By Vessels***

Due to congestion at the ports vessels have to queue for days before offloading cargo. The Tema and Takoradi ports have high turnover days and this is not the best for business. Also the vessels are exposed to piracy and other security threats.

According to the article, there is a clear opportunity for Ghana to assume the leading role in creating a maritime hub for West Africa if only the country can deal with the problems being faced in the industry (PwC, 2012).

Lessons from Successful Maritime Examples

The last thematic section deals with literature relating to successful maritime examples.

The first article under review is by Thomas Menkho and Hans-Dieter Evers titled 'The Governance of Singapore's Knowledge Clusters: Off Shore Marine Business and Water Hub'. This article gives background information of Singapore which is hailed as one of the best maritime hubs in the world. Traditionally, shipping and port related activities are the backbone of Singapore's economy. This can be attributed its hub function and strategic geographical location. It serves as an ideal place for the docking and repair of ships. Singapore's marine industry with its more than 5,000 maritime establishments represents more than 7.5% of Singapore's Gross Domestic Product (GDP) (Marine and Port Authority of Singapore, 2010.)

The article gives a general overview of the Singaporean maritime industry. The framework of the industry is in three main sectors:

(i) Ship Repair and Conversion,

(ii) Shipbuilding

iii) Offshore

These segments together with maritime services such as shipping finance, marine insurance and maritime legal and arbitration services make up the Singapore Marine Cluster (SMC). The SMC was created in the 1960s and its role and contribution to Singapore's economy in terms of job creation and value cannot be ignored. In 2008, it provided 70,000 jobs of which 12,000 were skilled workers with an output in 2009 of S\$ 16.83 billion (Government of Singapore, 2010). The most pivotal role, played by the offshore sector is its contribution of 55% of total industry earnings (Government of Singapore, 2013).

This article highlights certain steps taken by the Singaporean government in developing its maritime industry. According to the authors good governance by maritime institutions and key players such as Singapore's Economic Development Board (EDB), the Maritime and Port Authority (MPA), Agency of Science, Technology and Research played a key role in creating, maintaining and developing Singapore's maritime prowess. It also goes on to identify certain factors such as business acumen, research and development, talent development as major contributors.

The authorities of Singapore also created the avenue for the existence of various maritime related companies in order to expand the industry such as banks, private shipping firms, investment banks, private equity arrangers, shipping finance advisers, shipping finance conference organizers and publishers of maritime finance transactional information just to name a few.

Singapore in its steps to create a maritime hub for Asia also launched the first clearing facility for freight and energy derivatives in Asia, SGX AsiaClear in 2006, to further strengthen Singapore's position as a key hub port for oil and maritime commerce. This act put Singapore in a key position to serve the Asian energy and Forward Freight Agreements (FFA) market.

On the informal sector the Singaporean authorities have launched various maritime related programmes such as 'Maritime Week' and the maritime conference-cum-exhibition 'Sea Asia'. Its future plans include further growth and development of other maritime services such as shipping finance, marine insurance and maritime legal and arbitration services.

CHAPTER THREE

METHODOLOGY

The aim of this study was to understand the major problems of the Maritime Industry that hinder its contribution to the development of Ghana. Within this research certain stakeholders in the maritime industry were interviewed to know the major challenges faced. The scope of the research included identifying certain countries which have excelled in the maritime industry. Finally, some helpful lessons which could be applied to develop the maritime industry of Ghana to international standards were picked up.

Within this chapter is information regarding how data was collected, processed and represented.

Research Method

Since the research deals with identifying problems of the Ghanaian maritime industry and possible ways of dealing with them using examples from countries with developed maritime industries it required the use of qualitative research. The qualitative elements stem from the fact that the research deals with exploring the problems of the Ghanaian maritime industry and how they may be solved. The data was gathered through interviews with experts both culled online and one on one, information from websites, scholarly articles and journals.

Definition of Key Words

This section aimed to define some of the keywords which appear frequently within this research.

- ***Maritime***

Maritime refers to all activities relating to the sea or other water bodies.

- ***Port***

A port is a facility for the handling of ships and other sea going vessels as well as the storage of the cargo being carried by such vessels.

Method/Procedures

In this research, both the use of primary and secondary data was employed. The main instrument of primary data collection was through the use of interviews. Secondary data was collected both online using scholarly articles, journals and any form of literature relevant to the research as well as through the use of literature analysis. The data from interviews served as a guideline in finding data from literature analysis. In the same vein, the information gathered from literature analysis helped structure the type of interview questions respondents received. Some respondents were also difficult to contact so desktop research was used as an alternative.

Data collection tools/instruments

In gathering data the use of literature analysis and interview questions were employed.

- ***Literature Analysis***

This was the first step in gathering data because it provided information which was used to structure interviews. Some examples of the literature used include 'Enhancing Service Quality in the Maritime Industry' by Baffuor Ofori-Atta Kena, 'Shipping and Developing Countries' by Badal Roy and 'The Evolution of a Port System' by David Hilling.

Secondary data was mainly gathered from literature analysis. This was the main source of qualitative data. The data gathered was through use reliable scholarly articles, journals, books as well as reports which were culled online and from archival sources such as libraries.

Information gathered online was quite helpful in structuring this research due to the huge volume of materials gathered from official websites of ports and other important organizations.

- ***Interview Questions***

Interview questions were used to extract qualitative data from certain respondents that had been identified as stakeholders in the maritime industry. The interview questions were semi structured so as to allow respondents to feel comfortable during the process and simultaneously keep the responses from the interview within the context of the research. The questions were mailed and in some cases hand delivered to the respondents prior to the interview so they could have a fair idea of what would be discussed during the interview. After the interviews, literature analysis was used to scrutinize certain documents and the data from the interviews i.e. challenges and opportunities were used to compare and contrast.

The response from the interviews affected what type of texts that were looked up and vice versa. Interviews were conducted either face to face or through phone calls.

Sampling Strategy

The sampling strategy used in this research was a combination of purposive sampling and snowballing. This was due to the fact that certain individuals and organizations that have either a direct or indirect link to the maritime industry have been identified. These are specialized individuals with the technical ability and structural knowledge to help gather the specific data that was needed for the research.

Population

The respondents were private individuals and resource persons representing some of the organizations which were identified as stakeholders. The organizations here were the Ghana Ports and Harbours Authority, Regional Maritime University, shipping companies, the private individuals were maritime professionals and importers who usually use the harbours to bring in their cargo. With the organizations the strategy was to get a representative resource person who would provide the necessary information needed. Most of the information which was gathered from the organizations and individuals was qualitative. The population included representatives from three shipping companies (McDan Shipping Company Ltd, Meridian Shipping Ltd and Clear Freight Shipping Ltd), three maritime professionals, all of whom are clearing agents. While two are

independent agents the other is an employee of Patriotic Shipping Limited, three importers with two dealing in food importation and the last being a car importer and two students from the Regional Maritime University. With the students from the Maritime University, one is a final year student studying Ports and Shipping Administration and the second is a sophomore studying Logistics Management. With the students from Maritime University and the importers, the interview questions were unstructured.

Data Analysis

Findings from the interviews and literature analysis were analyzed using content analysis.

Table 1.1 Data Collection Table

SAMPLE	LOCATION	DATA NEEDED	METHOD USED
3 Shipping Companies	Tema Harbour /Airport Cargo Village	Major Problems Facing Shippers	Interviews
3 Clearing Agents	Tema Harbour /Airport Cargo Village	Major Problems Facing Maritime Professionals	Interviews
2 Students	Regional Maritime University	Opportunities Available For Students	Interviews
Dean Of Maritime Studies	Regional Maritime University	Contribution Of RMU To The Maritime Industry	Desktop Research
3 Importers	Tema Harbour	Major Problems Facing Importers	Interviews
Director Of Ports	Tema Harbour	Major Problems Facing The Maritime Industry	Desktop Research

Chapter 4

Data Findings and Analysis

4.1 Introduction

In this chapter findings from data collected were reviewed and discussed. With the initial research that was done some problems of the Ghanaian Maritime Industry were found from online sources. Further research was carried out through the use of secondary data to lend credence to the primary data already gathered.

The main objective of this research was to investigate the major problems being faced by the maritime industry of Ghana. Specifically it aimed to provide an insight into the maritime industry of Ghana. Also the research identified some of the major issues being faced by the shipping industry and offered helpful solutions using examples from other countries that had been able to overcome similar challenges to develop their maritime industries. Lastly, the research aimed to highlight how Ghana can take advantage of its opportunities and develop its ports

4.2 Demographics

- **Maritime Professionals**

Three maritime professionals were interviewed. All three were male middle aged Ghanaians. Actual ages are unknown.

- **Shipping Companies**

The three resource persons from the shipping companies were all male Ghanaian and were head of operations in their respective companies. Ages of the respondents were unknown.

- **Ghana Ports And Harbours Authority**

The resource person was the director of ports who is male and Ghanaian. His age is unknown

- **Importers**

One out of three was female. The rest were male. They were all self-employed Ghanaians.

- **Students**

Two students interviewed were male. One is a 23 year old half Ghanaian half St Lucian while the other is a Cameroonian whose age is unknown.

- **Regional Maritime University**

The resource person here is the Dean of Students' Affairs. The respondent is a Ghanaian male whose age is unknown.

4.3 Data Analysis

The data used in this research was culled from two sources. The sources include primary data which was mainly taken from scholarly articles both online and from archival sources as well as secondary data which involved detailed interviews with resource persons in organizations that have a direct role to play in the maritime industry.

Interviews

The research identified some main stakeholders who were interviewed. During the course of the research some major bodies as well as individuals were found to have a direct role to play in the maritime industry. These were the Maritime University, students of the maritime university, maritime professionals, shipping companies both local and foreign, importers and the Ghana Ports and Harbours Authority which operates the two Ghanaian ports.

Interviews were conducted with these stakeholders to know the problems being faced by the maritime industry from their own perspective.

i. Maritime Professionals

These are people whose careers are directly linked to the maritime industry. The main mode of contacting these professionals was through snowballing at the Tema port where most of them worked. During the course of the research, three maritime professionals were used. All three were clearing agents. Clearing agents are persons who execute customs clearance on behalf of importers (Shipping and Freight Resource, 2013) .In interviewing them a few problems they outlined included:

➤ Misinformation From Port Operators

According to information gathered, there was miscommunication between port operators and the people who ply their trade at the ports on a daily basis. This always led to problems and confusion.

➤ Poor Social Security Framework

Most of the workers also spoke about the poor social security framework existing in Ghana currently. According to them, generally, professionals within the maritime industry were not assured of good pensions and most people after retirement struggled to make ends meet. This was a factor that led to the exit of many maritime professionals from the industry.

➤ **Corruption**

The alleged corruption currently engulfing the port was also a major problem for the maritime industry. According to the respondents bribery is rather rampant at the ports. . To get anything done one must be willing to part with money.

➤ **High Taxes And Tariffs Being Charged At The Ports**

High taxes and tariffs being charged on goods and port services is also stifling the industry. According to the information from the interviews most importers especially from landlocked countries preferred to use other ports within the sub region. This takes away a lot of business from the ports.

➤ **Brain drain**

Most of these maritime professionals when asked if they would willingly leave the country to ply their trade elsewhere gave a positive response. According to them every year Ghana loses a lot of maritime professionals to neighbouring ports as well as other ports outside of Africa. This is due to the poor working conditions they face back home.

ii. Shipping Companies

For the purpose of this research, heads of operations of 3 shipping companies were interviewed. These were McDan Shipping Ltd, Clear Freight Ltd and Meridian Shipping Ltd. Out of all the responses a few problems were consistent.

➤ **Port Congestion.**

Port congestion is an albatross hanging on the neck of the maritime industry. Ghana has one of the longest waiting times for vessels in the sub region. Waiting time is the period a ship is anchored or before its cargo is offloaded. This has led to high port congestion at the Tema and Takoradi ports. This costs shipping companies as well as importers a lot of money.

➤ **Poor infrastructure**

Shipping companies claimed the infrastructure in terms of machinery, terminals; bays etc. at the port were out-dated. This made their work very difficult as it took a longer time for their cargo to be offloaded. They also claimed certain vessels could not berth at the harbour especially the Tema harbour as certain vessels could not dock since the wharf was too shallow.

➤ **High Tariffs And Taxes**

Shipping companies complained about the high demurrage and taxes being charged at the port. This according to them slows down business as other importers especially from landlocked countries in the region have opted for other ports as their source of import.

➤ **Inadequate Support From Government**

Shipping companies complained about inadequate support from the government. The government seems to be more partial to other sectors of the economy such as the agricultural sector. According to them most government actions are rather inimical to the growth and expansion of their business.

➤ **Poor Port Services**

Through the interviews one major problem that came up was poor port services. Ghana's two ports are both owned and operated by the Ghana Ports and harbours authority which is a government agency. However users of the port have bemoaned the poor quality of the services they offer in spite of the comparatively high tariffs they pay.

➤ **Corruption**

There is an alleged high rate of corruption present at the port. Bribery is rather rampant and without it little to nothing can be done.

➤ **Bureaucracy**

As often is the case with most government agencies there is a high level of bureaucracy present at the ports. This creates unnecessary delays in processes.

➤ **Unfair Government Policies**

Shippers also complained about unfair government policies which affect their businesses negatively. Currently government is trying to implement an amalgamation act where smaller shipping companies will be forced to join other companies to reduce the number of shippers on the market.

iii. **Ghana Ports and Harbours Authority**

The initial plan was to interview a resource person at the Ghana Ports and Harbours Authority. However due to certain factors such as busy schedules, time constraints, distance as well as other factors, information was gathered from an earlier interview with Mr Nestor Galley who spoke to USA Today in 2011 in his capacity as the Director General of the GPHA. In the interview he mentioned one major problem of the Ghana maritime industry being poor port infrastructure. (US Today, 2011)

iv. **Importers**

From the research done, it came to my notice that while most of the problems of the maritime industry is often largely be blamed on the Ghana Ports and Harbours Authority, that was not the case. Some shipping companies are also guilty of the very same things they accuse the GPHA of. Some importers were interviewed and from their responses these are some of the problems they faced with shipping companies

- **Poor Response To Customer Complaints**

According to most importers interviewed most shipping companies allegedly have poor customer services. Little to nothing is done about registered complaints from customers

- **Bureaucracy In Documentation**

The unnecessary complicated administrative procedure which is rampant among shipping companies is a huge problem. This often causes delays and waste of resources.

- **Release Process Takes Too Long**

This is closely tied to the problem of bureaucracy earlier discussed, due to complications in procedures often the release process of cargo from shippers to importers often takes a long time which slows down business.

- **Poor Communication Between Customers And Shipping Companies**

There is often a rift in communications between shipping companies and their customers. Certain customers have alleged that certain shipping companies they have had past dealings with have refused to pick up their calls especially when there are delays in the release and delivery of cargo.

Most of the problems outlined were closely linked to each other. Some even existed as a result of the other. However three major problems were identified. These kept recurring and most of the respondents also mentioned these problems when asked to name the most threatening problem which existed currently.

Major Problems

Out of all the problems that were identified through the interviews with stakeholders, they complained most about port congestion, poor infrastructure and high tariffs. These were the problems that cut across all the stakeholders. Out of the three shipping companies interviewed, two of them complained about port congestion while all three complained about high tariffs. One out of the three complained about poor port infrastructure. All the maritime professionals complained about high tariffs and .the major problem with the Ghana Ports and Harbours Authority from my online research was poor port infrastructure and superstructure. All The importers also complained about high tariffs and port congestion which caused delays. From the feedback received, the research identified these problems to be the three main issues plaguing port operations in the country due to their frequency of appearance.

Stakeholder	Problem Faced	What Improvement They Would Like To See
McDan Shipping Ltd	<ul style="list-style-type: none"> • Port Congestion • High Taxes • Bureaucracy 	<ul style="list-style-type: none"> • Improve Communication • Tariff Reduction • Port Expansion • Reduce Waiting Times Of Vessels
Meridian Shipping Ltd	<ul style="list-style-type: none"> • Low Bargaining Power • Unfair Rules • High Tariffs 	<ul style="list-style-type: none"> • Reduction Of Levies And Taxes

<ul style="list-style-type: none"> • Clear Freight Shipping Ltd 	<ul style="list-style-type: none"> • Poor Port Infrastructure • Port Congestion • High Tariffs • Instability In Exchange Rates • Corruption • Poor Port Services 	<ul style="list-style-type: none"> • Subsidization • Increase Government Support
<ul style="list-style-type: none"> • Ghana Ports And Harbours Authority 	<ul style="list-style-type: none"> • Poor Port Infrastructure And Superstructure 	<ul style="list-style-type: none"> • Port Expansion • Infrastructural Investment

4.4 Countries with Developed Maritime Industries

Under this section countries which have been able to develop their maritime industries to rival international standards were examined. For the purpose of these research two countries namely Singapore and the Netherlands were chosen. These countries are renowned worldwide for their budding maritime industries. The research aimed to find solutions to the major problems which were facing the maritime industry.

4.5 The Netherlands

The Netherlands is renowned internationally for their maritime prowess. The maritime industry is a huge part of their economy. Currently the Netherlands operates the world's largest port known as the port of Rotterdam which also doubles as its chief port. The Netherlands Maritime Institute is internationally recognized as one of the finest in the world, and their ship-testing station at Wageningen is known for its advancement in marine engineering research. For the purpose of this paper the port of Rotterdam will be analysed to examine how it was developed and how it became one of the leading ports in the world.

- **Port of Rotterdam**

Rotterdam is home to one of the main ports of the Netherlands. It is also considered as one of the largest logistic and industrial hubs of Europe. The port boasts an annual throughput of 450 million tons of cargo a year. Rotterdam is undoubtedly the largest seaport of Europe. The port is the gateway to a European market of an estimated 350 million customers. Rotterdam can brag about its position by virtue of its geographical position which grants it excellent accessibility via the sea i.e. Maritime Resource Endowment, the hinterland transport network and the many companies and organisations, active in the port and industrial complex. The port stretches out over 40 kilometres and is about 12,500 ha including Maasvlakte.

Cargo-handling equipment at the Port of Rotterdam includes ten sheer leg cranes, 12 container cranes, 22 ship-to-shore bulk cranes, 25 floating cranes, 103

container gantry cranes, and 162 multi-purpose cranes. The port has three shipyards. There are five graving, one graving and covered, and seven floating docks. A slipway maintains inland vessels (Port of Rotterdam Authority, 2015).

4.5 How the Port of Rotterdam deals with Congestion

With the problem of congestion, according to the research done, may be caused by a lot of varying factors. It cannot be completely eliminated. However it can be managed. The port authorities were recently faced with a problem of congestion at the ECT Delta Terminal and the Euromax Terminal and this is how it was handled.

First of all, the port management allocated different terminals to the ships arriving based on their size and number of containers carried. At the various terminals all related aspects such as berth, unloading and stevedoring will be handled and a final report is presented to the main terminal. This will free up main terminals for the vessels with high capacity.

The second measure had to do with infrastructure. What they essentially did was to allocate their very efficient cranes to unload vessels with high capacity. This made the processes associated with unloading of containers faster.

The third and the last were through the use of their inland port facilities.

Containers meant for inland shipping were bundled at one location i.e. Uniport Terminal in the Waalhaven area. This allowed for the other terminals to be free for sea going vessels.

4.6 Singapore

The second successful maritime nation here is Singapore. Singapore's maritime industry is a key component of its economy. Singapore's maritime industry contributes approximately 7% of Singapore's GDP, and employs more than 150,000 people across 7,000 companies. In 2012, annual vessel arrival tonnage reached 2.25 billion gross tons, an increase of 6.1 per cent from the previous year. Tankers and container ships were the top contributors to total vessel arrival tonnage

Singapore's ship registry is ranked among the world's top ten ship registries, with a gross tonnage of 65.0 million GT as of end December 2012. (Tan, 2013)

- **Steps Being Taken To Improve The Maritime Industry Of Singapore**

Singapore is already famous for its maritime industry, however there are still initiatives being implemented to boost its maritime industry. In May 2013, The Maritime and Port Authority of Singapore (MPA) announced new policies which were going to be implemented for the maritime sector. These policies were primarily targeted at strengthening Singapore's already solid maritime industry. The first policy was mainly centred around improving productivity at the port while the second was primarily focused on increasing market share of the Port of Singapore. The first policy is in three main categories: Maritime Research and Development (R&D), Productivity Enhancement and Finally Human Resource Development.

(a) Maritime Research & Development

Singapore has an already existing fund for the maritime industry from which developmental projects are funded. This fund known as The Maritime Innovation and Technology (MINT) Fund will be extended for a further five years, with an additional amount of S\$50 million being added. The MINT Fund was established in 2003 with an initial amount of S\$100 million to support maritime Research & Development and prototype testing of maritime technologies by universities, research institutes and other stakeholders in Singapore over a period of ten years.

(b) Productivity Enhancement

Singapore is taking effective steps to ensure productivity within the maritime industry is maximized. A new S\$25 million Productivity Programme under the umbrella of the Maritime Cluster Fund (MCF) is being introduced. The Maritime Cluster Fund is fundamentally was established to support the industry's man power and business development projects. It does this by co-funding existing maritime companies in their projects, supporting new maritime companies in their initial expenses as well as existing companies which may wish to branch into new lines of maritime business .The Productivity Programme being implemented among other things will provide co-funding for initiatives such as business process re-engineering, automation and adoption of new and improved productivity tools or practices.

(c) Human Resource Development

The Singaporean MPA has earmarked S\$2 million which will be culled from the Maritime Cluster Fund's Manpower Development Programme for a Global

Internship Award over the next five years. Local graduates from the three local universities are eligible for this award. As part of the benefits, winners will undergo a fully-sponsored maritime-centred internship that will take place both locally and internationally. This will equip them with significant exposure to international maritime companies and practices

There are also plans to introduce local universities to new educational reforms. Already some universities such as The Singapore Management University have begun following suit. The University plans introduce a new Maritime Economics Concentration programme within its School of Economics in August this year. This is a structured programme which comprises maritime-related modules, internship opportunities, overseas industry study missions, site visits, and talks by industry practitioners .The MPA, together with the American Bureau of Shipping as well as the Singapore University of Technology and Design (SUTD) have entered a tripartite agreement which will see the establishment of the ABS-MPA Maritime Technology Professorship Programme at SUTD to further enhance SUTD's capabilities in maritime education and Research & Development.

(d) Changes to Port Dues Structure and Rates

Singapore in recent times has realized that port dues and tariffs are very key components in ensuring market leadership and having competitive advantage over maritime rivals, the Singaporean Minister for Transport, Mr Lui Tuck Yew, announced on 11 April 2013 that the Maritime and Port Authority of Singapore has just completed a thorough review of the port dues structure and rates for vessels and other businesses. Furthermore the MPA will implement certain policies which

will simplify the port dues structure as well as make available the various incentive schemes that port users can expect to benefit from. The proposed changes are expected to benefit callers at the port as well as the whole industry as a whole. Experts estimate the industry will save an estimated S\$11 million a year. Under this proposed dues structure reform 83% of vessel calls can expect to pay lower port dues.

Chapter 5

Summary of Findings, Recommendations and Conclusions

5.1 Limitations

Limitations

During the course of the research certain limitations were faced. First of all, the articles used in the literature review, did not outline ways by which developing countries can catch up with developed nations which have utilised their maritime potential to the advantage of its economy. There were no clear steps outlined which showed how a developing maritime country can develop its Maritime Resource Endowment to be able to match those of developed countries.

Also during the research, finding a ranking system based on internationally accepted measurement scales such as the Maritime Potential Index (MPI), CenPRIS Ocean Index which is used for ASEAN economies for African maritime nations proved to be a challenge.

Data collection proved to be rather challenging. Initially the research was intended to interview resource persons from key organizations such as the Shippers' Council Authority, Ghana maritime Authority, Ghana Ports and Harbours Authority as well as 10 maritime professionals, 10 shipping companies and 10 importers. However, due to bureaucracy most of the resource persons in the organizations needed clearance from their superiors. Eventually the research had to continue without the direct input of the resource persons from The Shippers' Council Authority, Ghana Maritime Authority and The Ghana Ports and Harbours Authority. This affected the quality of the data gathered since the resource

persons could not be reached directly for interviews. Also, with the shipping companies, importers and maritime professionals, the number had to be reduced owing to time constraints and busy schedules.

5.2 Summary of Findings

The maritime industry of Ghana is facing a myriad of issues both from internal and external factors. To say nothing is being done about it locally would be a rather unfair statement. The government as well as other stakeholders are taking certain steps to ensure our ports have competitive advantage over others in the sub region. Some of these actions include:

- **Human Resource Development**

The contribution of the Regional Maritime University cannot be ignored. Currently the university has a Memoranda of Understanding with certain shipping companies such as MSCA and SDV to give students internship opportunities this makes them better equipped to deal with all these shortfalls when they finally enter the industry. Currently the university also runs a BSc Logistics Management programme. As part of the requirements of the programme, students are expected to complete their third year in the Shanghai Maritime University as part of a bilateral agreement between the regional maritime University and the former. This allows the students to benefit from the immense opportunities for knowledge in Shanghai which has a very developed maritime industry. This experience enables students upon their return to improve certain aspects of the maritime industry which were subpar.

- **Advanced Ship Information System (ASHI).**

The Advanced Ship Information System is a new system of recording vessel information which allows the relevant shipment information to be captured at its port of origin. This allows the ports in Ghana to receive the information in advance of the vessel's arrival at the port. This is a system that is being introduced by the Ghana Ports and Harbours Authority as part of its automation processes in the on-going port expansion and reform projects. This particular system is being implemented to help check port congestion. However, the launch of the ASHI has been delayed due to complaints from various stakeholders. Some of the complaints include the fact that the stakeholders believe it duplicates systems already in place. However port authorities have cleared the air surrounding the various issues. According to the Authorities, the new Advanced Ship Information System does not replace the old GCnet system where cargo information is only available 72 hours prior to the arrival of the vessel. Rather, ASHI will be integrated into the old system to help meet its shortfalls.

- **Construction of Inland Sea Port at Boankra**

The Ghana Shippers Authority in partnership with the Ghana Ports and Harbours Authority (GPHA) are working to establish the country's first dry port. The inland port will be situated at Boankra near Kumasi in the Ashanti Region

This very important infrastructure when complete will serve as the primary link between the ports of Tema and Takoradi to the hinterland. The landlocked countries of Burkina Faso, Mali and Niger are also expected to benefit immensely as it would ease up transportation of goods from our ports to their countries. The Boankra Inland port would be operated as a free port¹ that would combine uni-

¹ Free port : a port open to all traders and typically exempt of import duty

modal and inter-modal operations. This hybrid technique of transporting goods is targeted at tackling the congestion problem plaguing Ghana's seaports in a bid to ease the transit trade of Ghana's land-locked neighbours.

Some of the expected benefits of the Boankra Inland Port include:

- I. Reduction in haulage cost of international cargo to importers and exporters located in the middle and northern parts of Ghana, including the Sahel sub-region.
- II. Increased exportation of produce such as cola nuts, Shea butter, cocoa and wood
- III. Decongestion of the Tema and Takoradi ports.

- **Expansion of the Tema and Takoradi Ports**

As part of the efforts to make the seaports of Ghana the leading maritime hub in West Africa, management of the Ghana Ports and Harbours Authority has initiated series of expansion and modernization projects to be carried out in the ports of Tema and Takoradi. These projects costing about \$2.5bn are expected to be implemented between 2012 and 2018. As part of the expansion efforts, the two sea ports i.e. Tema and Takoradi will see infrastructural expansion, business and operational process automation, procurement of modern plant and equipment as well as human resource development projects. Upon completion in 2018, Tema harbour should be able to handle 2 million TEUs (Twenty-foot Equivalent Units) per year, rivalling the expanded port of Abidjan. Most recent available statistics from the GPHA show that 822,131 TEUs passed through Tema, Ghana's main port, in 2012 while Lagos handled 1.4 million. With the procurement and

inauguration of two new cranes in January 2014, turnaround time for ships at Tema is expected to reduce from six days to four days. The expansion project has become an even more pressing necessity with the discovery of oil in the western region of the country.

The expansion projects, when completed, will improve the overall efficiency and productivity, provide adequate port capacity to handle the ever growing traffic, improve service delivery as well as decongest the ports and lower the cost of doing business in the long run. This is to improve the competitive advantage of the Ghanaian ports over neighbouring maritime countries in the sub-region.

5.3 Recommendations

Co-operation

First of all cooperation between all stakeholders is key. If the problems at the ports are to be managed if not solved entirely all the necessary parties that have a stake in the maritime industry must agree to work together for the greater good. This involves corporation from both private entities as well as the governmental agencies. Everybody has a role to play as tackling of the problems cannot be solved on a divided front. Efforts would have to come from the state as well as private individuals who have an interest in the industry.

- **Common Maritime Fund**

The establishment of a common fund for the maritime industry would greatly help improve the maritime sector. Currently Ghana does not have such an instrument in place. Various stakeholders such as Ship Owners and Agents Association of Ghana have called for the establishment of a common maritime fund. The fund

could help bankroll many infrastructural and human resource development projects in the industry as well as support companies in the industry. The fund could be fed from the various levies, charge and taxes being paid by the various companies. It could also be placed under the management of The Ghana Maritime Authority who in turn would be supervised by Parliament.

- **Tighter Regulations on Shippers and Forwarding Companies**

There should be a regulatory framework which ensured that all shipping companies are registered to the port authorities. Also there should be a source of authentication for importers who want to verify the credibility of the agency they are contracting. This will make it difficult for charlatans and fraudsters to ply their trade at the ports. It will also enable the port authorities to regulate the charges on the ports. This could primarily be executed by the Ghana's Shippers Council.

- **Government Support**

The government would also have to show a stronger commitment to the maritime industry. At the moment entry barriers are already high. Government can help ease this up by providing assistance to struggling companies. This may be in the form of tax exemptions, infrastructural projects and training support programmes.

- **Lower Tariffs**

The port authority should also look into restructuring the tariff framework for the port. The ports of Ghana lose so much business to the ports of Lome and Abidjan due to high tariff charges. Currently Ghana has the highest tariff charge in the sub-region and this has greatly reduced the number of vessels calling at the ports and reduced business.

5.4 Conclusions

This research has attempted to identify major problems facing the Ghanaian maritime industry and find solutions from countries with developed maritime industry. Even though it is not exhaustive of all the problems being faced, it did give a sufficient and necessary overview of the issues that were plaguing the industry.

The problems facing the maritime industry of Ghana are not unique to the shores of this country alone. The industry in itself is highly volatile and elastic since it has interconnections with so many economic factors. This means it will continue to be plagued by so many challenges from external sources.

Given this information it is easy to dismiss the suggestions made in this research as it does not eliminate all the problems completely. However this should not be the case. With every maritime industry, a strong relationship between the government and maritime stakeholders effectively combined with significant Maritime Resource Endowment, excellent human resource and proper infrastructure places the country in a position to gain immensely.

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Appendix

Interview Questions Sample

General Questions

1. What major problems do you think the Ghana maritime industry faces?
2. What role do you think your organization can play in ensuring the maritime industry improves its contribution the Ghanaian economy?

SPECIFIC Questions

Ghana Ports and Harbours Authority

1. Would the addition of a third seaport or an inland port help the country at this stage?
2. In terms of equipment, how far are our ports from those of developed countries?
3. Are there any future plans to increase our maritime capacity?
4. Where do we have a comparative advantage over our competitors?
5. What actions can we take to attract and lock in customers?
6. Will the establishment of extra ports create a new form of competitor?
7. How significant is port cost in determining market competitiveness of port customers?
8. What barriers or incentives can prevent port customers from switching to other ports?
9. To what extent can the services provided by our port be replicated elsewhere?

10. What are the bargaining strengths and weaknesses of the port and port users?

11. How can the port's bargaining strength be improved?

Foreign Owned Shipping Companies

1. Do you have any shipping companies outside of Ghana?
2. If yes, how would you compare your Ghanaian operations to those outside the country?
3. How profitable have your Ghanaian operations been compared to others based outside?
4. What problem within the Ghanaian maritime industry threatens your operations the most and how do you think it can be resolved?
5. Are your operations linked to any landlocked countries within the sub region?
6. What policy on maritime operations do you think would help your company most at this stage

Locally Owned Shipping Companies

1. How favourable is the business environment to Ghanaian owned shipping companies?
2. What problem within the Ghanaian maritime industry threatens your operations the most and how do you think it can be resolved?
3. Are your operations linked to any landlocked countries within the sub region

4. What policy on maritime operations do you think would help your company most at this stage

Maritime Professionals

1. How lucrative is the Ghanaian maritime industry for maritime professionals
2. Are there better opportunities outside of the country
3. Are you willing to leave the country to ply your trade elsewhere and if so what factors account for that?
4. What policy on maritime operations do you think would help your career most at this stage