THE RELATIONSHIP BETWEEN INTERNATIONAL TRADE AND INFRASTRUCTURE DEVELOPMENT IN KENYA MARITIME TRANSPORT

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DECLARATION

This research project is my original effort and has not been availed for a degree or any other award in any other university.

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D61/72794/2014

This research project has been submitted for examination with my approval as the university supervisor

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DEDICATION

This study is devoted to my family especially my parents, Mr and Mrs Omondi for their continuous support and inspiration during the course of my academic period.

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ABSTRACT

The overall research unbiased aim was to study the relationship between international trade and infrastructure development in Kenya maritime transport. The definite goal was to determine the relationship between international trade and infrastructure development in Kenya maritime transport. The theories that guided my study were: mercantilism theory, absolute advantage theory, internalization theory and the regime theory. A case study methodology was adopted for this field study, by use of questionnaire as a primary method of data collection. Content analysis was used to analyze the collected data. Study findings revealed that the relationship between international trade and infrastructure development in Kenya maritime transport is existent. Strategic partnerships and collaborations are important in order for a country to establish an international footprint in global trade. The IMO with the help of its many conventions like SOLAS and FAL are but a few that put Kenya in the forefront of global network with other countries in the world bringing about dynamism in the maritime sector. Performances are improved due to the addition of subsidy on viable projects that bring return of investment. In turn the national government involves in advancing maritime education and training by getting involved in developing the maritime curriculum hence making human resource globally competitive. The limitation of the study was that the sample-size of the study. In order to increase more information, the sample-size should have been larger, perhaps both the lower level managers together with the departmental heads of KMA. However due to the time limit and sensitivity of information the study had to be limited to higher level managers alone. The study recommends that management of the maritime sector should also reconsider the introduction of regional cabotage more so, Kenya should increase its transshipment cargo. The concept of African ports for African ship owners is possible, in that, a shipping line chooses an efficient Port for transshipment cargo.

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ABBRIEVIATIONS AND ACRONYMS

BMA	Bandar Maritime Academy
BRIC	Brazil, The Russian Federation, India and China
CO2	Carbon Dioxide
CRIMARCO	Critical Maritime Route wider Indian Ocean
CMF	Combined Maritime Forces
CSC	Customer Service Charter Export Led Growth
EAC	East African Community
EDMS	Electronic Data Management System
ERP	Employee Resource Planning
ELG	Facilitation of International Maritime Traffic
FAL	Facilitation of International Maritime Traffic
GDP	Gross Domestic Product
IMO	International Maritime Organization.
IOMOU	Indian Ocean Memorandum of Understanding
IT	Information Technology
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KEBS	Kenya Bureau of Standards
KENTRADE	Kenya Trade Network Agency
KMA	Kenya Maritime Authority
KRA	Kenya Revenue Authority
KPA	Kenya Ports Authority
MTCC	Maritime Technology Corporation Centre
NIS	National Intelligence Services
SGR	Standard Gauge Railway
SOLAS	Safety Of Life at Sea
SWS	Single Window System
UNCTD	United Nations Conference on Trade and Development
USA	United States of America
VGM	Verified Gross Mass

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

International trade is the exchange of good and services amongst trading countries. With the right conditions, this type of trade benefits both countries involved, hence, acts as a powerful driver for sustained GDP growth (Gross Domestic Profit), leading to improved living standards of the citizens, Gandolfo (2014). Nations will generally focus in and export products which uses raw materials they are most abundantly endowed. Infrastructure development is a major challenge of the 21st century. John Spacey (2018), defines infrastructure development as the building and upgrading of foundational services to spark economic growth and improve life's quality. Infrastructure is historically state-provided, universally distributed services of a city or region Graham and Marvin (2001). These includes; water, energy, transportation, societal and green infrastructure. Kenya is mainly dependent on international trade which is mainly with countries where the predominantly mode of carriage is maritime transport. Maritime transport in Kenya is almost solely conducted by foreign shipping companies which own ships and provide services worldwide. The market structure under which these shipping companies provide transport services is of significant importance to the economy, therefore, the study will seek to determine the relationship between international trade and infrastructure development in maritime transport.

This study was anchored on three major theories: mercantilism theory, the absolute advantage theory and the internationalization theory. Mercantilism theory advocates for governments to trading internationally with the objective of creating capital and strengthening the authority of the state. This occurs when suppliers and the state collaborate on the lessening of trade deficit, therefore, creating excess (McCusker, 2009). The absolute advantage theory is the ability of an individual, a nation or an organization to manufacture a good, product, or service in surplus, using similar quantity of resources (Mesquita, 2013). Internationalization is an advanced process which entails a pro-active tactic to achieve international expansion according to The Innovation-Related (I-R) Model. This model analyses the development of export activities as a growth learning curve (Shirani, 2009).

The Kenyan Maritime Industry has put measures to improve its efficiency thus increase its competitive advantage amongst other nations of the world through international trade. As part of the Big Four Agenda of the country's executive branch of government, Kenya maritime transport has been able to achieve operational efficiency. Through the governmental pillar of Vision 2030 where Kenya foresees a country which demonstrates a structure reflecting the ambitions and opportunities of its people by improved standard of living, access to healthcare facilities and good infrastructure among others, Kenya maritime transport falls perfectly in the economic and macro pillar. With this in mind, there is establishment of special economic zones that have been and still are being pursued in order to improve maritime transport. For example, the Mombasa Dongo Kundu Free Port, Lamu Port and also Kisumu Port are some of the infrastructure that the government have taken key interest in improving their infrastructure in order to keep up with thr rising demand of clients in the blue economy both regionally and internationally. These ventures not only attract local and foreign investments but also help in diversifying and expanding of produce of good and services for domestic and export markets.

1.1.1 International Trade

International trade is an economic transaction between nations, or any profitable deal across country borders (Bennett, 2009). Consumer goods, capital goods, raw materials, food, services and payment of patent rights are the most traded items. International financial payments is the means through which international transactions are done (Buckley, 2005). The Central bank of trading countries play a role in these transactions. International trade is normally conducted to offer its people commodities it produces in deficit, for those commodities it produces in surplus. The conception of long distance trade 9,000 years ago resulted to international trade, before the existence of national states and borders. The modern industrialized world exist because countries traded in imports and exports, making international trade the core of modern global economy.

International trade and transactions improves a nation's standard of living, promote free trade between nations, and promote product availability and variety at an affordable price (Devinney, 2010). Additional advantage of international trade includes; comparative advantage, economies of scale, completion, transfer of technology, and jobs creation (McDonald et al., 2002) However, international trade leads to overspecialization, which may negatively affect a country if global demand for a product declines. Lastly, a country may be at risk of being held ransom by its exporters if it totally depends on imports for strategic industries (military equipment, food, and energy.)(Torre, 2008).

International trade strategy has bilateral and multilateral measures amongst trading countries, and it dictates the terms of business engagement between the nations. Trade policies and associations varies in content, but they generally focus on the economic structure of a given country (Hill, 2005). Trade across continents plays a major role in shaping and influencing succeeding trade policies, whereas locally, the influence is from public-private relationship and self-sufficiency of state agencies and their utilitarian capacity.

1.1.2 Infrastructure Development

Infrastructure development is the construction of physical networks and facilities essential to the operation of a modern industrialized nation. In the year 2017, Switzerland was ranked first globally in regard to infrastructure quality. Infrastructure typically includes; telecommunication sector, energy sector, and transport sector.

Internationally influenced government policies and the world's capital markets are keen on infrastructure of markets that are evolving, drawing in new subsidies, which consequently improve expansion of infrastructure. Many nations emphasis on infrastructure development projects and growth objectives and the private sector also contribute largely to the development of infrastructure which has led to the formation of public-private partnership. Emerging market hosts like Qatar, China and India, are aggressively amassing up as major venture benefactors. Particularly, a country like China has played a major role by investing in development of infrastructure in the African continent and other parts of the developing world. Investment funds generated in the private sector is motivated by capital market activity and low interest rates leading to intense competition for assets, increasing prices, and hard negotiations among nations.

Availability of new sources of funds are realized through publicly financed organizations in developing countries, especially the export-import banks of Brazil, the Russian Federation, India and China (the BRIC countries.) The worldwide dynamism of investment infrastructure was well-known during 2007 April on the Third general counsel's Roundtable on Emerging Markets' Infrastructure. The forum discussed new sources of funds, sponsors, their objectives in relation to foreign direct investment in developing countries.

Emerging markets has four current trends in facilitating infrastructure development. When private firms fail to successfully do their projects, there has been an urge for dual firms; quasi private firms and quasi governments, which matured from a hindered reform courses (Woodhouse, 2005). In numerous markets, dual organizations acquired resources cheaply when international stakeholders lost cash and withdrew. The subsequent trend is the upsurge of the South-South investors, where stakeholders from emergent states invested on both indigenous and foreign projects which increased funding of local currency (Yanosek et al, 2007). The third trend is the emergence of BRIC country export-import banks, enabling public financial institutions in their nations to expand their functions on asset advancement and increase their trade volumes (Caspary, 2007). Lastly, petrodollars came as a outcome of supply-demand discrepancies. Investments in energy plus subsidiary infrastructure was promoted through state owned oil firms and capital reserves which is an element of extraction supply chain.

1.1.3 Kenya Maritime Transport

Maritime transport involves the conveyance of goods from one place to another, Norton (1971). According to (Redding & Venables, 2011), maritime transport is the export and import of products such as crude oil, petroleum products, coal, iron ore, consolidated and loose cargo goods, in bulk. Studies have shown that transport in the maritime industry is still a pillar of trading internationally with over 75 percent of the worlds commodities conveyed in large volumes via the sea.

Kenya Maritime Authority (KMA) was established in 2004 as an organization in charge of Kenyan maritime industry to oversee its safety and security. Examination is done by KMA ship surveyors as per agreement of the Indian Ocean Memorandum of Understanding (IOMOU) of foreign vessels calling at the port of Mombasa, of which Kenya is an affiliate. This ensures compliance of vessels with regulations on safety of life and safe manning, protecting marine life and load line protocols. Kenya endows transport industry as a tertiary sector of the Kenyan economy, with maritime transport as part of the transport industry, with over 90% of her trade conveyed through water vessels. Kenya maritime is largely involved with international trade, and has structures which determines freight charges in the dry general cargo trade and their relative importance. The level of freight rates in the Kenyan trade is higher than in most parts of the world by comparison. This indicates some degree of overcharging and high possibilities of monopolistic behavior by the shipping conferences operating in Kenya.

The Port of Mombasa has facilities for handling different types of cargo. There are twenty one dry general cargo berths, while dry bulk cargoes are handled at the Mbaraki Wharves, consisting of cement wharf and two other dry bulk handling wharves. Liquid bulk cargoes are handled through two specialized terminals, one for crude oils and the other for refined oils and other bulk liquids. Dry general cargo transportation is connected to various trading zones (North America, Indian Subcontinent, Europe, Far East and Australasia) by regular liner services provided by various shipping lines. Trade with South America is conducted by trans-shipment, through North American or Europe ports.

The East African countries (Uganda, Rwanda, Burundi, Somalia, and Ethiopia) use ports in Kenya and Tanzania for their maritime transport needs. The shipping lines and the conferences operating in Mombasa are the same ones which operate in the Tanzanian ports of Dar-es-Salaam, Mtwara and Tanga. Tanzania owns some shipping lines which conduct international maritime transportation, though their capacity is small. Kenya has no international maritime transport capacity, and has attempted to reduce the powers of conferences operating in East Africa region, and formed East African National Shipping Line in 1966 and also the Intergovernmental Standing Committee on Shipping (ISCOS). The shipping line wound up but ISCOS is still active in studying and documenting the pattern of freight rates in the Kenyan and Tanzanian ports. However, ISCOS does not have the machinery to control the conferences and therefore remains only as a monitoring body.

1.2 Research Problem

The integration of national markets has led to the increase of globalization and the interdependency of countries worldwide. Globalization through trade has created opportunities which are affecting development through fostering economic growth. International trade has been strengthened through the national and international efforts of improving markets access, market entry and also competitiveness thus leading to global infrastructure development of both developing and developed countries. The role of infrastructure development in any economy is to promote economic growth. This is seen through enhanced market accessibility and expansion especially in developing countries. In this regard, the formation of various economic blocs and their regional integration has helped to increase capacity of both goods and services both locally and internationally.

Kenya is mainly dependent on international trade which is mainly with countries where the predominantly mode of carriage is maritime transport. Maritime transport in Kenya is almost solely conducted by foreign shipping companies which own ships and provide services worldwide. The market structure under which these shipping companies provide transport services is of significant importance to the economy. Shipping commodities through containerization is providing a cost effective means of conveyance over long distances, playing a fundamental part in world maritime transport.

Studies that have been undertaken on maritime international trade include Mwashigadi (2014) study on the causes prompting effectiveness in the execution of mandate of state regulatory and enforcement agencies within maritime trade in Kenya. The study found out that lack of proper ICT infrastructure, bureaucracy and political interference and poor integration of a harmonized regulatory framework among the state agencies were noted to be a significant hindrance in trade facilitation. Nguku (2013) undertook a study on external factors affecting the environment influencing China-Kenya trade and established that political environment, legal environment, socio-economic factors and technological environment influenced the growth of Sino-Kenya trade. Nyagaka (2014) researched on the role of achieving food security in sub Saharan Africa through international trade. He found that the capacity to import food has plummeted, occasioning the country into more food insecure issues. The balance of payments amid the rest of the world and Kenya has deteriorated against Kenya. From the studies that have been undertaken, there are limited studies that has been done going on the influence of international trade on infrastructure development in Kenya maritime transport. The study therefore pursues to respond to the query;

what is the relationship between international trade and global infrastructure development in Kenyan maritime transport?

1.3 Research Objective

To determine the relationship between international trade and infrastructure development in Kenya Maritime transport.

1.4 Value of the Study

The research results will benefit both employees and management of Kenya Maritime Authority and Kenya Ports Authority with an acumen on the significance of maritime transport in positively influencing international trade and infrastructure development. The findings of this research will sensitize stakeholders and managers of the port on its practicality in international trade thus fast tracking changes that are aimed at improving efficiency and competitiveness of the port.

The understanding of the role ports play in fostering international trade in a country will benefit governments, policy makers and other stakeholders, in designing strategies and agendas that will dynamically inspire growth of businesses and sustainability. Consequently, policy makers will use the research findings to boost and support the formation of suitable procedures to direct businesses. Bearing in mind that the Port of Mombasa is becoming a key destination for strategic business investments and a vital link in the rapidly expanding global trade, therefore, understanding port operations becomes a crucial task both from the community policy viewpoint and strategic commercial resolutions.

This research will generate a profile which could be imitated in other divisions of the economy. Significantly, this study will add more content to the works on international trade in companies especially in emerging countries like Kenya. Moreover, the findings will be appreciated by scholars, who may discover valuable research gaps that may arouse responsiveness in upcoming research. Commendations will therefore be made possible on future areas of imminent studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter assesses on literature on theoretical foundation, empirical literature review and concludes with a summary of literature review and knowledge gap of the study.

2.2 Theoretical Foundation

This research proposal is founded on four theories: mercantilism theory, the absolute advantage theory, internationalization theory and the regime theory.

2.2.1 Mercantilism Theory

Mercantilism is a fiscal theory advocating for regulation of state on international trade to creäte capital and make stronger state control. This occurs when the government and business owners collaborate to create a surplus and minimize trade deficit. (McCusker, 2009). Mercantilism is a system of fiscal autonomy which support policies of trade that protect local businesses. The government, in mercantilism reinforces the private holders factors of production which include free enterprise, investment goods, natural assets and manual labor. It institutes monopolies, grants tax-free status, and pensions to favored industries. In addition to imposing import tariffs, it also forbids expatriation of skilled labor, tools and capita. In return, productions channel assets from overseas businesses back to their governments, and tax income to bring rise to nationwide growth and governmental authority (Amadeo, 2019).

Mercantilism prevailed in modern Europe from the 16^{th}-18^{th} century, considered an era of proto-industrialization before deteriorating. (LaHaye, 2008). Government regulation is upheld in a country's economy for the resolve of boosting national control at competing foreign states cost. Mass-production of goods that had high tariffs, were a nearly worldwide feature mercantilist policy (McCusker, 2009). Mercantilism relies on inherently unfair trade balances and trade practices. The relationship in which one nation wins and the other loses. This later lends itself either to an involuntary trade relationship or to trade wars in which both nations mutually ratchet up tariffs, for example, America, being a high skilled economy trading with Vietnam who offer a much cheaper coast of labor.

2.2.2 Absolute Advantage Theory

Absolute advantage theory is defined as the capability of an individual, firm, or country to manufacture products in large quantities and offer services using the same amount of resources offering competitive advantage. According to Adam Smith this theory uses labor as an input exclusively in international trade. As this theory is formed by a modest link of labor productivity, it is likely that a party to have no absolute advantage in anything whatsoever (Mesquita, 2013). Absolute theory promotes focus on specific production and trade among nation-states, thereby, promoting world trade. Absolute advantage theory was a reaction to the old theory of mercantilism, which other critics labeled as a zero-sum game. Adam Smith saw the absolute advantage theory as positive sum game, where all parties involved gained (Marrewijk, 2007).

The major weakness of the absolute advantage theory is the notion that the partakers of global trade are exporting states and not firms. This reduces firm-based and multifaceted international competition due to the large number of partakers. The theory further argues that with free trade, world production is greater as compared to restricted trade which further contribute to the increase of exporting and global trade in general. The theory claims that absolute advantage is achieved from different productivity levels mainly in labor output. The theory therefore has contributed to the development of international trade and export marketing (Hill and Jain, 2005).

2.2.3 Internationalization Theory

Internationalization is an inventive process which involves a pro-active style with a satisfactory attitude toward international expansion according to The Innovation-Related (I-R) Model. This model analyses the development of export activities as a growth learning curve (Shirani, 2009). The model emphasizes on the learning order in connection with assuming an innovation, and a firm may not be concerned in trading at Stage 1, but is keen to fill unsought orders or is partly interested at Stage 2, Andersen (2009). This leads to “Push” mechanism which initiates the export decision. An in-house change agent is probably a more applicable reason as to why an organization would move to the subsequent phase of internationalization.

Based on internationalization process theories, organizations generally internationalize progressively in regard to their operation approaches (Laantiet al., 2009), where they first start with export styles then gradually enter more committed styles; foreign-country based subsidiaries, making it a dynamic cycle. The distinction therefore between state and change facets of internationalization is emphasized. In contrast, the Innovation-Related models view internationalization as an improvement for the organization. Both models view internationalization as a chronological incremental practice with a changing amount of stages, Wickramasekera & Oczkowski, (2006). Numerous debates has occurred over the feasibility of the stage models of internationalization specifically with the International New Ventures research which focuses on small firms in the high technology fields.

2.2.4 Regime Theory

This theory seeks to explain the idea of an agreed base of government bodies subject to a certain extent of popular control, combined with an economy steered mainly by privately controlled investments. One of the intricate challenges facing infrastructure development is the recognition of the interaction between governmental and economic services. In Infrastructure development, regimes ensure that the local government participates through negotiated trade contracts and jobs, improving local housing and paying attention to civil rights. Thus the condition of an effective infrastructure development is not different from that of a successful execution of a business plan, therefore, we are always between two extremes.

2.4 Review of Empirical Literature

By means of data for 87 countries, Hakura and Jaumotte (1999) established that trade serves as a fundamental means of transferring international technology to developing nations. The two demonstrated when it comes to technological transfer intra-industry trade plays a more significant role as compared to interindustry trade. The study divulges that less has been mentioned about economies of developing countries and compared to the developed ones. (World Bank. 1991, Elias, 1990) Furthermore, there has been an increase of developing countries showing much more prospects in increase in capital and labor inputs of productivity and that the growth in output is as a result of the productivity changes in input.

Keong, Yusop and Sen (2005) researched on the case of Malaysia whereby they used the bounds test approach to examine the validity of growth hypothesis led by export. Exports and labor were discovered to inspire progressive modification to growth of the economy where, foreign exchange rates, imports and the East Asian financial crisis contributed to its decline. Additionally, a co-integrated association was determined in the short and long term between economic growth and exports.

Kim and Hwan (1999) surveyed the costs and bases between two economies policies led by export growth; that is, Korea and Chile. The case established, that unlike other countries in the Latin American region, industrialization in Chile began on an endeavoring stand centered substitution on import and they experienced growth in their economy of Chile quite well in the initial phases (1937- 1950) as an annual progression of 7% was recorded on average in the manufacturing sector.

Hummels (2001) projected that the expansion of fast maritime transport was equal to sinking tariffs from 20% to 5.5% between 1950 and 1998. This illuminates why during post-World War II period trade globally increased. Redding and Schott (2003) stated the significance of distance has improved during the period till up to the year 1995.Mutual shipping expenditures are to some extent originating from within bilateral trade bringing about predisposed outcomes. In reality, rise in transportation costs may be as a result of extreme traffic on a definite method rather than low bilateral trade flows. China is a perfect example where increasing demand for import of raw materials not supplemented by suitable upgrading in port infrastructure has caused port queues (Wheatley, 2004).

Shepherd and Wilson (2009) noted the effect of transport infrastructure on international trade flows of Southeast Asia especially on seaports and ICT. Hoekman and Nicita (2008) discovered that global trade was affected through, poorly constructed roads and seaports, below par customs agencies and processes, dimness in monitoring capability, and restrictions to investment.

Bougheas, Demetriades, and Morgenroth (1999) in their gravity model, established that there is a substantial and affirmative connection to the level of infrastructure and the capacity of trade.

Consequently, difference in transportation cost amongst markets may highpoint difference in their capacity to participate in global markets.

Wheeler and Mody (1992) found that in order for a country to pursue and appeal for FDI from the United States, infrastructure is a key important variable for developing countries. Additionally, using FDI model, Cheng and Kwan (2000) created backing for decent infrastructure as a determinant of FDI in 2 Chinese region. Voorpiji (2011) analyzed FDI in Kenya stresses mostly on achievements in addition to damages connected with foreign association, and found out that the analyzing investment climate is key. As stated by him, the utmost central venture aims are the existence and infrastructural network contracts and a highly educated as well as relatively cheap but qualified labor cost.

Neddy, Koskei and Kibet (2013) explored the influence of Kenya's Economic Growth by International Trade. They hoped to evaluate the years between 1960 where economic growth was on the rise. Their finding was that Kenya performs below par, for instance, dating back 1996 through 2008 the governmental solidity index averaged at -1.052 (African Development Indicators, 2011).

Milner, Morrissey and Zgovu (2009) study on the role of operational sea port in India on supervision in aiding international trade. Study findings revealed a correlation concerning suitable port reception services, its decongestion, a reduced amount of traffic, secure and safe ports forming the heart of good administration and prosperous worldwide trade. As a result, operational and well-organized ports management in India is a resilient remedy in helping things run smoothly and successfully in international trade.

Malchow and Kanafani (2011) undertook a study on improvement of port value and custom processes in Asia and established range and degree of the practice of the computerization structure in port operation and customs and other associations. Its extent in dealing and cultivating the system, the positive effects of automated system led to the promoting of international trade thus creating countries as trade hubs of the sub-region.

Shinyekwa, Isaac & Ntale, Anita (2017) studied the effect of improving economic infrastructure in the East Africa Community (EAC) area on exports of industrial products. The outcomes recommended refining of economic infrastructure value produces enormous improvements in relation to exports of industrial products from the EAC Member States. Solid physical infrastructure has additional prospective to cause a larger effect on industrial exports paralleled to infrastructure that is soft. Seemingly for soft infrastructure; accountability and liability; the ability to connect to the internet and subscription to telephone services expand the business atmosphere bringing to the support of exports of industrial products.

Hesbon (2009) studied influence of Kenya's economic growth through international trade. He examined the increase of Kenya's economy and the role exports play in it. He discovered that they have a superior affirmative effect to other components including that of GDP. Furthermore, the research demonstrated not only a numerical importance of GDP through exports but also established that imports have an undesirable correspondence with the GDP and are numerically irrelevant.

Njoro (2016) studied the effect of infrastructure development on fiscal competitiveness in Kenya and discovered that energy is an indispensable input especially in manufacturing sector which is critical in fueling industrialization and also promotes exports earnings. He discovered that the underlying factors of contribution the economy depends on like capital and labor especially in the infrastructure sector aid in the positive outcome of improving the living standards of its citizens.

2.5 Summary of Literature Review and Knowledge Gap

Based on the theory and empirical literature provided in the above chapters of the study these are the gaps identified; most studies are focused on developed countries for example, the study done by Kim and Hwan (1999) focused on Korea and Chile, the study done by Shepherd and Wilson (2009) was based on South East Asia among others, while this research will be focused on a developing country, Kenya. Furthermore, Hesbon (2009) study majored on Kenyan exports as its base of economic growth through international trade while I seek to investigate further on how international trade relates to infrastructure development

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter presents research methodology which includes research design, data collection instruments and the techniques for data analysis.

3.2 Research Design

The research design was a case study. A case study is a comprehensive analysis of a person, an establishment or an occurrence. Case studies reference detailed material, additional deepness other than cross-sectional studies with the goal of understanding conditions. This also aids in seeing-through the variety of elements working together to yield the distinctive appeal of the entity that is subject to study.

3.3 Data Collection

The study employed primary data collected using an interview guide. According to Cooper and Schindler (2003) interview guide helps in obtaining comprehensive info as the student can make alterations as required, explains uncertainties and makes sure the replies are agreed upon through rephrasing or restating. Interviews is the main method of collecting data and necessary care and due diligence is bound to be observed in order to ensure the validity and reliability of the data collection.

In this case, open ended questions in the form of interview guide was conducted, which included a face to face interaction as a data collection tool. The respondents interviewed comprised of 6 managers in heads of departments in internal audit, corporate services, marine safety, public relations, commercial shipping and corporation secretary and legal services from Kenya Maritime Authority

They are well-thought-out to be main informers for this study. The choice of managers in the study are key as they are the organizations leaders and the ones who can promote organizational objectives. Section A contains the respondents profile, Section B contains the international trade questions while Section C contains questions on infrastructure development.

3.6 Data Analysis

The data attained from the interview guide was further evaluated by content analysis. Content analysis is the methodical qualitative account of the configuration of materials of the study (Hsieh and Shannon, 2005). It involves taking remark on in depth explanation of entities, matters or things that involve the objective of study. This methodology was more applicable for the study for it allowed for a more profound, logical and comprehensive interpretation in ever changing situations. This was relevant because organizational objectives usually occur in myriad of circumstances.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The research objective was to establish the relationship between international trade and infrastructure development in Kenya maritime transport. All the analyzed data and interpretation are presented in this chapter. The study employed primary data collected using an interview guide and the sample population was from Kenya Maritime Authority.

4.2 Respondents Profile

The respondents comprised the top management of Kenya Maritime Authority (KMA). In total, the researcher interviewed five respondents out of the six that had been intended to be interviewed. One of the respondents was not available during the interview.

4.2.1 Gender of Respondents

The respondents interviewed for the study were all male. There was no female respondent.

4.2.2 Age of Respondents

Three of the respondents were between the ages of 36 and 45 years. One respondent age was above 46 years while the final respondent age was between 26 and 35 years. This indicates that a greater number of respondents was in their senior years.

4.2.3 Designation and Department held of Respondents

The respondents interviewed comprised managers in the following heads of departments; internal audit, corporate services, marine safety, public relations, commercial shipping and corporation secretary from Kenya Maritime Authority. The departmental head from legal services was not available for the interview.

4.2.4 Work experience of Respondents

The duration in which the interviewees have worked in KMA varied from ten to twenty years. Three of the respondents have worked with KMA for more than ten years while the other two had worked for more than fifteen years. This indicates that all the interviewees have worked in KMA for a longer duration of time and therefore understand the contributions of the authority to the relationship of international trade and infrastructure development in maritime transport.

4.3 International Trade

KMA serves a multi skilled community who include investors, shipping companies, boat owners, seafarers, the consumer public, other Government agencies and the Government of Kenya. It also partners with regional states and international stakeholders therefore achieve in delivering professional, accountable and honest standard of service.

4.3.1 The relationship between infrastructure developments to international trade

KMA as an organization that outline the standard of competences that people who are supposed to serve on board in international sea going vessels are supposed to be trained, examined and then certificated to ensure they meet the standards of good service on board the vessels. They are mandated to approve the courses or curriculum that are being offered by training institutions in Kenya to ensure that they are in compliance or they meet the minimum standards set out in institutions like Bandari Maritime Academy (BMA) and Jomo Kenyatta University of Agriculture and Technology (JKUAT) which have been approved to offer courses like Bachelor of Science and Marine Engineering, Diploma in Marine Engineering, Diploma in Nautical Science among others. As an organization they develop the curriculum together with the help of Kenya Institute of Curriculum Development (KICD) therefore ensuring proper content is included in the teaching curriculum after which it goes further to the Commissioner of Higher Education for approval and also the Engineering Education Board upon approval. When a student gets the degree certificate, one proceeds to get sea time experience before they proceed to the authority for verification of competency to serve on board ships as officers.

KMA therefore supports and guides these institutions by what kind of infrastructure that they are supposed to have in place like auxiliary workshops and equipment's needed for operation in the maritime industry. There is also the aspect of qualification of the instructors so that they may be able to offer this courses. There is also the need for additional facilities needed to improve efficiency like safety courses. This is very important because the maritime industry is a very hostile industry because of the changing situations due to the weather at sea. One can experience waves of a height of almost 7 meters, an officer on board may also be surrounded by steel like pipes of 120 degrees, oil of almost 150 degrees thus in the event of a fire on board and very far in deep sea waters, nobody is going to come from shore and come to assist you to put out the far, therefore, the training is very necessary in situations such as these. There is also cases of hull failure whereby there is increase of water into the ship therefore officers on board are expected to maintain ship stability quickly and efficiently. In many instances, oil spillage or chemical explosions can also occur therefore necessary training is needed to prepare them for response and in the dire event of ship sinking, officers are expected to operate emergency equipment like life boats or life rafts and are expected to survive at sea for long periods of days before they sought out assistance from search and rescue. In case of oil/chemical spill, KMA is the lead agency in managing the National Oil Spill Response Contingency Plan. This knowledge gained will help mitigate risks in the occurrence of such events that may either cause damage to cargo or worse off, result to loss of life hence may be able to respond quickly and act appropriately on safety protocol. In collaboration with other public agencies and institutions, KMA coordinates measures to prevent marine source pollution and protect marine environment.

For a country to facilitate international trade, it is required to set up a search and rescue center like in Kenya KMA operates the Regional Maritime Rescue Coordination Centre (RMRC) which is manned 24 hours and receives distress signals from all ships passing through the channel for Search and Rescue (SAR). It operates from Kenya, Tanzania, Somalia down to Seychelles and avails assistance as soon as possible so that they may be able to rescue lives and control environmental damage like oil spillage that may be as a result of dangerous carrying cargo carrying vessels like oil tankers.

4.3.2 The role of Information Technology

KMA has a responsibility and an obligation through international conventions like the SOLAS (Safety of Life At Sea) convection to inspect all vessels coming to the port and ensure that they are in compliance with international standards. One aspect of the inspection is to ensure that they have been surveyed and have valid certificates. Currently, most countries are shifting from manual certification where one has to append a signature to electronic certificates. Information technology (IT) has made the process much easier as it is not mandatory to appear in person in order to verify documentation. In terms of facilitating international trade all certificates on board a vessel with the necessary information like the list of crew members, the cargo on board among other information is transmitted through KENTRADE (Kenya Trade Network Agency) and shared to all stakeholders who are to verify the information like KPA, National Intelligence Services (NIS), Department of Immigration Services and Customs and Border Control usually facilitated by Kenya Revenue Authority (KRA).

In terms of trade, shipping lines used to wait for the vessel to dock at the Port of Mombasa in order to get the necessary information about the vessel and its cargo but due to advancement in technology there is online tracking of ships regardless of the location. Certification is also made easy whereby information is easily available online as compared to how it was previously acquired through phone calls that proved to be a tedious process. Registration of ships based on their different classes is made simple because they need to be surveyed periodically. They have different systems on board which enables them to have a method of notifying the ship owner of the date of survey of the vessel at a particular time thus arrangements are to be made prior of the due date of renewal to avoid cancellation of trade and prevent delays in terms of international trade is concerned. This helps in reducing costs as surveys done on vessels take a very long period of time thus proper planning is made by the ship owner therefore trade inconveniences are reduced drastically.

There is also the international requirement of the type of fuel used on board a vessel where an analysis is done on the Sulphur quantities, the density of water and any alkaline properties therefore through the system the analysis is sent to the appropriate laboratories directly to ensure the vessel is in compliance with international standards. This ensures controls of certain emissions like Sulphur oxide and nitrogen which are harmful to the environment. The monitoring systems will help in monitoring fuel calculations and controlled carbon dioxide (CO_2) emissions by the vessel. This information is later consolidated and sent to International Maritime Organization (IMO) who come up with regulations and guidelines in ways to prevent or reduce emission of CO_2 from the marine industry. Maritime Technology Corporation Center (MTCC)-Africa also collect this information operated by KMA and JKUAT with their offices in Mombasa, have systems installed on board some selected ships where they calculate, integrate and finally send the information to IMO on fuel consumed, the amount of cargo transported in terms of tonnages because there are limits set by international standards. The purpose is to find out how energy efficiency the vessel is utilizing and the amount of CO_2 the vessel is emitting to the environment and the negative impact it has on it.

In regard to overseeing the quality, availability and the cost of maritime transport, KMA has developed a system of monitoring maritime performance through the Single Window System (SWS). This platform captures the performance through various agencies through the existence of the Mombasa Port Community Charter. This Charter identifies the roles played by various agencies in the cargo clearance processes from customs, ship agents, Kenya Bureau of Standards (KEBS), all government agencies plus the private sector. They identify what they do and give direction on the indicator of the nature of their performance which have to be measured. This platform helps to create targets hence assist in finding out their deliverables thus differences are able to be established through the system. This supports efficiency delivery in maritime transport sector which plays a very critical role.

Individual institutions also benefit from IT in that the Electronic Data Management System (EDMS) allows individuals to transact their businesses even when they are out of physical office station. Once a document has been received, it is later scanned and uploaded in the system, the officer can interact with the document via mobile phone, one can comment, assign a duties thus the process is initiated at the comfort of one’s telephone device.

4.3.3 KMA processes

KMA basically deals with safety of ships by make sure they do not break when carrying cargo. Prior to the ships being designed, if they are Kenyan ships, design specifications are inspected architecturally, certain standards have to be met to ensure that the ship is safe. During construction, measures are put in place to ensure the sea worthiness is sustained until it is finally completed. Later, periodic surveys are done to ensure that the hull of the ship is not beaten by rust and a certain level of thickness is met, therefore, ship machines are to be checked to ensure that they are in good working condition.

There are very many conventions in the IMO framework that guards on the safety of the ship in terms of sea worthiness, prevention of pollution and ensure that issues on security are addressed appropriately as ships can also be used as weapons as planes were used in the terrorist attack of The United States of America (USA) on September, 2011. Systems are put in place to ensure that the port environment does not allow security issues to be compromised as well as the ship itself.

There is a direct involvement when it comes to sustainable efficiency in international trade in that there are processes that influence ship carrying cargo. Before a ship is allowed to dock and human beings are supposed to disembark to a particular port certain procedures, processes and documents are needed through the Facilitation of the Maritime Traffic Convention intervention known as (FAL Convention). This convention addresses the uniformity of procedures and requirements for ships, crew working on board, passengers and also for cargo. Failure to standardize these processes, ships may take long to start there operation at the port thus lengthening the clearing processes, therefore, standard documents must comply with the FAL convention.

Containers may also carry the wrong weights of which might confuse ship operators because they go about operations by what is being declared at the Bill of Lading because they do not have a machine to measure the weights during loading and offloading the cargo. Failure to declare correct weight of containerized cargo may result to accidents like vessel listing on either side thus causing it to split into two due to uneven distribution of cargo loaded. Container weight verification procedures of Verified Gross Mass (VGM) is put in place under the SOLAS convention to ensure that proper and accurate figures of container weights are measured, declared and indicated in the bill of lading.

4.3.4 Employee Motivation and Efficiency

The maritime industry is a competency-based industry, therefore, KMA is responsible for the nationwide training on maritime. In this responsibility they offer curriculum based programs that is being used by training institutions that have been approved to offer such courses in the industry. They support BMA, JKUAT and all other institutions by ensuring training takes place through proper authorization, they develop the curriculum, vet the institutions and ensure they meet the required standards of training. This is being done for the seafarers and also the logistical team on the ground like port operators, clearing agents, ship agents, cargo consolidators and many other supporters of the maritime transport industry through certificate and diploma courses in maritime transport logistics.

4.4 Infrastructure Development

KMA plays the role as a regulator by guiding the government of Kenya on the implementation of international conventions and policies to guide in maritime sector, therefore, is not involved directly on infrastructure.

4.4.1 Major Infrastructure Development projects in KMA

The major/hard development project affiliated with the authority is the construction of the headquarters in Mombasa that is still underway because currently KMA is renting offices from KPA and expected to be finished by the year 2020. Infrastructures affecting the maritime sector include the expansion of the Port of Mombasa, Lamu and Kisumu, the Standard Railway Gauge Railway (SGR). Other soft/minor projects include but not limited to the upgrade of the Employee Resource Planning (ERP) platform, the development of curriculum and the study of census for the boats.

4.4.2 International institutions on trade regulations

Kenya being a major exporter thrives on the growing international trade amongst its neighboring countries and the world at large. With this in mind, it follows a set of rules, regulations and standards set by various economic trading countries in collaboration and agreement set internationally in order to help govern trade aimed at creating a level playing field. The major player is the International Maritime Organization. IMO is a specialized agency in the United Nations aimed with the responsibility of safety and security of shipping and the prevention of marine and atmospheric pollution by ships. The United Nations Conference on Trade and Development (UNCTD) is also involved in ensuring developing countries like Kenya access the benefits of a globalized economy through proper analysis and facilitation of consensus-building and technical assistance through achieving the sustainable developments goals of 2030. The Critical Maritime Route Wider Indian Ocean (CRIMARIO) funded by the European Union and other member states also plays a major role in ensuring safety in the international waters especially in selected countries in East Africa. Since Kenya borders the country of Somalia, its trade route is exposed to the threat of piracy, therefore, with collaboration with the Djibouti Code of Conduct commissioned by IMO, Combined Maritime Forces (CMF), Kenya Navy and KMA, maritime security has become an increasingly priority for Kenya. They help safeguarding international waters by providing security and stability and deal with piracy directly which still remains as a threat in the maritime sector.

4.4.3 Contribution of the Government

The government of Kenya established KMA through a Presidential Order in 2004 to oversee the transfer of responsibilities in shipping matters from KPA to an autonomous State Corporation. The Act provides basis for addressing maritime safety, security and trainings, as well as opening opportunities for investment in water transport and related industries. The legislation allows KMA to collect funds for development issues and operational expenses being handled from its own various activities or operations hence do not receive monies from the exchequer or in other words, the National Treasury.

4.4.4 Public private partnership acceptable in influencing International trade

The respondents unanimously agreed that there is public private partnership as KMA has assisted by advising the Government through proper policy making while putting into consideration international convection and treaties. This support is seen the construction of berth 22 at the Port of Mombasa, Kenya has liaised with Japan therefore, safety of shipping and compliance with construction regulations for safety are enforced by the authority.

4.4.5 Local and International political environment

The political environment has a negative influence especially on the maritime sector. The local politics has just recently realized the importance of blue economy and how Kenya can benefit greatly by partnering in this global initiative. It has brought about delay in awareness and execution of actions on the global efforts focused around the vision 2030 of the Agenda on Sustainable Development Goals. However, this has led in a positive shift in terms of coming up with new policies. This recognition has brought about improvement of infrastructure, given that in the past, focus was on coffee and tea exportation and the country turned its back on the waters. With the current government, fish ports are now being acknowledged thus resources are being allocated for their improvements, for example, Shimoni Port has captured Wanainchi Marine Products (K) Ltd, Mombasa which deals with processing of fish. The monies allocated is given to fishermen for support financially and also to the beach management units to be to run ships in Mombasa County of which bigger boats were provided in order to deliver a larger capacity of bigger fish in the market. This will in turn encourage more people to eat more fish since the population of Kenya consume only 4% of fish as compared to Africa that consumes 10% while globally is 20%. This only means that we as a country Kenya is a very good participant of consuming fish.

4.9 Discussion

The study recognize the relationship between international trade and infrastructure development in Kenya maritime transport. The respondents had a positive attitude towards their relationship in the sense of positively impacting blue economy in terms of developing infrastructure, creating awareness through learning institutions and also being in collaborations with countries in making strides of cultivating maritime economy on a global front. The findings confirmed Malchow and Kanafani (2011) results on the improvement of port value and custom processes in Asia and the established range and degree of the practice of the computerization structure in port operation and customs and other associations. Positive effects can be found in automation of systems leading to the promotion of international trade. Conferring to Bougheas, Demetriades, and Morgenroth (1999) in their gravity model, there is a significant link between the levels of infrastructure and volumes of trade in maritime transport.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This segment includes the purpose of the field work, set objective, outcomes, limitations and endorsements of this study in relation to its objective and suggestions for further research of the study. The objective was to determine the relationship between international trade and infrastructure development in Kenya maritime transport. The limitation of the study was the sample size of which could have been larger and recommendations put forward was that management of the maritime sector should reconsider the introduction of regional cabotage.

5.2 Summary of the Study

The research instituted that the relationship between international trade and infrastructure development in Kenya maritime transport is existent due to the respondents know how on international trade and infrastructure development. Kenya is mainly dependent on international trade which is mostly with countries where the predominantly mode of carriage is maritime transport. Depending on the economic structure of a given country, trade polies may vary in content but the underlying international trade strategy is what dictates the terms of business engagement between two nations. (Hill, 2005).

Strategic partnerships and collaborations are important in order for a country to establish an international footprint in global trade. The IMO with the help of its many conventions like SOLAS and FAL are but a few that put Kenya in the forefront of global network with other countries in the world bringing about dynamism in the maritime sector. Performances are improved due to the addition of subsidy on viable projects that bring return of investment. In turn the national government involves in advancing maritime education and training by getting involved in developing the maritime curriculum hence making human resource globally competitive.

5.3 Conclusion

The general intention of the study was to determine the relationship between international trade and infrastructure development in Kenya Maritime transport. An analysis of the study findings confirm good knowledge of the impact of international trade has helped increase awareness of the blue economy. However, even though respondents were few, it is evident that IT has played a key role in improving the processes in the maritime sector in terms of security and stability. Moreover, this research indicates a positive correlation between international trade and infrastructure development as parties from both the local and international market strive to improve the standards of regulations, increase customer satisfaction by improving huge volumes of trade through commitment to sustainable economic development goals through maritime safety and commitment to improvement of skills through trainings and capacity building. Therefore, countries should strive in investing more on infrastructure and bridging a gap of the local people especially on their awareness of the blue economy initiative and how today business is shifting from land and moving to sea.

5.4 Limitation of the Study

The most challenging drawback was the sample-size of the study. In order to increase more information, the sample-size should have been larger, perhaps both the lower level managers together with the departmental heads of KMA. However due to the time limit and sensitivity of information the study had to be limited to higher level managers alone.

This study took all the cautionary steps to lessen the likelihood of partiality and applied practical measures, however, there may still be more or less a predisposition to the responses generated from the interview. Nevertheless, in spite of the above limitations, the findings presented in this paper have important policy implications.

5.5 Recommendations

The study recommends the following:

Public private partnership is still a new concept in the maritime industry and local and private collaborations are only adopted if the financial viability of a project is very strong. In the maritime industry we have seen measures of improving infrastructure especially at the Port of Mombasa where developments have been made to increase berths so that more vessels are able to dock. The trend that is coming is that of land bridges where Africa is just but a good example where major trade flows from the east towards the west region of the continent. With the help of the SGR, Kenya opens a corridor from eastern to central Africa, expanding trade routes while creating a much wider spectrum of customer base whereas reducing sea voyage of vessels carrying goods. This is a game changer as it will helps facilitate international trade through fast moving trains hence we stand a better chance to trade better.

Management of the maritime sector should also reconsider the introduction of regional cabotage more so, Kenya should increase its transshipment cargo. The concept of African ports for African ship owners, in that, a shipping line chooses an efficient Port for transshipment cargo. Let us suggest, the Port of Lamu that upon completion will have a much greater capacity to receive bigger vessels as compared to that of Mombasa, this in turn will improve maritime connectivity by linking national, regional and intercontinental linear shipping services.

5.6 Suggestions for additional studies

As this study has shed some light to the relationship between international trade and infrastructure development in Kenya maritime transport, it recommends that a similar study be done but on a global perspective hence inference will be made on both developing and developed countries in maritime transport.

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APPENDICES

Appendix I: Letter of Introduction

University of Nairobi,

School of Business,

P. O. Box. 30197,

Nairobi, Kenya.

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH DATA

I am a postgraduate student undertaking a Master of Business Administration degree (International Business Management) at University of Nairobi. I am currently carrying out a research on **The Relationship between International Trade and Infrastructure Development in Kenya Maritime Transport.** I am kindly requesting you to complete the attached interview guide to the best of your knowledge. Your responses and comments will be treated with utmost confidentiality. The information provided will be used purely for academic purposes and specifically for this study.

Your assistance and cooperation is highly appreciated.

Yours faithfully,

Maureen Awuor Omondi

omondi.maureen@ymail.com

Appendix II: Interview Guide

Section A: Respondent's Profile

1) Gender of the respondent Male ( ) Female ( )

2) What is your age? ( ) 26 -35 ( ) 36- 45 ( ) 46 and Above

3) What is your designation and department at KMA?

4) How long have you worked at KMA?

Section B: International Trade

a) What is the relationship between infrastructure development in Kenya maritime, to international trade?

b) What is the role of Information Technology in Kenya maritime to international trade?

c) How has Kenya Maritime Authority processes influenced international trade?

d) How has employee motivation and efficiency affected international trade in Kenya Maritime Authority?

Section C: Infrastructure Development

a) What are the major infrastructure development projects in Kenya Maritime Authority in the past decade?

b) Are there international institutions on trade regulations that have funded infrastructure development in Kenya maritime?

c) What is the contribution of the government in infrastructure development in Kenya maritime?

d) Is public private partnership acceptable in influencing international trade on infrastructure development?

e) How has local and international political environment affected maritime infrastructure development in Kenya?

END