WAITING TIME REDUCTION MEASURES AT THE PORTS OF MOMBASA AND DAR ES SALAAM.

BY MOHAMMED HAJI HEMED

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF HUMANITIES AND SOCIAL SCIENCES, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE MASTER DEGREE OF BUSINESS ADMINISTRATION OF KENYATTA UNIVERSITY.

SEPTEMBER, 2003
DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

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(REGISTRATION NUMBER: D53/7465/2001)

This project has been presented for examination with my approval as University Supervisor.

SUPERVISOR

Signature: ___________________________ Date: ___________________________  

MR MAGANJO
DEDICATION

This project is dedicated to my mother Mrs. Susan Kadide, my father Mr. Hemed Mohammed, my niece Habiba Abdulrahman, my nephews Hemed Mohammed and Salim Khamis.
ACKNOWLEDGEMENTS

I would like to thank Allah for His guidance, protection and direction throughout the study period.

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May Allah enrich your lives with joy and happiness on earth and in heaven.
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<th>Description</th>
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<td>Twenty Equivalent Units</td>
</tr>
<tr>
<td>THA</td>
<td>Tanzania Harbors Authority</td>
</tr>
<tr>
<td>KPA</td>
<td>Kenya Ports Authority</td>
</tr>
<tr>
<td>SAP</td>
<td>System Application Product</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strength, Weakness, Opportunities and Threats</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Programme for Social Sciences</td>
</tr>
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</table>
ABSTRACT

In the recent years many less developed countries have embarked on major economic reforms. They have in most cases encouraged private participation and have sold out most of the initially public owned or government enterprises to private entrepreneurs. This has been done mostly increase efficiency in the state-owned companies hence privatization was thought to be the solution to the problem.

In the late 1999 the Dar es Salaam’s port container terminal was leased out to a private operator, while in Kenya the same is yet to be done. Should the Mombasa port emulate the Dar es Salaam move or should it not? Has the privatization brought any improvements in the waiting time for cargo clearance? The research was done in order to find out the answers to such questions.

The research used the secondary data to explain the different cases both theoretical and empirical that highlighted different issues concerning port privatization in the literature review. The major part of this research finding came from the survey conducted to clearing and forwarding agents on the waiting time and related factors at the ports of Mombasa and Dar es Salaam. Contrary to most people beliefs, this research found out that privatization did not reduce the delay time of cargo clearance.
CHAPTER ONE

INTRODUCTION

1.0 The Characteristics of Mombasa and Dar es Salaam Ports

A port is a regional gateway to international trade; it is the entry and exit point for a nation's imports and exports (Kimberly, 2000). Most ports are multi-modal in that they serve as the combined gateway for several forms of transport, most typically maritime, road and rail, often with a mix of bulk and containerized traffic.

In the East African region the two major maritime ports are the Mombasa and Dar es Salaam Ports. These ports have the following characteristics as specified in the table below.

Table 1: Characteristics of Mombasa and Dar es Salaam Ports

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mombasa Port</th>
<th>Dar es Salaam Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of berth</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Total length of berth in meters</td>
<td>3048</td>
<td>2000</td>
</tr>
<tr>
<td>Free storage period for imports goods in days</td>
<td>4</td>
<td>7</td>
</tr>
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<td>Free storage period for exports goods in days</td>
<td>2</td>
<td>7</td>
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<td>4</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Author’s Summary from Various KPA and THA Annual Bulletins
Port Consumers

Ikiara, et al (1999) said that Mombasa Port can be categorized in two ways: by type and by region. The classification of port consumers by type included clearing and forwarding companies, shipping companies, importers and exporters, warehousing, storage and travelers. The classification of port consumers by region included local consumers, Burundi, Uganda, Rwanda and Congo.

At the port immediately after a ship’s arrival the port community has a busy time in ensuring that each member is served at the right time. A number of port procedures will have to take place before the port consumers can clear their goods. One of them is the berthing of the ships, then there is the loading and off-loading of cargo, there is verification of consignment, documentation procedures both at custom’s long room and port, insurance procedures, banking procedures, inspection and finally the port clearance. If such procedures take too long then the port consumers will experience delays. This study has tried to analyze the strategies of reducing delay time by comparing the public and private, ports specifically the Mombasa to Dar es Salaam maritime ports.

1.1 Background To The Study

Mombasa Port was strategically planning to improve its services in order to be among the top 20 ports in the world. The strategies in their initial stages of implementation were: the change of organization structure in order to improve efficiency and effectiveness. The other strategies as reported by Beja (2002) were improved security measures in order to
improve the port consumers’ confidence and the improvement of information technology (IT) in order to bring about increased speed in decision-making, improved quality service delivery, improved cargo billing process amongst others. The improvement in IT was aimed at making it an e-port by the end of 2005. Kenya Ports Authority (KPA) had started using System Application Product (SAP) as its software. This was aimed at reducing the cargo clearance period to within 24 hours, reduce the human interventions in the cargo clearance hence reducing potential corruption and fraud in cargo clearance process and eventually reducing the cost of cargo clearance.

At the Dar es Salaam Port barely a year after it was privatized the Tanzania Harbors Authority’s June 2001 Annual Report provided the following information. The report showed that during the year 1999/2000, the port was able to improve ship’s stay time to 3.0 days from 3.8 days attained in the last year for deep-sea tankers and 3.0 days from 3.1 days attained in the last year for general cargo ships respectively. The port experienced deterioration in coaster ships’ stay, whereby dry general cargo ships stayed for an average of 1.5 days from 1.4 days of last year while coastal tankers stayed for an average of 1.4 day compared to 1.0 day spent in 1999/2000.

Foregeaud (2002), mentioned that poorly performing ports are public owned and high performing ports are those that are owned by private firms. This study investigated whether those comments were true by comparing of partially privatized Dar es Salaam Port and the public owned Mombasa Port.
1.2 Statement of the Problem

Mombasa Port is a very important source of revenue in this country. Its operations are not only significant to this country’s economic prosperity but for the many parts of the eastern and central African region. The improvement of quality of service that it could provide through privatization would go into attracting more port users.

Port privatization has been associated in improving the level of efficiency but in some cases, some port authorities had embraced port privatization without proper planning, politics and neglect of workers’ role were evident. In addition, the expected improvements had been overestimated.

Given that Tanzania has undertaken privatization by leasing its Dar es Salaam container terminals, it would be of paramount importance to study the implications it has on consumer’s waiting costs. By comparing the Dar es Salaam’s case to the absence of privatization in the Mombasa Port, the present study aimed to fill the void left by lack of studies in the issue at hand.

1.3 Objectives of the Study

The following are the some of the objectives of the study

- To evaluate port privatization effect on port performance with biasness of cargo waiting time at the port
- To determine whether Dar es Salaam container terminal privatization has had significant impact on efficiency, so that Mombasa Port to borrow a leaf.
To determine the major causes of port delays

To measure and compare the performance of Dar es Salaam and Mombasa Ports.

To identify strengths and weaknesses of port privatization.

To evaluate ports consumers and management understanding and attitudes towards port privatization.

To determine the suitable form of privatization that would be suitable should the need to privatize Mombasa Port arise

1.4 Research Questions

The questions the research was looking for answers were:

- Was Mombasa Port performing to the consumer satisfaction?

- If not, was privatizing it the solution?

- Had Dar es Salaam Port privatized container terminal achieved enough efficiency to set precedent for Mombasa Port to do the same?

- What were the impacts of port privatization on waiting time?

- What were the views of port consumers on port privatization?

- What are the views of port consumers on port procedures, security and cargo handling at the port?

1.5 Significance of the Study

The findings contained in this paper were expected to be of interest to the ports and shipping industry, to investors in ports, to policy makers, and to the maritime research
community. Further more this study was done at a time when East African Community was eager for regional integration hence the study was expected to bring the communities together by comparing strength and weaknesses of two key maritime ports in the region.

The lessons learnt from the study were expected to be of benefit to both the two countries’ policy-makers, business communities and maritime researchers. The study is expected to be of important to the port authorities in the two countries because reduced waiting time meant that there would be a reduction of congestion of cargo at the port which would also help the port not to lose business.

1.6 Scope of the Study

The survey was done on the land interface only. The port consumers in this research were assumed to be clearing and forwarding departments of different organizations from Mombasa and Dar es Salaam. The cargos in consideration are dry general and dry bulk cargo only. The inquiries were made on documentation time and related factors at Mombasa and Dar es Salaam Ports only. The maritime interface factors that were captured from secondary data focused only on ships dwelling time and related factors.

1.7 Rationale Of The Study

Many of the previous researches that had been done on port privatization did not place consumers as the most important stakeholders of the process. They also did not consider waiting time as a crucial factor for port consumers. This research considered the waiting time as being of more interest to the port consumers.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
This chapter seeks to give an account to what other scholars, maritime stakeholders or the different world information sources reflect on the subject. The chapter gives the general literature about the subject, the empirical data are also provided. Finally the important issues raised by the literature on the topic are also summarized.

2.1 General Literature
Sirisaiyao (1996), addressed the performance indicators of a container terminal (i.e. port). These indicators were broken into production, productivity and utilization and service quality indicators. The study only gave a general look at the port performance indicators and left out the specifics that would have otherwise been helpful in providing information towards the problem that the present study wished to address. It did not look at the documentation time and ships dwelling time. The present study tries to fill this gap.

Mitchell’s (2003) study on a practical approach on upgrading container terminal efficiency, he recommended that for efficiency to be achieved in port or terminal then the following measures should be taken ; staff training and motivation that would improve efficiency, improved berth efficiency by building more interchangeable berths, increasing
berth working hours. This study explained how to improve the port or terminals operations but it disregarded the port consumers’ waiting time and privatization issues.

Kimberley (2000) argued that the objectives for the reform of a port’s operational and institutional functions should involve the following factors:

- To promote a competitive market in port services with consequent economic and social benefits.
- To prevent misuse of monopoly and market power, including firm, operator, government or organized labor.
- To facilitate entry into a specific or broader market hence servicing the future needs of both local and international businesses.
- To facilitate efficiency in regulated industries, so that they can achieve best practice and compete at commercial levels.
- To ensure that users and customers benefit from competition and efficiency, ensuring economic benefits flow through the economy to the consumer.

This argument was rather general to our underlying problem. It only gave us the general objectives to be considered in which the consumer has also been mentioned. It did not however make the consumer the most important stakeholder of the whole process.

On the other hand, Eustache (1999) provided questions that needed to be answered before port reforms. The questions were targeted on the following issues; legal issues like possibility of private providers to compete for cargo handling and storage contracts, inter-port competition, adequacy of inland transport, sufficiency of traffic for intra-port
competition, sufficiency of port lay out to support competing yard operations, possibility of licensed private operators provide vessel services such as pilotage, towing and berthing.

These questions provided the current study with only background areas to consider but were far much wider in scope. They also never went further into answering the issues pertaining to customer satisfaction and attitude towards available port service provision that the present study has tackled.

**TABLE 2: SWOT Analysis for Restructuring of African Ports.**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Threats</th>
</tr>
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<tbody>
<tr>
<td>Utilization of available resources</td>
<td>• Fear of failure of the process</td>
<td>• Perceived fear of labor unrest due to reduced requirement</td>
</tr>
<tr>
<td>Infrastructure development at no cost</td>
<td>• Selecting of an unprofessional operator resulting underachievement privatization objectives</td>
<td>• Ineffective regulator</td>
</tr>
<tr>
<td>Trade development hence overall economic development</td>
<td></td>
<td>• Selecting a weak advisor</td>
</tr>
<tr>
<td>Increased volumes by private sector marketing</td>
<td></td>
<td>• Non transparent process</td>
</tr>
<tr>
<td>Financial gains in the form of rent/royalty/taxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved efficient services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion of international trade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educate the population about the benefits of privatization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform the role of regulator and landlord</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the scarce resources to other high priority sectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow the world trend of involving the private sector in ports.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The author merely mentions the strength, weaknesses, opportunities and threats and does not explain how the opportunities will come about after privatization. It would have been better if methods of reducing the weaknesses, strategies of combating the threat, ways in which the strength can be directed towards achievements and effective tactics of exploiting the opportunities were described. The present study through analysis of effects of reforms on the waiting time has tried to fill such a gap.

Kimberly (2000) argues that a successful port reform process should also consider the best form of privatization. Some of the forms of port privatization, and which are explained by authors clearly, are management contracts, leasing, partial sale, total sale and joint venture. According to Kerf and Smith (1996), a management contract the Government retains ownership of the assets, and is responsible for the general commercial policy of the port (tariffs, labor conditions etc), whilst the private sector contractor operates the port and is responsible for day-to-day commercial decisions. By leasing, Guislain (1997) describes the lease as transfer of assets possession for a fixed period of time, after which the assets have to be returned to the Government; the length of the lease varies from port to port, but is normally between 5 and 20 years. In this form of private sector participation, the port's assets remain the responsibility of the State, and the private sector sets up a cargo handling company responsible for port operations only. Through total sale, McCallum (1999) was of the opinion that it could be done in several alternatives: through a trade sale or by submission of Business Plans by bidders for the development of the port, showing their proposed investment program, method of
operation, marketing strategy, tariff policies etc. This form of port private sector participation has been extensively used in Great Britain.

In a share flotation, shares in the joint stock company is sold to anyone who wants them at a published price. The shares are usually listed to allow subsequent trading on a Stock Exchange. Alternatively, a management/employee buy out could be advanced by a company and it involves selling the port (often at a very favorable price) to its existing workforce. The studies only focused on privatization forms and did not explain how each of these methods would reduce the port consumers waiting time.

Foregeaud (2000) gave the following Drewry bench marks for port efficiency of different port performance indicators

- Average dwelling time should not exceed 5 days
- Average time for document clearance should not exceed 1 working day

These bench marks were not specific on whether they will be applicable to all world ports scenarios or not. It only specify what ought to be and not what is. The present study has checked if the Dar es Salaam Port and Mombasa Port meet those bench marks especially as far as documentation time and ships dwelling time is concerned.

2.2 Empirical Study

Thanaboriboon (1996) conducted a survey on Laem Chabang Commercial Port’s in Thailand to identify the major obstacles faced at that port. Questionnaires and interviews were conducted among 150 correspondents, who are port users, and utilized SPSS computer program in the analysis of the data.
The findings revealed that the major problems and obstacles were as follows: additional freight costs, the gratuity paid for import and export, the traffic congestion on Bangna-trade, unclear port management policies from government. Recommendations of this study were that the appropriate directions to improve the services at Laem Chabang Commercial Port and the independence of port management are required. The others were, to expand important business areas into upcountry, to have more supported form government, to develop sufficient infra-structure and utilities system, and to promote more public relations on Laem Chabang Commercial Port.

Eustache et al (1997) opinion on the cause of inefficiency in ports could be brought by a dominant port operator. In the absence of economic regulatory oversight, a port operator with a dominant or monopoly position, could attempt to engage in anti-competitive practices. This may lead into driving out potential competitors and increasing costs to port users and the economy at-large.

Privatization cases in Mexico and Holland also conflicted with Foregeaud opinion. Pardina et al (1999) noted that in Mexico terminal operations at the ports of Veracruz and Manzanillo were transferred to private operators. However, due to the lack of inter-port or intra-port competition, port users have repeatedly complained about high tariffs requested that a regulatory institution be established to limit the monopolistic position of terminal operators. This experience was also experienced in Rotterdam as noted by Irwin et al (1997).

Falkonar (2003) observed that in 2001, 172 million TEUS of the global container throughput out of a total of 245 million TEUS falls under private sector. This means that
about 70% of the total global container throughput falls under the private sector. It is forecasted that there global container trade will grow in excess of 6.6% per annum in the next five years. This predicted increase is expected to require investments costing from $14 million to 18 million in which funding is expected to flow from the private sector facilities.

In Africa, 0.7 million TEUS of the container throughput out of a total of 7.3 million TEUS falls under private sector. This means that less than 10% of the total container throughput in Africa falls under the private sector. It is forecasted that there global container trade will grow in excess of 6.6% per annum in the next five years. This predicted increase is expected to require investments costing from $ 500 million in which 60-70% is expected to be funded by the private sector facilities.

The efficiency expressed in these observations focused from the investors’ point of view and not the port consumers’ point of view.

In all the above empirical cases productivity and cost factors have been used to explain the improvements made by port due to privatization. The cases never specifically measured the privatization effects on waiting time.

Luhigo (1999) studied the Dar es Salaam privatization case from the initial stage to the end of the three months the following issues were the major observations he made as far as the leasing agreement were concerned.

- In terms of performance there were significant improvements in operations because cargo moves per hour were increased, ships dwell time was reduced, time
of clearance was shortened and the ship turn-round was enhanced by earlier improvement of the entrance channel.

The study mainly focused on the impact of the privatization process and merely mentions the resultant products like ships dwell time and waiting time that the present study has investigated.

Penfold (2003) noted that Mombasa had suffered from years of under investment and this has inevitably led to declining efficiency. The situation was one where congestions, surcharges had become the norm. The Kenyan government was however making a renewed attempt to improve operation at the port as part of its program of economic reform. This was likely to include a measure of privatization of the container terminal.

2.3 Chapter Summary

The chapter highlighted issues pertaining to performance indicators, objectives of reforms, considerations of reforms, forms of privatization, and provided empirical evidence of countries that have undertaken privatization of their port operations. The forms of privatization are noted to include management contracts, leasing, partial sale, total sale and joint venture. As per Foregueaud (2000), the indicators of efficiency include average dwelling time not exceeding 5 days and an average time for document clearance not exceeding 1 working day. Further literature provided the experience of countries that have undertaken port privatization.
This lays the basis of the present study's argument of the need to study generally Kenya's experience, and specifically Mombasa Port attempt to improve efficiency relative to what has been taking place at the Dar es Salaam's port.
CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section gives a preamble to the methodology adopted and used by the study. The
conceptual framework used will be stated, the assumptions made by the study, the study
hypothesis and all the processes involved in collecting data.

3.1 Conceptual Framework

Waiting time ($W_t$) is a function of ship dwelling time ($H_t$) and documentation time ($L_t$)

$$W_t = a_0 + H_t + L_t,$$

Where $a_0$: other transactional factors for instance time spent for other secondary services
like banking, insurance and inspection of cargo.

The port with less ($W_t$) was assumed to be more efficient. For instance if ship dwelling
time in Mombasa Port was found to be more than the one for Dar es Salaam Port, then
the waiting time in Mombasa Port would be assumed to be more than the waiting time in
Dar es Salaam Port. The same will be assumed to be true as far as documentation time is
concerned.

3.2 The Study Assumptions

Holding other factors constant, the ships dwelling time and documentation time are
directly related to the waiting time.
3.3 Hypothesis
Waiting time in Dar es Salaam Port is less than the waiting time in Mombasa Port.

3.4 Population of the Study
The population of the study was composed of clearing and forwarding companies and agents, from Mombasa and Dar es Salaam cities. The cities were selected because they offered a good comparison points. Dar es Salaam Port had undertaken port reforms through privatizing its terminals while the Mombasa Port was doing its reforms through internal restructuring.

3.5 The Sample
A representative sample was collected randomly from Mombasa and Dar es Salaam cities, composed of clearing and forwarding agents of different companies.

3.6 The Sampling Procedures
The samples were taken as follows. First of all, the clearing and forwarding agents and companies from each of the cities were listed and 30% randomly sampled out of the total selected from each city using random numbers.
3.7 Sampling Frame

Table 3: Sampling Frame

<table>
<thead>
<tr>
<th>City</th>
<th>Clearing and forwarding companies and agencies population</th>
<th>Clearing and forwarding companies and agencies sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa</td>
<td>243</td>
<td>73</td>
</tr>
<tr>
<td>Dar es salaam</td>
<td>357</td>
<td>107</td>
</tr>
<tr>
<td>Total</td>
<td>600</td>
<td>180</td>
</tr>
</tbody>
</table>

Source: author’s own computation

3.8 Instrumentation

The data of this study were collected primarily by the use of a self-administered questionnaire. The questionnaire made use of both structural and open-ended questions. The questionnaire was personally administered to a number of agents in clearing and forwarding companies which were selected through random sampling procedures.

3.9 Data Collection and Analysis

Secondary data were obtained from KPA and THA annual bulletins, while the primary data were obtained from the survey. Analysis was done using the SPSS AND MS EXCEL. The results were given in form of means, standard deviations and percentages. The results were then presented in pie charts, tables and graphs.
3.10 Limitations of the Study

The response rate in Mombasa was 43% while in Dar es Salaam it was 29%. These rates are low probably because of the following factors:

A number of interviewees claimed to be busy. The fast pace nature of clearing and forwarding work also resulted on many willing respondents having less time to answer their questionnaires. Most of the targeted respondents were suspicious. In Mombasa most officials thought it was an indirect inquiry that is being done by the government regarding corruption. These doubts came about despite having a letter of introduction from the university and an assurance of confidentiality by the researcher. The higher cost of living in Dar es Salaam did not allow the research to be done for a lengthier time.

Secrecy also made it difficult to access data for example some clearing agents said that giving out information on how much time they used to process document was confidential to the company. Replacements of refused interviews were made in order to increase number of respondents. Call backs were also made to those interviewees who did not finish answering their questionnaires in time.
CHAPTER FOUR
DATA ANALYSIS

4.0 Introduction
In this chapter results shall be analyzed and interpreted.

4.1 Findings
The following were the major findings from this research

4.1.1 The Documentation Time
The primary data provided the study with the following average time for processing documents or mean documentation time ($L_d$).

Table 4: Mean Documentation Time for Imports and Exports in Mombasa and Dar Es Salaam

<table>
<thead>
<tr>
<th>City</th>
<th>Mean documentation time for exports in hours</th>
<th>Mean documentation time for imports in hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa</td>
<td>27.8</td>
<td>62.6</td>
</tr>
<tr>
<td>Dar es Salaam</td>
<td>29.9</td>
<td>71.2</td>
</tr>
</tbody>
</table>

The average time for processing documents for a single import consignment at Mombasa and Dar es Salaam Ports were 62.6 and 71.2 respectively, while the average time for processing documents for a single export consignment at Mombasa and Dar es Salaam Ports were 27.8 and 29.9 respectively. So the average $L_d$ for both imports and exports have surpassed the 1 working day (8hrs). The following were some of the responses regarding the delay:
Table 5: **Response on Testing Existence of Stages in Cargo Clearance, Which Could Be Associated With Delays.**

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa Port</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Dar es Salaam Port</td>
<td>77.4%</td>
<td>22.6%</td>
</tr>
</tbody>
</table>

In Mombasa the 90% respondents felt that some stages in port clearance caused delays either because of unnecessary procedures for instance inadequacy of computer, while in Dar es Salaam Port over 22% felt that there was a good flow of documents. This may due to the fact that the customs services at the Tanzania Revenue Authorities are completely computerized.

Table 6: **Identification of the Stage in Cargo Clearance That Was Characterized With Much Delay.**

<table>
<thead>
<tr>
<th>Category</th>
<th>Customs long room</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa Port</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Dar es Salaam Port</td>
<td>96.8%</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

Over 95% of the respondents from both Mombasa and Dar es Salaam who thought there was a stage in cargo clearance that was characterized by delay actually pointed out that the stage was in documentation procedures at the customs long room.
Pie Chart 1: **Response on documentation procedures.**

<table>
<thead>
<tr>
<th>Clearing and Forwarding Agents' Views on Documentation Procedures for Cargo Clearance in Mombasa.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bureaucratic and corrupt</strong></td>
</tr>
<tr>
<td><strong>Simple but corrupt</strong></td>
</tr>
<tr>
<td><strong>Bureaucratic but not corrupt</strong></td>
</tr>
<tr>
<td><strong>Simple and not corrupt</strong></td>
</tr>
</tbody>
</table>

In Mombasa, over 75% of respondents felt that the documentation procedures were unnecessarily bureaucratic. 73.3% of respondents in Mombasa also felt that there existed so much corruption in the process of documentation such that some companies suffer because of their unwillingness to bribe the officers at the customs office.
In Dar es Salaam, over 65% also felt the system was bureaucratic even though the customs department is fully computerized. This may indicate the lack of training or selection of wrong software, which dragged the whole system down.

Corruption in Dar es Salaam was lower in that about 46% of the respondents felt that the system was not corrupt.
Pie Chart 3: Response on Port Efficiency Ranking

In Mombasa, the port performance was ranked fair by 80% of respondents. Most of the remaining respondents ranked its performance falling short of expected levels. This may be because of corruption and delays associated with the port.
In Dar es Salaam, port over 45% of respondents ranked its performance to be above average. Of whom about 10% described it as being excellent. This may seem be to the confidence given to the authority’s privatization steps it has implemented at the Dar es Salaam Port container terminals. The problem of delay may therefore be associated with documentation.
In Mombasa, 53.3% trusted the port to secure their goods, because of the decrease in human contact with the cargo and the computerization of the port that is being implemented. Another factor could be that in most cases if non-perishable goods were damaged, the liability would lay on port authority hence management would try to minimize any incidences of such nature. In Dar es Salaam Port less, than 40% of the respondents trusted the port as far as prevention of damage to cargo was concerned. This may be because untrained staff were left to deal with the equipment.
In Mombasa, 47% of respondents trust the port authorities. This may be because of the increased security in the recent years. Another factor is assurance of compensation since in most cases if goods are stolen, the liability laid on ports authorities hence management would try to minimize any incidences of such nature. In Dar es Salaam Port, over 74% mistrusted the authority’s capabilities to handle the pilferage most of whom felt that due to corruption the security could collude with thieves or do the stealing themselves. Other factors that made cargo to be easily stolen was poor packaging or if the cargo imported had defects.
Table 7: Whether There Shall Be Decrease in Delays after Privatization

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dar es Salaam Port</td>
<td>67.9%</td>
<td>32.1%</td>
</tr>
</tbody>
</table>

Over 67.9% of respondents from Dar es Salaam Port felt that privatization could actually reduce delays. Most of them had confidence that the port privatization could bring about competition in service delivery and could also reduce corruption cases.
In Dar es Salaam Port, 52% of the respondents preferred leasing of the port assets. This may be because of the familiarity of using this method of privatization since the same has been applied during the privatization of Dar es Salaam Port container terminals.
In Dar es Salaam Port, 52% of the respondents preferred leasing of the port assets. This may be because of the familiarity of using this method of privatization since the same has been applied during the privatization of Dar es Salaam Port container terminals.
4.1.2 The Ships Dwelling Time

The results of average ships waiting time from 1996-2001 for both Mombasa and Dar es Salaam Port are given as below

Table 8: Net Ships Waiting Time In Terms Of Days

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mombasa</td>
<td>0.56</td>
<td>1.3</td>
<td>1.34</td>
<td>0.7</td>
<td>0.71</td>
<td>0.62</td>
</tr>
<tr>
<td>Dar Salaam</td>
<td>0.6</td>
<td>1.1</td>
<td>0.8</td>
<td>0.9</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s Computations From various KPA and THA Annual Bulletins
Between 2000 and 2001 (privatization period), the waiting time in Dar es Salaam Port decreased by 55.5% while the Mombasa Port decreased by 12.6%. This shows that there was a great decrease in waiting time in Dar es Salaam Port.

The reason may be associated with efficiency brought by the private container terminal operators. The throughput however did not increase. During the period the container throughputs in Dar es Salaam Port increased by 13% while the Mombasa Port increased by 22%. Though during the same period, there was about 55% decrease in ships waiting time in Dar es Salaam Port as compared to 13% decrease in Mombasa Port, the effect
was not reflected in container throughput. The reasons may be due to improved gang performance in Mombasa and berth occupancy. See appendix 2 for more details.

Between 2000 and 2001, the gang performance in Dar es Salaam Port increased by 20.6% while the Mombasa Port increased by 24.7%. This may be an indicator that Mombasa Port laborers are better motivated than those in Dar es Salaam. Motivation may be attributed to better training or better remuneration. See appendix 2 for more details.

There was an increase in berth occupancy in Mombasa Port as from 1998 to 2001 while the exact opposite was happening in Dar es Salaam Port. This shows that Mombasa Port utilization is increasing. The higher berth occupancy rate of Mombasa Port is because of many berths found in Mombasa Port. In Mombasa Port there are 13 berths while the Dar es Salaam Port has 8 berths.

4.2 Chapter Summary

From the chapter the average time used for documentation in Mombasa is lesser than that in Dar es Salaam even when privatization has been done at the Dar es Salaam Port and not Mombasa Port. The ships waiting time on the other hand has decreased in Dar es Salaam Port than in Mombasa Port this however has not been reflected in the port’s productivity and utilization.
CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

In this chapter a summary of conclusion is given. The chapter goes further to recommend areas which would require further studies.

5.1 Conclusion

From the results in chapter four, it was noted that the privatization of container terminal in Dar es Salaam Port had a great impact in reducing the ships waiting time. That however did not result to an increased container throughput. Mombasa Port's ships waiting time decreased by a far lesser margin as compared to Dar es Salaam Port but did better in terms of container throughput, performance and berth utilization.

On the other hand the time taken to clear goods in Mombasa was far much less than in Dar es Salaam who have privatized their container terminals and computerized their customs services. This implies that privatization at the port only is not enough to bring efficiency in the maritime sector. The customs also play a big role as far as delay time is concerned. It is through their efficiency that the overall delay time can be reduced.

It is evident from the results that, while most respondents were in favor of privatization of the port as a way forward in reducing delays, more efforts were needed to improve the customs office performance. The study shows that the customs office was vulnerable to corruption and bureaucracy, which if avoided would reduce the waiting time.
In Dar es Salaam Port the privatization methods preferred were leasing and management contracts. This indicates that there was lack of proper utilization of assets to yield productivity and there existed failing and unpopular policies that were put down by port authorities’ management. The research suggests the following policy recommendations

- The customs procedures should increase the level of computerization in order to reduce the documentation delays when clearing for goods. The should consider both the economic feasibility and the technicality in selecting the appropriate software.
- Supervision and rotation should be made on regular basis in order to minimize the chances of corruption.
- Privatization of both port and customs services through leasing (for ports) and management contract may improve the efficiency of these institutions.
- Offer handling discount for timely collection and delivery

5.2 Recommendation for Further Research

This study reveals that reduction of the cargo clearance delays at the port would be more if customs department were a little more efficient. The present research therefore highly recommends a detailed research on how to improve the services at the customs department in both Kenya and Tanzania.
The same research could be redone but after some more years have passed so that the privatization effect of Dar es Salaam container terminal can have a more clear indication as to their direction.

The present study revealed the effect of port privatization on waiting time only, thus it left out other factors. It will therefore be of paramount importance if the effect of port privatization will also be looked at from the profitability side, throughput, berth utilization, gang performance and workers attitude.

The effect of IT services both at the Mombasa and Dar es Salaam Ports would be very important since at the time when the research was done both ports had started implementing some new information technology in their operations.

References:


REFERENCES


Kenya Port Authority, Annual bulletin (various issues)


Republic of Kenya, statistical abstract (various years), Nairobi: Government printer.


Tanzania Harbor Authority, Annual bulletin (various issues)


Environmentally Sustainable Development Division (Technical Department, Africa Region), World Bank.

APPENDIX 1

\[ W_t = f (H_t, D_t) \]

\( W_t \): total waiting time

\[ W_t = a_0 + H_t + L_t \]

\( H_t \): ships dwelling time

\[ H_t = f (V_t, L_t) \]

Where \( V_t \): service time

\( A_t \): arrival time

\[ V_t = f (O_t) \]

Where \( O_t \): stevedoring time

Since it is not easy to collect the data on arrival time the ships dwelling time \( (H_t) \) is readily available, the study preferred to use \( (H_t) \) rather than its components.

\[ D_t = f (C_t, A_t) \]

Where \( C_t \): cargo clearance time

\( A_t \): arrival time

\[ C_t = f (L_t, B_t) \]

Where \( L_t \): documentation time.
\( B_t \) : time spent for other secondary services like banking, insurance and inspection of cargo.

\( B_t \) during the pilot study was observed to be very negligible and fixed for during documentation period.

Hence, the factors that would be depended upon to explain the waiting time from the time the cargo arrives with the ship to the time it leaves the gates of the port will be given.

\[ W_t = f (H_t, L_t) \]

\[ W_t = a_0 + H_t + L_t \]
APPENDIX 2
Panel a.

COMPARISON OF CONTAINER THROUGHPUT BETWEEN MOMBASA AND DAR-ES-SALAAM PORT. (1996-2001)

THROUGHPUT IN TEU

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Mombasa Port</th>
<th>Dar-es-Salaam Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>270,000</td>
<td>140,000</td>
</tr>
<tr>
<td>1997</td>
<td>270,000</td>
<td>140,000</td>
</tr>
<tr>
<td>1998</td>
<td>270,000</td>
<td>140,000</td>
</tr>
<tr>
<td>1999</td>
<td>270,000</td>
<td>140,000</td>
</tr>
<tr>
<td>2000</td>
<td>270,000</td>
<td>140,000</td>
</tr>
<tr>
<td>2001</td>
<td>300,000</td>
<td>150,000</td>
</tr>
</tbody>
</table>

PERIOD
Panel b.

COMPARISON BETWEEN GANG PERFORMANCE BETWEEN MOMBASA AND DAR-ES-SALAAM PORTS

PERIOD


Mombasa Port
Dar-es-Salaam Port
Panel c

BERTH OCCUPANCY RATE MOMBASA AND DAR ES SALAAM PORT

BERTH OCCUPANCY

PERCENTAGE%

PERIOD


- Mombasa Port
- Dar-es-Salaam Port
APPENDIX 3

QUESTIONNAIRE TO MEASURE MOMBASA AND DAR ES SALAAM PORTS’ PERFORMANCE.

FOR THE PORT CONSUMERS

SECTION ONE
BACKGROUND INFORMATION

Company ___________________________ location ______________________

Designation of the respondent ______________________________________

Contact _________________________________________________________

SECTION TWO
GENERAL OPERATIONS OF THE PORT

1. What do you think of the process of clearing the documents?

   Bureaucratic and corrupt   [ ]
   Bureaucratic but not corrupt   [ ]
   Simple but corrupt   [ ]
   Simple and not corrupt   [ ]

(Please tick where necessary)

2. Please give reason for your answer

   ________________________________
   ________________________________
   ________________________________

3. How long does it take to process documents when clearing for imports? (In hours)

   ________________________________
4. How long does it take to process documents when clearing for exports? (In hours)

5. How long is the free storage period at the port (in days) for the following items?

- Dry general imports cargo
- Dry general exports cargo
- Dry general transit cargo
- Dry bulk imports cargo
- Dry bulk exports cargo
- Dry general transit cargo

6. How likely is the possibility of non-perishable goods being damaged at the port in case of a week delay at the port?

- Not likely
- Likely
- Very likely

(Please tick where necessary)

7. Please give reason for your answer

(Please tick where necessary)
8. How likely is the possibility of non-perishable goods to be stolen at the port in case of a week delay at the port?

Not likely

Likely

Very likely

(Please tick where necessary)

9. Please give reason for your answer


10. If you were to rank port’s efficiency, how would you rank it?

Excellent

Good

Fair

Poor

Very poor

(Please tick where necessary)

11. Please give reason for your answer


12. Is there a stage in cargo clearance that is characterized by delay?

Yes [ ]

No [ ]

(Please tick where necessary)

13. If the answer in 12 is yes, identify it please?

If the answer in 12 is yes, please answer question 14

14. Are the service providers in that stage government or private enterprises?

15, 16, 17 and 18 are for Dar es Salaam Port users only

If the answer in 14 is yes, please answer question 15

15. Do you think if that stage was to be privatized then the delay shall decrease?

Yes [ ]

No [ ]

16. Please give reason for your answer

If the answer in 15 is yes, please answer question 17
17. Which method of port privatization do you think would be suitable?

Management contract

Lease

Partial sale

Complete sale

(Please tick where necessary)

18. Please give reason for your answer

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
17. Which method of port privatization do you think would be suitable?

Management contract

Lease

Partial sale

Complete sale

(Please tick where necessary)

18. Please give reason for your answer

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________