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The assessment of the performance of the landlord port of Nigeria (Onne Port Complex, Onne)

ThankGod Ndidine Pinwa
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WORLD MARITIME UNIVERSITY
Malmö, Sweden

**THE ASSESSMENT OF THE PERFORMANCE
OF
THE LANDLORD PORT OF NIGERIA
(Onne Port Complex, Onne)**

By

THANKGOD NDIDINE PINWA
Nigeria

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

in

PORT MANAGEMENT

1999

DEDICATION

This work is dedicated to my late dad,

Chief Godwin Ndidine Pinwa

&

Mars, Earnestine Gracelyn

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has been previously conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

..... (Signature)

..... (Date)

Supervised by:

Professor Ma Shuo
Course Professor, Port and Shipping Management
World Maritime University

Assessor:

J.R.F. (Dick) Hodgson
Associate Professor
World Maritime University

Co-assessor:

Carlos Canamero
Senior Economic Affairs Officer
UNCTAD, Geneva

ACKNOWLEDGEMENTS

Some individuals who I am very delighted to acknowledge made the pursuit of this programme possible.

First, I express my profound gratitude to God Almighty for His blessing and special grace, who through His mercy granted the opportunity for me to study in this unique university.

My special thanks to Dr. Christian Saro-Nwinia, Executive Director, Finance/Administration (Nigerian Ports Authority) for nominating for study in the University.

I also wish to express special appreciation to my employer, Nigerian Ports Authority granting me sponsorship for the programme.

I am highly indebted to Professor Ma Shuo, my Course professor as well as dissertation supervisor for his guidance, advice and support have been very valuable during the writing of my dissertation and throughout my stay in the University.

I will ever be grateful to all those who availed me of the relevant materials and information needed for my work. Indeed, I must specially thank Olatunje of Statistics Department, Onne Port Complex and the head of Port Harcourt port Labour for making those essential materials available to me.

I owe special thanks to Jeremiah Haruna Stepen, Amadi Wobo Emmanuel, Dibia S.A.N. and Iso for their unflinching advice and encouragement that provided the stimulus for my programme.

Indeed, it is not possible to enumerate here names of all those who critically, morally and materially contributed to the accomplishment of my study. In the event of this, I extend my indebtedness to all involved and wish them God's guidance and blessings.

ABSTRACT

This study examines the performance of the landlord port in Nigeria, Perceived to be the only landlord port in Africa. Most ports around the world today are being transformed into the landlord port pattern with the intention of improving efficiency.

The study discussed and examined the characteristics of the service, tool and landlord ports with an attempt to identify which is the best system. However, the result was that what could be the outstanding model is influenced by certain factors including work attitude.

The performance of the landlord port of Nigeria was critically examined and analysed against the performance of two Nigerian operating ports. It was observed that the landlord port has been more efficient despite weakness in certain areas.

Since the efficiency of a port is influenced by labour the study traced the evolution of dock labour in Nigeria, looked at the impact of technology on labour and noted that with the present trend in technology dock labour force is on the decrease globally. It further noted that dock labour of the present time need more training and skills to cope with the demands of operations which necessitates high productivity. However, despite the efforts to enhance productivity there has been no significant increase in Nigerian ports.

It also looked at what the shippers and ship-owners expect from the ports in terms of service enhancement activities.

Finally, it was concluded by opting for the landlord port pattern and recommendations made for the improvement of performance of the port.

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LIST OF ABBREVIATIONS

AGM	Assistant General Manager
CAL	Calabar Port
CT	Container Terminal
ED	Executive Director
FLT	Federal Lighter Terminal, Onne
GM	General Manager
LPC	Lagos Port Complex
NPA	Nigerian Ports Authority
PH	Port Harcourt Port
RR	RoRo Port
TCIP	TinCan Island Port

CHAPTER II

REVIEW OF PORT SYSTEMS

2.1 HISTORICAL DEVELOPMENT OF NIGERIAN PORTS AUTHORITY

Seaport activities in Nigeria evolved in the 15th century during the era of explorers and traders as increased trading activities necessitated cheap and easy means of transportation provided by water. Creeks of Akassa, Forcados and Calabar, and Victoria later ceded to Camerouns were used as ports for pre-colonial inlets into the Nigerian hinterland until mid 19th century. Since these ports could not serve the transportation needs; the challenges of the increased trading activities after the second world war demanded an organised and improved water transportation to relieve the debilitating pressure on the existing port facilities, rail and road transportation. Consequently, Lagos-Apapa and Port Harcourt ports were developed in 1921 and 1927 respectively, Port Harcourt port development being influenced by the coal mines in Enugu.

Between 1906 and 1954 the significant feature of port administration was the multiplicity of interests in port operations and control. Hence, the ports were under the joint operation of several government agencies and private concerns, among them were the Nigerian Marine (dominant player), Nigerian Railway and Customs Service. Private interests in port affairs were seen in John Holt, United African Company (UAC) and Compagnie Francaise de l'Afrique Occidentale (CFAO).

As port development progressed, commercial and economic activities increased the Authority expanded its scope of operation to match new challenges having grown

from two to eight ultra modern ports. It became necessary to create a well constituted body to manage and control the seaports, hence, Nigerian Ports Authority emerged.

Nigerian Ports Authority (N.P.A) was created on 24th March, 1954 by the provisions of Ports Act (cap.155) as an autonomous public corporation to maintain the ports as well as discharge cargoes (N.P.A.1995:15). Having assumed responsibility for certain port and harbours activities for the country's maritime industry commenced operations on 1st April 1955. The created Authority was an attempt to forging an integrated national approach to port administration, thereby bringing all Nigerian ports under a single unified central management and control. Consequently, it is vested with the following responsibilities:

- Provision and operation of cargo handling and quay facilities in all Nigerian ports.
- Provision of pilotage and towage services.
- Supply of water and fuel to vessels at anchorage or mooring buoys
- Repairs and maintenance of vessels.
- Dredging of waterways to required depth.
- Navigational lighting of the ports as well as other ancillary services.

(NPA, 1995).

With remarkable progress and in line with government efforts to improve services and revenue generating potentials the activities of N.P.A were commercialised on 2nd May, 1992, with the government still having 100%, share a consequence of decree No.25 of 1988 empowering it to operate as profit-making commercial venture and without subvention from the Federal Government.

THE ESSENCE OF THE COMMERCIALISATION

In 1986, structural adjustment programme, a so-called economic policy to reduce total dependence on petroleum oil earnings led to Nigerian Ports being listed for

commercialisation, a programme of profitisation of operations. Following this development there were steps initiated towards:

- i. Orientation towards improved performance, viability and overall efficiency through commercial principles and practices.
- ii. More realistic capital structure to be able to approach the capital market to finance its operations without government guarantees.
- iii. Removal of bureaucratic bottlenecks in port administration and enhance operational efficiency.
- iv. Evolution of cost conscious and goal-oriented management and staff whose future links the prospects of the organisation.
- v. Re-organisation and re-orientation of port operation and management to suit the needs of the nation's economy.

t is therefore authorised subject to the general regulatory power of the Federal Government to:

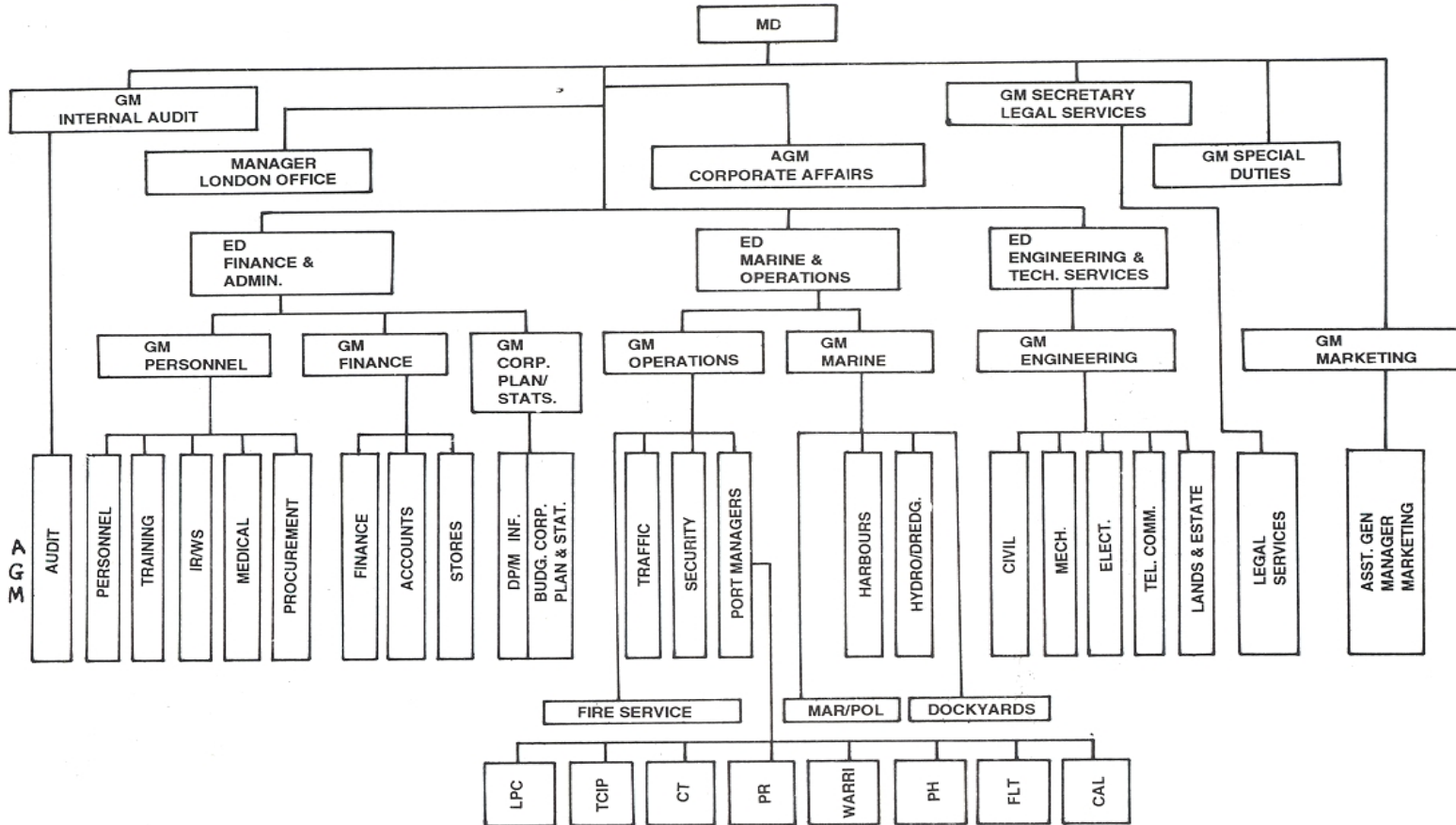
- a. Fix rates, prices and charges for goods and services provided.
- b. Capitalise assets.
- c. Borrow money and issue debenture stocks.
- d. Sue and be sued in its corporate name.

In the event of this development, new aims and objectives were set to face the challenges of commercialisation, the organisation restructured for optimum result thereby dividing Nigeria Ports Authority into three tiers of administration: Corporate Headquarters, Zonal and Port. While the Managing Director was the Chief Executive, a General Manager/Executive Director headed each zone of the three and each port a Port Manager. But the three-tier administration was abolished in December 1995 following the huge finances involved in running such a system.

Today the Ports authority stands as a major pillar of the nation's economy in terms of contribution to the country's GDP, employment, trade etc, and has since 1986

accounted for approximately 99.27% by volume 95% by value of the total imports and exports of Nigeria (N.P.A, 1997:1).

ORGANOGRAMME



2.2 PORT ORGANISATIONS

Although port major aims are identical in reality the tasks and functions are organised and distributed differently in different countries, sometimes in different ports of the same country. Basically these dissimilarities are a necessity of differing degree of cargo handling. Thus, Baudelaire (1986.123) asserts that selection of a particular status is influenced by the attitude towards cargo handling. This is why it is argued that port organisation influences the performance of a port. Therefore, three major port patterns among which are Service, Tool, Private and Landlord ports exist.

In Nigeria two of these port patterns operate but under a central authority. While other ports are service, Onne Port Complex chosen for this study is the single landlord port. This part of this work will show a cursory view of the various types of port.

2.2.1 SERVICE PORT

The port authority develops, owns and maintains the infrastructures - quays, sheds, warehouses, channels, aids to navigation, roads, railways, docks, locks, land and superstructures - cranes of various types, forklifts etc, including related services. It is responsible for the entire operation of the port as well as management of it, hence, referred to as operating port. It sometimes provides stevedoring activities and maintains direct industrial and commercial relations with port users while retains its governmental powers.

The Port Authority may play a role through an enterprise separate from itself in which it holds shares. A situation of this nature calls for a distinction between its governmental role and its role in industrial and commercial activities. Such policy is necessary when the port authority deems it essential performing the operating functions.

Operating port system is common in the developing nations with less efficiency and usually controlled directly by the Ministry of Transport or Communications. This guarantees unity of command and management but more power to unions. Service ports are found in Singapore, Nigeria, Ghana, Kenya etc. However, the port of Singapore is a typical service and leading world port reckoned with for its effectiveness, efficiency and innovative management and operation system.

2.2.2 TOOL PORT

The basic characteristic of a tool port is the provision of heavy but essential infrastructure and superstructure (offshore cranes - gantries, cranes, warehouses and equipment, sheds etc) at the disposal of private operators. Put differently, besides the administration and development of land the Port Authority creates the tools and rents them to various port operators. It is argued that the authority's interference is necessitated by the need to guarantee the installation of efficient and the right equipment as well as forestall monopoly by certain operators. Port of Le Havre is a concrete example.

The Port Authority maintains and repairs the structures and the staff of the port management operates the handling equipment. Other stevedoring activities onboard vessels, quay apron and on the terminals such as pilotage and towage services etc are executed by the private companies contracted to by shipping agents. Therefore, the

participation of private companies is limited. The tool port is organisation between two extremes: the service and landlord ports systems, hence, double entity operates during handling operations. Secondly, there exists double owning of equipment, a possible source of induced conflict.

2.2.3 LANDLORD PORT

The landlord port pattern may be regarded as the provision and transfer of basic port infrastructure and services to private companies by means of some sort of leasing arrangement or contractual agreement to provide cargo-handling services. The contractual arrangement may be on short term or long term basis. Besides, the port authority provides the operators with land areas for storage and other activities to protect the interest of the port. It could be a city port decentralised from the state. In exercising some control the Port Authority regulates the activities of the port, ensuring that all activities are in the interest of the port, administers land and ensures the maintenance of the infrastructure including the depth of the berths. The private operators on the other hand, acquire the superstructure according to their operating activities and set their tariffs, which are regulated by the port authority.

As Baudelaire (1986:120-121) points out, the port authority is limited to direct responsibility for the following in addition to decisions concerning the use of land.

The Ship :

- Aids to navigation
- Channels and fairways, breakwaters
- Turning areas, locks docks and wharves

-Navigation information and radio-telephone service, traffic management

Land carriers:

- Quays, roads, parking lots and amenities
- Railway tracks
- Marshalling yards
- Waiting docks (inland waterway craft)

General port service:

- Conservancy
- Lighting
- Fire fighting
- Police force
- Sanitation.

In effect the private companies are allowed to function with the following services:

- Stevedoring
- Ware-housing and Distribution
- Pilotage
- Towage
- Bunkering
- Mooring and Unmooring
- Labour

The private operators are given free hand in the organisation of their activities through limited government and authority interference, thus sometimes could be described as partial privatisation. This situation implies innovation, creativity, enhanced efficiency and productivity with the ultimate result of stiff competitiveness.

Nonetheless, there is the likelihood of the evolution of over-capacity of equipment and facilities. Rotterdam, Hamburg, New York, Antwerp are operating the landlord port system.

The underlisted are conditions for a proper functioning of a landlord port.

- Large throughput to facilitate competition among various companies and to fund the superstructure.
- Sufficient capital, know-how and qualified man-power to cater for the facilities and services acquired and required.
- A conducive political climate that is a sine qua non for economic activities.

2.2.3.1 KEY FEATURES OF A SOUND REGULATORY FRAMEWORK

The landlord port pattern attracts several players who provide services in varied port activities competitively. Due to narrow traffic base, effective competition is possible to a limited extent, hence, the activities of the private operators need to be coordinated and regulated to limit the emergency of monopoly. It therefore, becomes necessary the regulatory system emphasises:

- Transparency and openness of the system
- Clear articulation of regulatory objectives and the tariff setting
- A legal structure that clearly defines the rule and procedures that allow participation of the private individuals or companies
- The conditions of market entry and exit of private companies
- A well defined process for issuing permits and licences, allocating land and so on.

Observing an increased interest in port pattern, the question is, Which is the best of the three models?

Arising from the foregoing, it might be concluded that the landlord and tool port management patterns are mostly employed in developed world while the operating is applied in the developing nations where exists less efficiency. Secondly, it is construed that operating ports are less efficient. Ironically, Singapore, a leading world port is a service port. Indeed, Singapore has been successful for the following reasons.

- a. Location. Singapore is situated at the southern end of the strait of Malacca, at the crossroads of the seaborne trade route between Asia and Europe.
- b. The port and city have been commercially oriented towards free trade.
- c. Quality of its infrastructure.

However, in considering the best model the focus should be on:

-The level of development of the country counts to a great extent the model to be adopted. This could be seen from the fact that service ports are not common in developed countries.

-The business environment. The question that arises in this case is whether the environment is conducive for the particular model anticipated.

-The financial resources. Are there sufficient funds, otherwise where and what will it be sourced from?

-National culture and attitude towards service. Do the people of the country have the right attitude towards work? The top management to the least level staff should imbibe the proper behaviour towards work under the prevailing set-up.

-Organisational disposition to flexibility.

-Management capability

In actual situation, the elements of the models are fused. No pure model exists.

The present trend reveals the emergence of private ports to cope with the increasing challenges of operations. For instance, the port of Felixstowe in the United Kingdom.

CHAPTER III

PERFORMANCE OF THE LANDLORD PORT OF NIGERIA (ONNE PORT)

3.1 THE PROFILE OF ONNE PORT COMPLEX

THE Onne Port Complex is often referred to as a unique or peculiar port in Nigeria because unlike other seaports it is a landlord port with its operational areas leased out to private operators major among which are:

1. Integrated Logistics Services Limited (INTELS)
2. Marine and Oil Services
3. Brawal Shipping (Nig) Limited

Who handle the operations and take physical storage of cargoes while Nigerian Ports Authority maintains the documentation, administration and security back-up of vessels' operation and cargo in conformity with the requirement of the government and the Authority's corporate objectives.

The port complex consists of the Federal Lighter terminal (FLT) with its adjoining Federal Ocean Terminal (FOT) and other auxiliary jetties like the National Fertiliser Company of Nigeria (NAFCON) jetty, Material Off-loading Facility (MOF) jetty, Buoy 53 Bonny Midstream etc.

The port complex particularly the Federal Lighter and the Federal Ocean Terminals are expected to have a capacity of eighteen (18) berths with a quay length of 2850 metres. The FLT with a draught of 4.5 metres has 1260 metres quay length accommodating twelve (12) lighter berths, three (3) warehouses of 6000 square metres each large stacking areas and a container base. It was designed to handle

lighters, coasters, service vessels and smaller ocean-going vessels while bigger ones discharge midstream for lighterage.

In similar vein, the FOT with a draught of 14.5 metres is in phase completion and is conceived to have a total quay length of 1590 metres, six (6) berths, four (4) transit sheds three (3) warehouses and a large stacking area for Roro traffic, general cargo and containers. Presently, it has taken off with a multi-purpose berth redesigned from the original concept of a general cargo berth so that it can take into consideration the needs of the oil and gas free zone. It is anticipated that the redesignation, together with the strategic geographical location of the terminal will enhance bulk cargo/container handling and shipment of both raw and finished products to and from National Fertiliser Company of Nigeria, the Petro-chemical industry, Ajaokuta Steel Complex and the refineries.

The port complex is situated in Nigeria's buoyant oil and gas development centre, in the Gulf of Guinea, and has been the cornerstone of Nigeria's oil industry including other industries in the zone such as the petro-chemical company limited, Port Harcourt refinery, NAFCON. It therefore implies that it is an ideal location to service a dynamic oil and gas market in the region. This realisation and consideration of the critical importance of oil and gas to the economic development of Nigeria and countries located on West African coast and Central Africa the Federal Government of Nigeria promulgated a decree on 29 March 1996 designating the port complex as Onne/Ikpokiri Oil and Gas Free Zone. As a free zone it has the following listed incentives as advantages.

- Absence of corporate tax.
- No import or export duties for goods imported or exported through the free zone.
- Possibility of building duty free stock of equipment, spare parts and merchandise with no time restriction.
- Ability to manufacture, process, refine, mix or blend with other materials, grade and

- distribute such materials outside or inside the free zone.
- No personal tax.
- Full repatriation of capital and profit.
- No foreign exchange regulation.
- Full ownership opened to foreign and local investors.
- No pre-shipment inspection for goods imported into the free zone.
- No expatriate quota etc.

The idea of free zone is a well thought decision as it will stimulate import and export oriented activities expected to attract direct foreign investments for economic growth of the country and the sub-region. In addition, it is to facilitate the transfer of technology, manpower development, promotion of employment opportunities and economic self-reliance. Furthermore, the development is believed to enable exporters to build up stocks within the confines of the port, thus, avoiding the incidence and expense of double handling exporters' own warehouse facilities cause. The proclamation of the free port was in any case formally made on 8 March 1997 for its official take-off.

3.2 PERFORMANCE OF THE PORT

A port is regarded as an infrastructure serving the international and domestic trade as well as the entire economy of the country. But European Sea Port Organisation defines it as an "area of land and water including facilities destined mainly for receiving vessels, loading, unloading and storing cargoes, receiving and delivering the cargoes from/to land transport means; they may also include activities linked to the sea-borne trade". Whichever may apply logistical platform is important to be associated.

Proper planning, management, co-ordination and control are the basic elements that inhibit or enhance the performance of the port. On the other hand, performance of

the port, in addition to the economic growth of a country and inland transport system determines the port of call by ships. Hence, the commercial viability of a port is always a point of emphasis by shipping companies. It becomes therefore imperative for ports to ameliorate performance or efficiency by reducing the maritime cost in the form of time in port and quality of service that occur in ports. In this wise the performance of the port under study is examined with reference to certain indicators.

3.2.1 TOTAL CARGO THROUGHPUT (Metric Tons) OF ONNE PORT COMPLEX

In 1992 a total cargo throughput of 856,986 metric tonnes handled was in the port. In the subsequent years until 1995 total traffic decreased to reach 417,257 metric tons, indicating a decrease of 51%. However, traffic started to pick up when 749,847 metric tons was handled in 1996 and 1,092,787 handled in 1997. This implies that there has been a 28% increase of traffic between 1992 and 1997.

TOTAL CARGO THROUGHPUT

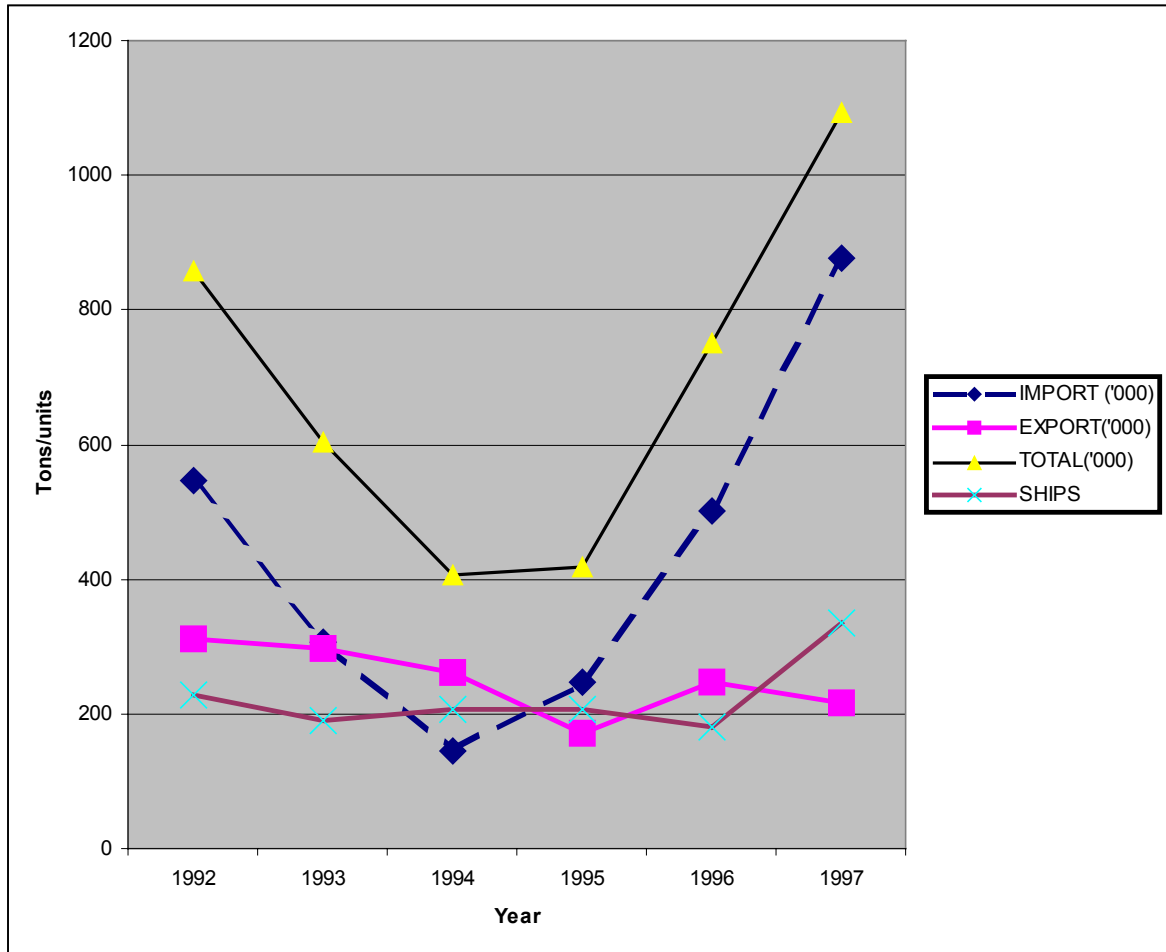
YEAR	IMPORT	EXPORT	TOTAL	SHIPS
1992	546498	310488	856,986	227
1993	305998	296467	602,465	189
1994	145810	261219	407,029	206
1995	246487	170770	417,257	207
1996	502496	247351	749,847	180
1997	875790	216997	1,092,787	336
Growth	28%			
Source: <i>Nigerian Ports Authority Annual Reports</i>				

The evident decrease between 1993 and 1996 was the consequence of the fiscal and economic policies introduced by the Federal Government. A substantial proportion of the nation's budget was allocated to debt servicing which affected currency exchange rate, interest rate and adequate funding of foreign exchange and subsequently low import. Moreover, the period was characterised by deteriorated political instability, social and economic uncertainty. Thus, import that accounted for 64% in 1992 slumped to 51%. There was no confidence in the economy, a situation that scared both domestic and foreign investors.

The increase in throughput that set in beginning from 1995 perhaps was in consonance with the economy becoming more stable from that year. Suitable and appropriate fiscal and monetary policies were introduced and implemented. This resulted in an increase in economic growth on which port operations (throughput) depend with the Gross Domestic Product (GDP) rising to 2.2% as against 1.6% of 1994. Import in the year accounted for 59.1% while export stood at 49.9%.

The significant increase in 1997 reveals a difference of 342940 tons accounting for a percentage rise 46% between the throughput of 1996 and 1997. A decisive proportion came from general cargo particularly materials and equipment (cement, machinery and spares) imported for construction of Nigerian Natural Liquefied Gas at industry Bonny. In other words, general cargo formed 68.% of the total import in 1997.

Figure 3.2 CARGO THROUGHPUT



The only and single completed berth at the Federal Ocean Terminal has just come into use. Moreover, the port has been chosen as a Free zone. Considering the incentives associated with a free port together with the economy becoming more stable and the democratisation almost in place, and based on the trend revealed by figure 1 above the cargo throughput rose to 28% between 1992 and 1997. Many industries are indeed cropping up around the area particularly in Bonny. It is anticipated that their imports and exports will pass through Onne port.

Table 2

CARGO THROUGHPUT BY TYPE HANDLED AT THE PORT												
Year	INWARD					OUTWARD					Total Handled	Throughput Index
	Bulk		container	Gen. Cargo Exl. container	Total	Bulk		container	Gen, Cargo Exl. containers	Total		
	Dry	Liquid				Dry	Liquid					
1992	51257	70181	62409	362651	546498	254259	43352	2207	10670	310488	856986	100
1993	35436	39873	50896	179793	305998	257247	32482	3077	3661	296467	602465	70.3
1994	13000	29497	33002	70311	145810	209096	39637	5421	7065	261219	407029	47.49
1995	88326	35510	36074	86577	246487	157181	5136	6447	2006	170770	417257	49
1996	71104	8500	67234	355658	502496	104401		28481	114469	247351	749847	87.49
1997	205381	10802	63458	596149	875790	93591		27566	95840	216997	1092787	128

Source: *NPA Annual Reports*

The cargo throughput of the port is very low when compared with other Nigerian ports. (See table 3 below). Two ports - Apapa and Port Harcourt ports selected for the comparison.

The total throughput of Apapa port has always been about ten times bigger than the size of the throughput of Onne port complex. In 1992 Apapa inward and outward cargo amounted to 8,125,995 tons while Onne port had a throughput of 856,986 tons. However, a dwindled throughput was realised in the two ports in 1996 resulting in the former having 4,850,306 tons and the latter 749,847 tons.

Such a huge margin of throughput never existed between Port Harcourt and Onne ports. The amount of cargo that passed through Port Harcourt port has always been about twice the size of total throughput of Onne port complex. In 1992, the cargo throughput of Port Harcourt port and Onne port complex was 1,399,430 and 856,986

tons respectively, and in 1996 Port Harcourt port had 1,576,652 tons and Onne port 749,847 tons. Port Harcourt port experienced an increase but Onne port a decrease Between 1992 and 1996

COMPARATIVE THROUGHPUT

YEAR	PORTS		
	APAPA	PORT HARCOURT	ONNE
1992	8125995	1399430	856986
1993	7657399	1472666	602465
1994	5096695	1015831	407029
1995	4888503	972221	417257
1996	4850306	1576652	749847

Source: Nigerian Ports Authority Annual Report

The differences in the throughput can be attributed to the following reasons:

- Apapa and Port Harcourt ports are Nigerian premier ports and as such have well established market share.
- They have deeper draughts.
- They have better inland link.
- They are located in highly industrialised towns with international and national support services.

3.2.2 SHIP TRAFFIC

Ship traffic did not show any increase between 1992 and 1996, although the number that entered the port recorded the highest in 1992 (see table 1 above). About 6% of the vessels that participated in the port were Nigerian ships. In 1993 the port experienced a decrease by 88 vessels or 32%, but with an appreciable rise from 180 in 1996 to 336 in 1997.

SHIP TURN-AROUND TIME

YEAR	AVERAGE SHIP TURNAROUND TIME	
	DAYS	HOURS
1992	5.3	126.3
1993	3.4	80.7
1994	3.8	91.2
1995	4.7	114.4
1996	4.8	115.2
1997	3.4	80.7

Source: *NPA Annual Reports*

The table above shows that the turnaround in 1992 was very high compared with the turnaround time of the subsequent years. While the turnaround time was about five (5) days in 1992, an improvement was made in 1993 with about three (3) days and 1994 with almost four (4) days. In 1995 and 1996 it rose again to almost five days, only to be improved by being reduced to three days in 1997. Three industrial actions of the year resulted in the high turnaround time. On 28th July workers of Nicotes Oil Base Service limited to whom five terminal were leased went on strike demanding the reabsorption of their colleagues retrenched by the management. In September there was also a stand-still in operational activities at least four (4) terminals of the port. There was a delay in the payment of wages, consequently the National Cargo Handling Labour resorted to industrial action. And in November, a similar issue - non-payment of arrears compelled dockworkers under Brawal Shipping to embark on strike action. These developments and non-24 hours work incurred many loss-man-Hours and subsequent high turnaround time.

. COMPARATIVE TURNAROUND TIME						
YEAR	PORTS					
	APAPA		PORT HARCOURT		ONNE	
	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS
1994	5.21	125.04	8.2	197.2	3.8	91.2
1995	11.7	280.8	7.7	184.8	4.7	114.4
1996	9.29	223	9.3	223.2	4.8	115.2

Source: NPA Annual Reports

A discernible difference occurred between the average turnaround time of Onne Port Complex and that of Apapa and Port Harcourt ports looking at the table above. The average turnaround time of Apapa and Port Harcourt ports was much higher. Their turnaround time in 1994 was more than 5 days and 8 days respectively while within the same year Onne port Complex was about 4 days. In 1996 the average turnaround time of the three ports increased, but Onne port still with a reduced turnaround time of nearly 5 days while the other two ports with 9 days turnaround time each.

This status quo compared with foreign ports such as Liverpool and Antwerp where the average turnaround time for vessels is 1.5 and 3.8 days respectively implies that Onne port is better off. Nevertheless, more improvement is required to reduce delays, waiting time, non-operational and idle time as they have effect on labour output and productivity at large. High turnaround time in the other two ports could however, be caused by the factors outlined under labour productivity.

3.2.4 PRODUCTIVITY

Several factors or conditions influence Port productivity. Some but major among these factors include type of cargo being handling, the number of gangs and people employed in each and their skill, type of ship being worked, type of equipment used, skill of crane drivers. Others are stowage of cargo in the holds and conditions of Storage area. To sum it all, productivity is greatly determined by the organisation of work at the berth and on the ship. The efficiency of a port is largely a function of labour and labour productivity to a large extent determine the quality of service to portUsers such as shippers and ship-owners.

3.2.4.1 LABOUR PRODUCTIVITY (metric tons)

Table 6

YEAR	TONNAGE	GANG OUTPUT				GROSS/NET LABOUR UTILISATION %
		Gross Hours	Gross Tons/Hour	Net Hours	Net Tons/Hour	
1992	467471	32005	15	21865	21	71
1993	274368	35078	8	24573	11	73
1994	188895	28966	7	20639	33	77
1995	179533	26114	7	18387	10	70
1996	321013	23424	14	13483	24	58
1997	612134	28425	22	18880	32	69

Source: *NPA Annual Reports*

Gross gang output is the average tonnage handled/hour taken into account idle time or delays caused by either unlashing, equipment breakdown, labour strife, weather, etc.

Net gang output is the average tonnage handled/hour when there is no idle time or delays.

The trend of labour productivity tends to indicate some improvement. However, it is observed that there still exists much idle time or delay. In 1992 the gang gross output per hour was 15 tons while the net output was 21 tons per hour. This implies that only 71% of the available hours were the effective working hours.

In 1997 the gang-hour productivity was increased by 47% and 52% as gang gross and net output respectively. This indicates that there has been enhanced labour output, but delays and idle time are still very high.



The underlisted factors affected productivity between 1992 and 1995.

- a. Poor labour relations: There had been poor labour relations, minimal motivation which resulted in work stoppages. Meanwhile, efforts have been made to ensure cordial rapport to minimise or eliminate conflicts between employers and labour employees.
- b. With the restructuring of the port to the status quo the plants were inadequate. In addition, the employed labour needed some form of training to acquire the necessary skills to work efficiently.
- c. The quay apron was dilapidated. Dilapidated quay implied slow and unsmooth movement of labour, equipment etc during loading and discharging.

Productivity in the port has been affected by other factors in addition to the ones stated above as seen in the table below.

Table 7 **GANG IDLE TIME (%) FOR ONNE PORT COMPLEX**

Year	Ship Movement/ Preparation	Labour	Equipment Breakdown
1992	42	40	11
1993	48	36	7
1994	27	35	2
1995	14	43	1
1996	25	18	20
1997	33	26	13

Source: Onne Port Complex Annual Reports

In fact, idle time caused by ship movement/preparation, labour and equipment breakdown has been prominent in the port. In 1992 the delay caused by ship movement/ preparation was 42%, in 1993 48% and in 1997 33%. In the same 1992 equipment breakdown consisted of 11%, in 1996 20% and in 1997 13% gang idle time. All this goes a long way to affect productivity.

It is evident that because of poor labour co-ordination, 1992 through 1997 witnessed very high gang idle time caused by labour (see table 7 above). In 1992 labour delay was 40%. In 1993 36% in 1994 35% and in 1995 43%.

Table 8 below gives an idea of the level of gang output of Apapa, Port Harcourt and Onne ports. The gross and net ton/hour in Apapa port in particular are higher than those of Onne port. In 1993 the gang gross and net tonnage per hour were 13 tons and 18 tons, while they reached 8 and 11 tons respectively. In 1995 Apapa realised a higher gross and net tonnage of 39 and 53 tons per hour respectively, indicating a significant improvement over the previous period and Onne port complex. But Onne

port made a higher output in 1996 than Port Harcourt port with 14 and 24 tons as gross and net tonnage.

COMPARATIVE LABOUR PRODUCTIVITY

YEAR	PORTS GANG OUTPUT					
	APAPA		PORT HARCOURT		ONNE	
	GROSS	NET	GROSS	NET	GROSS	NET
	Ton/Hour	Ton/Hour	Ton/Hour	Ton/Hour	Ton/Hour	Ton/Hour
1993	13	18	7	13	8	11
1994	14	19	7	11	7	9
1995	39	53	9	21	7	10
1996	17	19	7	11	14	24

Source: *NPA Annual Reports*

The differences in the output of the ports are probably related to the following factors.

- Size and type of vessels worked
- Packing
- Tonnage discharged/loaded
- Nature of consignments
- Equipment employed during operations
- Weather conditions
- Skill of labour
- Size of gangs Number of gangs etc.

Nonetheless, the gang output of Onne port complex was low as a result of long delays, non-operational and idle time. More improvement and better work attitude is therefore imperative to challenge the requirements of shippers and ship-owners.

2.2.5 BERTH OCCUPANCY

There is a correlation between berth occupancy and port productivity in an ideal situation. That is improved productivity means reduced waiting time and incidentally reduced berth occupancy. But high berth occupancy could imply much traffic or low productivity. When the former causes high berth occupancy the need to plan for more berths arises to check or eliminate queuing, but if caused by the latter increased efficiency at the operational terminals becomes quite essential.

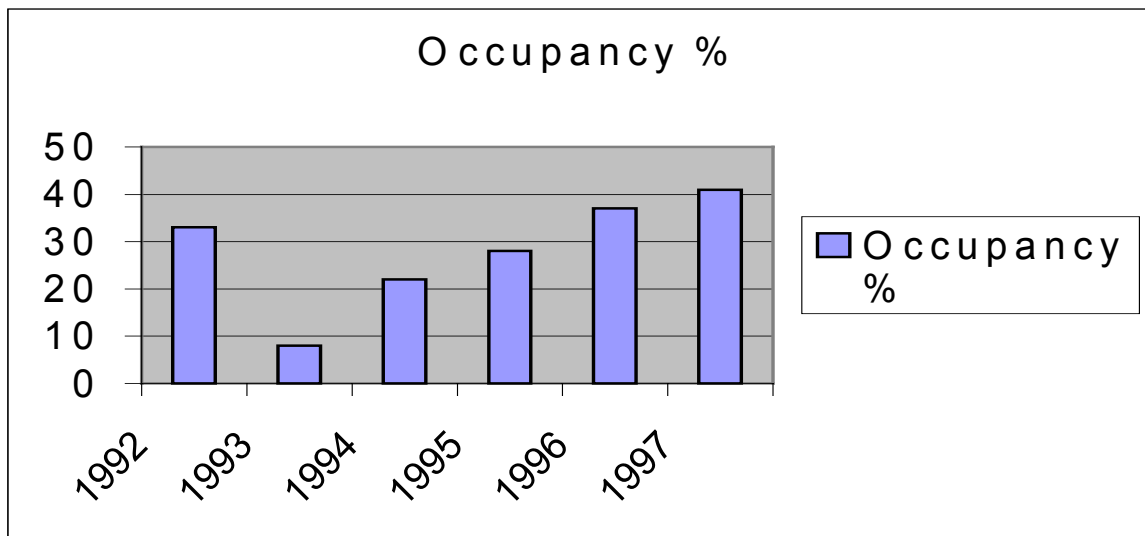
BERTH OCCUPANCY

Year	Occupied not working (Hours)	Occupied Working (Hours)	Occupied not workable- (Hours)	Vacant (Hours)	Total (Hours)	Berth Occupancy %
1992	4839	15163	26280	93878	140160	33
1993	3022	8296	0	128842	140160	8
1994	2536	28972	0	108652	140160	22
1995	2446	36411	0	101303	140160	28
1996	22830	29290	53	88371	140544	37
1997	20336	36825	0	82999	140160	41

Source: *NPA annual Reports*

However, table 8 above indicates that berth occupancy of the port has been very low; the ratio not determined by improved handling operations. The labour productivity of the port has always been low and turnaround time high. (See tables 3 and 4 above). There is the need to improve berth occupancy as well as productivity.

BERTH OCCUPANCY (ONNE PORT)



The period during which the berths are not occupied is excessively high. With the period under study it has an average of 72% attesting for the under-utilisation of the berths.

In fact, there was an over-investment in the berths. The Federal Lighter Terminal was designed to handle lighters because of the draught of the port. This is an indication that most vessels discharge cargo midstream. Thus, building sixteen (16) berths in the port created an over-capacity and consequently over-investment.

It will also be recalled that the period between 1993 and 1996 was fraught with political crises, which affected economic activities in the country. This created an unfavourable business and economic atmosphere. Already existing economic outfits were on the threshold of folding up. Business activities were almost at a halt for fear of insecure environment. Hence, ships rarely called at Nigerian ports among which Onne port is one. As Cornelder's Sales co-ordinator for West Africa, a stevedoring company in the port of Amsterdam during field study in April 1999 remarked the company never interested in any link with Nigeria because of her former political problem.

. COMPARATIVE BERTH OCCUPANCY (%)

YEAR	PORTS		
	APAPA	PORT HARCOURT	ONNE
1994	35	57	22
1995	59	33	28
1996	59	58	37

Source: *NPA Annual Reports*

Comparatively, the berth occupancy of Apapa and Port Harcourt ports have been relatively high, in relation to Onne port complex. In other words, the Onne port has berth over-capacity. The period during which the berths had no ships is much higher. In 1992 it had an occupancy ratio of only 22% while Apapa and Port Harcourt ports had 35% and 57% respectively (See table 9 above).

3.2.6 FINANCIAL PERFORMANCE

1992 is not considered in the analysis below because the port became autonomous on 1st July 1992 and the port Manager assumed full responsibility in August of the same year. In the event of this, it was in control of operating revenue and expenditure of only the last quarter of the year. In any case, the port generated a revenue 15 million 6 hundred and 49 thousand 4 hundred and 15 naira (Local currency), and 2 million 8 hundred and 66 thousand 6 hundred and 29 dollars in that year (See table 11 below).

Table 11

YEAR	OPERATING REVENUE		OPERATING EXPENDITURE	OPERATING SURPLUS
	Naira	Dollar	(Naira)	(Naira)
1992	15649415	2866629	0	0
1993	33639560	5240094	17027879	16611681
1994	36124250	4825370	29021310	7102940
1995	101106331	5230316	71276565	29829766
1996	151145663	6008389	75926181	75219482
1997	153246164	8022310	76746639	76499525

Source: *NPA annual Reports*

The port experienced an increase in revenue between 1993 and 1997. Between 1994 and 1995 revenue increased by over 280%. The trend has almost been simultaneous with both the expenditure and surplus with expenditure rising insignificantly more than the surplus.

In 1993, 51% of the naira value was incurred as operating expenditure while 49% was surplus. But in 1997 expenditure and surplus were 50% each. The increase in expenditure from 29 million in 1994 to 71 million in 1995 was a result of the policy to increase salaries and other financial benefits of the staff by more than 100% enable them while in the same year the staff strength increased from 375 to 381. This was an initiative to enable the staff meet up with the prevailing inflationary trend. Also in 1996 and 1997 more capital projects were executed such as the construction and furnishing of an additional floor at the Administration building.

3.2.7 LAND MANAGEMENT

The management of port land is important because its efficient management determines its utilisation capacity. The inability to adequately model and put it into proper use creates wastage. Hence, good land management requires efficient and effective modelling of the port land for structures, facilities and other port related activities.

The land area acquired by the port stands at 2660.37 hectares and only 207.55 hectares is currently utilised.

Total land area -----	2660.37 hectares
Hectares in current utilisation	
a. Federal Lighter Terminal-----	44.00 hectares
b. Housing Estate (Residential)-----	15.40 "
c. Federal Ocean Terminal-----	148.15 "
	<hr/>
	207.55 "
	2452.82 "

It is worthy to note that only about 8% of the vast land has been utilised while 92% is still undeveloped or being used. The used area are paved or unpaved and developed for port structures and facilities. To develop it is measured in square metres. Some of the facilities include four warehouses, three of 600m² each and one of 7112m², stacking areas etc. Apart from these, parts of the land are leased out in square metres to various operating companies for their activities. Development of undeveloped areas by the lessees must be approved by the port authority to ensuring that it is in consonance with port policy and that the best materials are used.

Port is an industry that attracts other related industries. As it expands the need for more added value activities increases. With this conception the port acquired more and at expansion in the future hopes to develop or otherwise the area not yet utilised

and lease out to private companies such as the ones involved in transport logistics and other value added services.

Unfortunately, the leaving of the land for future development is now posing some threats as villagers are encroaching onto it and resorting to court case.

3.2.8 SECURITY

Every thriving port must have a virile security outfit to minimise stealing and pilferage as no port is wholly free of such incidents. The combination of the outfit varies from country to country and even from port to port. The Onne port complex has a combination of the port security, the port police and Marine police, the Navy, men of State Security Services. Others include men from Military Intelligence unit, National Drug Law Enforcement Agency and the Nigerian Customs for surveillance of the port and its immediate waters. The police is a special port command detached from the metropolitan command.

Individual companies also engage their own security outfit. Walkie-talkies serve as means for easy communication and to monitor unauthorised activities, movements and individuals in the port. The marine police are provided with a patrol boat for surveillance of the immediate waters. Through their joint engagements and patrols the incidents of pilferage and stealing are to a considerable level minimised. There had been occasions on which stolen items were recovered and suspects prosecuted. In 1997, through their efforts a naval officer involved in the theft of pipes using a barge was caught and necessary action taken. However, they lack modern equipment to efficiently execute their duties.

3.2.9 EQUIPMENT BREAKDOWN

Cargo handling equipment is import in the port because the pieces determine the operations at the quay and moreover in the sheds. In the port the equipment used include mobile cranes, forklifts and betotti. These, though still in use in ports of the world they need to be supplemented in the port with modern equipment to be efficient. Modern ships require modern equipment for operations because of their design.

The equipment breaks down but usually not often. According to Captain Madu, the Deputy Branch Manager of Brawal Nigeria limited "the breakdown of heavy equipment was about three times in 1997 but non for the light equipment". Damage to equipment in the port is not frequent as a result of regular repairs and maintenance. However, the following indicates port equipment breakdown between 1992 and 1997 in the port.

1992	11%
1993	7%
1994	2%
1995	1%
1996	20%
1997	13%

Source: Onne Port Complex Annual Reports

As they are not modern equipment that are more complicated preventive repairs and maintenance are carried out in-house in the workshops of the respective terminal operating companies. The maintenance is carried out monthly and staggered major repairs in every six months.

CHAPTER IV

THE ORGANISATION OF DOCK LABOUR IN NIGERIA

4.1 THE EVOLUTION OF DOCK LABOUR IN NIGERIA

The employment of dock workers in Nigerian ports before 1949 was such that it was casual and migrant to the extent that labour was being called upon when their services were required and paid. Those who wanted work assembled in a designated area referred to as the **stand** at the beginning of each shift. The stevedoring contractors or their foremen would then choose those they wanted. This system gave room for different kinds of malpractices among which were nepotism, bribery, slavish conditions of work. For instance, dock labour employers took advantage of the irregularity of employment to exploit dock labour with irregular pay and low remuneration. This practice amounted to constant cause of labour unrest leading to costly interruptions in dock operations. Moreover, the more experienced kroo labour from Liberia was preferred to Nigerian labour, a discriminatory situation that further aggravated labour relations in the docks.

In order to ensure order and organisation of stevedoring and improve the situation a Labour Advisory Board was established in 1947 to enquire into the conditions of employment, wage rates and method of remuneration of dock labour. The recommendations of the board led to the fixing of minimum wage and conditions of employment in 1949 for dockworkers in the port of Lagos. In 1962, another dock labour advisory board was set up with the main objective of securing greater regularity of employment of dockworkers and at the same time ensuring that an adequate number of dockworkers was available for efficient performance of dock

work. As an advisory body the board was ineffective and therefore in July 1963 recommended the establishment of a National Dock Labour Board with statutory powers to secure greater regularity of employment. The regularity in the employment has been achieved by regulating the registration of dockworkers in line with the amount of available work at the ports.

After the creation of Nigerian Ports Authority in 1955, in accordance with the 1949 orders-in-council, the Biney & company, a stevedoring contractor introduced the system of preference gangs on the basis of continuous efficient performance. Later, preference gangs became entitled to fifteen (15) days pay in the month even if there was no work.

The importance of stevedoring contractors became apparent as there was increase in the volume of maritime traffic caused by oil boom in 1973 and consequently, rise in imported manufactured goods. The increase in traffic volume resulted in port congestion mainly in Lagos-Apapa port in the subsequent years owing to inadequate stevedoring management, delays in documentation procedures and cargo clearance, inadequacy of inland transport and many other issues. Also, Nigerian Ports Authority introduced integrated stevedoring system, a development that made labour on the ship, the quays and sheds handling, delivery of cargo come under a single contractor.. With the system ship-owners paid for stevedoring services in advance to Nigerian Ports Authority, implying dock labour employers were contractors to NPA offering services to shipping lines calling at the Nigerian ports.

4.2 ORGANISATION AND MANAGEMENT OF PORT LABOUR

As earlier indicated dock labour was traditionally on irregular basis but the need for an improved system to cope with the increase in the volume of traffic became necessary. The number of stevedoring companies increased and with divergent

interest creating difficulty in the combination of individual policies with the interest of the ports. This and other situations led to the setting up of an ad-hoc committee in 1979 on the future of stevedoring services in Nigeria who looked into the following:

- Establishment of a government owned stevedoring contracting company, the National Cargo Handling company to set standards for other private contractors.
- Re-allocation of all the ports to eight stevedoring contractors.
- Promulgation of the labour Decree No. 13 of 1979. (NPA 1992).

The Decree No. 13 of 1979 which established the National Dock Labour Board assigned the following to the board.

- Registration and employment of dock workers
- Allocation of dockworkers to registered dock labour employers
- Provision of training and welfare facilities for dockworkers
- Establishment of a pension scheme for dockworkers
- Maintenance of harmonious working relationship between the stevedoring companies and dockworkers.

The daily activities of the National Dock Labour Board are carried out by the Executive Secretary appointed from the civil service. Believing that new and more appropriate conditions of employment and proper personnel management policies are seen as essential to the successful modernisation of cargo handling operations and improvement of port efficiency, the role of the created board cannot be overemphasised. Thus, its creation was conceived to assist in the operations of ports nevertheless, while it is a unit of the Ministry of Employment, Labour and Productivity, the Federal Ministry of Transport exercises a great influence and responsibility over ports and shipping activities and matters.

The registered Dock Union of Nigeria having area committees organises the entire activities of dockworkers allocated to dock labour employer. The stevedoring companies who are regarded to be direct employers of the dockworkers have

therefore, no right of discipline and control over their supposedly employees. This has invariably affected or influenced their productivity.

It becomes imperative for Nigerian Ports Authority to make a successful effective labour management to be efficient and reliable. Placing important decisions over employment in dock work in the hands of board where unions can act as barriers to essential changes deprives employers of their responsibility for effective management. On the other hand, if the work and pay of the dockers is perceived to be unrelated to their performance in respect of the activities to which they are engaged they become unmotivated to effect efficiency.

This situation as it applies to Nigeria affects working at a peak efficiency to develop full business potentials to compete effectively with its neighbouring country ports of Abidjan in Cote D'ivoire and others.

4.3 REGISTRATION OF PORT LABOUR

The registration of dockworkers in Nigerian ports is the responsibility of the Port Officer whose conditions for such registration is determined by the Council of Ministers. For the purpose of registration, a dock employer is required to keep a list of dockworkers employed showing separately the names of the workers who are to be placed on the preference list and those to be placed on non-preference list. This lists may be requested to be forwarded to the Port Labour Officer.

The number of such registered dock labour two-thirds of which is on the preference list and one-third on the non-preference list is determined by the Director- General of the Federal Ministry of Employment, Labour and Productivity. Thus, no dock employer can transfer any of his registered non-preference workers to the preference list but the Port Labour Officer may admit any such worker to that list on the

employer's request if only the total number of registered dock labour allocated to the employer by the Director-General is not exceeded.

The registration of dockworkers includes the preparation of registration documents for the workers and on completion of the registration the Port labour Officer issues the registration documents to the registered workers.

4.4 NIGERIAN PORT LABOUR AND CARGO HANDLING

Like other ports in the world, mechanisation has been introduced in the Nigerian ports but going at a slow pace compared to many other ports. The introduction of unitisation and containerisation has a great impact not only on the ratio of labour to capital in cargo handling, but also on land use, inland transport and human skills.

The main dock labour management difficulty today in Nigerian ports is the problem of replacing the large number of labour force with capital intensive technology in cargo handling as a consequence of containerisation in the absence of adequate financial resources from the stevedoring contractors.

Granted, the handling of traditional general cargo is usually labour intensive and time-consuming, the growth of container traffic and new cargo handling equipment has changed the scenario. New container terminal and modern cargo handling equipment has been adapted in the ports to speed up the process of loading and discharging vessels with the ultimate aim of reducing turnaround time of ships. This is evident in the container terminal in Container Terminal of Lagos equipped with gantry cranes and straddle carriers.

Table 12. CARGO THROUGHPUT AT VARIOUS PORTS, 1970s AND 80s

PORT	YEAR	DRY CARGO in tonnes	% CHANGE	CONTAINERISE D CARGO (TEUs)	% CHANGE
Lagos	1970	2959206		909	
	1980	4357259	47.2	153896	16830.3
All other Nigerian ports	1971	4274262		7962	
	1982	11480547	168.6	2040949	25533.6

Source: Couper A.D (1986:24 & 25)

Today, port technological developments have led to the use of equipment such as belt container conveyor, computerised stacking control, automated container inventory and storage systems, batch container handling, container elevators, sideload devices and many others.

These and other developments are all designed to improve cargo handling, increase productivity and facilitate ship turnaround time. The changes in cargo handling techniques invariably have contributed to labour reduction particularly in container terminals (see table 14).

Despite the efforts to improve productivity which affects customers' patronage of a port there has been no noticeable effect on the productivity in the Nigerian ports (see table 13 below). Productivity has always almost been stagnant between 1992 and 1996.

Table 13 LABOUR PRODUCTIVITY IN NIGERIAN PORTS

Year	Tonnage Handled	Gross Tons/ Hour	Net Tons/ Hour	GROSS/NET
				Labour Utilisation %
1993	4669759	12	18	67
1994	3620707	12	18	67
1995	3083107	19	29	66
1996	2412077	14	20	70

Source: Nigerian Ports Annual Reports

4.5 TECHNOLOGICAL IMPACT ON LABOUR

The challenge of cargo handling technology manifests itself in two major ways. First, the port authority strategies to introducing advanced technology; second, the effect of such technology on the entire range of problems associated with human resources including those related to employment, training, attitudes to changes and social security.

One of the most sensitive matters involved in port labour reformation in Nigeria is the need to reduce the labour force to the level required by the new cargo handling methods.

Table14 AVERAGE LABOUR REQUIREMENT PER TYPE OF CARGO HANDLED

	BB Cargo	Container	Differences (%)
Ship's gang	12	5	-58
Shore gang	16	7	-56
Total men	28	12	-57
Tons/Hour	28	216	980
Man productivity (t/h)	0.71	18	2435

Source: Lecture Note of J-M. Mancion, WMU, Malmo

The above table shows the evolution of labour productivity and the number of labour as a result of new handling devices and system. While the number of dock labour per gang is decreasing from 28 to 12 men the output per gang is increasing from 28 to 216 tons. In similar way, the productivity (ton/man/hour) is increasing from 0.71 to 18 tons.

The proposal to reduce the number of workers is very difficult and would strongly be resisted because of the social and economic implications and consequences the nation will face. For instance, Nigeria is short of the provision of social security for unemployment. Indeed, the National Provident Fund Scheme established in the 60s is not more than a form of compulsory savings and does not pay out pension in the true sense of the term and the protection it provides is inadequate. It applies only to wage earners and sometimes excludes certain types of work. For instance, it excludes seasonal or casual labour and moreover, certain categories of wage earners - the employed in the private sector. When one considers the public service it is only the employees of the so-called modern sector of the economy who benefit from the special scheme. In 1980, International Labour Organisation (ILO) estimated that workers benefiting from social protection taking into account all social categories

amounted to an average of 16% of the economically active in Africa as against 81% in the industrialised countries (ILO:1986).

One other thing of noteworthy is the fact that those who bear the brunt of labour reformation in advanced technology are usually old workers and first time job seekers. This social dilemma, however, government hesitation and reluctance to extend social protection to every citizen are in fact, understandable. No matter how desirable it might appear from the social and political standpoint, it is an operation presenting formidable administrative and financial difficulties.

Both the Nigerian Ports Authority and National Dock Labour Board are aware of the gap between workers who are able to meet the technological challenge and adapt their skills and attitudes to new requirements and those who for reasons of age, education, work attitudes experience serious difficulties in adjusting. As Evans posited, workers are not likely to give up these practices and cooperate in the introduction of new methods unless they can be given some guarantee of employment or income. What is therefore needed, he continued is a major breakthrough in industrial relations, a new basis of agreement by which dockworkers will agree to handle new equipment and apply new methods, abandoning restrictive practices, cutting out unproductive time and cooperating in promoting efficiency.

Technological impact will not only be in labour reduction but also in job profiles. Dock work is moving from physical efforts to manual dexterity and mechanical skills. There is also progress in greater requirements for types of mental aptitude within the system of high mechanical, computerisation and mind changing. Some of the semi-skilled and unskilled jobs are gradually disappearing. Dockworkers have thus to be convinced that shippers and ship-owners select ports with high quality of service and lower price.

Thinking in this way, Nigerian Ports Authority constructed specialised ports such as the Container Terminal and RORO ports all in Lagos. This specialised ports led to the reduction of gang size, provision of equipment like gantry cranes and straddle carriers and also maintaining the navigational channel to ensure the passage of big vessels.

These situations notwithstanding, port labour work is in serious transformation, hence, requires among other things training and port educational systems to be reviewed to render more flexibility and responsiveness to changing demands of port users. The port training institutions should henceforth be prepared to develop appropriate programmes to match with the new innovations in order to facilitate the transition.

4.6.1 THE INFLUENCE OF INTERNATIONAL LABOUR ORGANISATION (ILO) ON PORT LABOUR

The productivity of labour and other operational staff in cargo handling depends not only on their professional skills. It is also on how satisfied they are with the condition of work because it is the dock labour employed in the handling of cargo that bear the burden of traffic variations and technological changes necessary to obtain sustained improvement in port operations. Consequently, there exists a number of guidelines on conditions of labour capable of international application but conditioned by the economic and social conditions prevailing in the different countries.

Many of these guidelines are embodied in the International Labour Organisation (ILO) Conventions and Tripartite meeting recommendations, and particularly the 58th session of the general conference held in 1973 and the meeting of 20th -24th May, 1996 in Geneva.

:

- a. **Port Reforms**-Port reform is seeing as a continuous process that takes place at different rates and from varying bases depending on circumstances. As such port labour in Nigeria has undergone several reforms. In the reforms economic and social development of the country is considered and implemented as part of the nation's transport policy. The reforms at the same time reflect the economic and social impact on port, its workers and users, and the hinterland. Thus, all reforms have done on gradual process.

Government of the country therefore, assumes responsibility for formulating the legal framework and creating economic conditions that can propel reforms and be maintained. Policy formulated for the nation encourages cooperation between port employers and staff's organisations and ensures freedom of association and the right to collective bargaining, hence, staff unions of various levels are formed.

The role of information exchange and co-operation in fostering progress and reforms are important. Hence, they are encouraged between the groups involved from the initial stages of the reforms so as to define individual roles, identify necessary measures for reforms and the means of implementation. Believing that there may be some lapses the parties involved periodically review the reforms and cooperate to always evolve new or any measures as and when necessary.

- b. **Labour-Management Relations**-The improvement of productivity is what port users expect from the port. This is achieved if there is mutual trust and confidence between the parties. Noting this, sound labour-management relations become imperative to ease reconciliation and promotion of interests of the social partners as a foundation for the enhancement of productivity. The framework provided by government, makes provision for the social partners to establish and

maintain a dialogue to discuss industrial and social issues and strive to reconcile any misunderstanding and differences that may arise between them.

According to Prevot (1998:2) an early objective of the dialogue should be to establish guidelines to be followed in introducing a port reform programme. The guideline provides for the establishment of constructive labour-management relations with a view to ensuring that there is no overall deterioration in living and working conditions of port workers and that the efficiency and effectiveness of port operations are improved.

- c. Employment-**Port reforms although encouraged, the level of employment is sufficient to guarantee the provision of port services in a safe and timely manner. Employment policies and practices are structured so that the social partners can develop and agree on adequate provisions for port workers who need to change their skills, jobs or leave the industry. In reaching consensus on the appropriate courses of action, it is suggested that national legislation, international standards and collective agreements be used by the social partners as the foundation. Although, reductions in work force are inevitable, but priority should be given to creating alternative job opportunities either within the industry or outside and where necessary adequate redundancy payment made.

In creating job opportunities the redundant staff could be secured employment by transferring them to off-dock facilities or inland container depots or may be engaged in container cleaning, repairs and refurbishment operations.

- d. Working Conditions-**As structural adjustment affects working conditions of workers of the port, in certain situations early consultations and negotiations may be made between the social partners on the impact of the change. This will provide the forum for the discussion of the development and introduction of new work methods with the aim of preventing any negative effects. With the reforms

workers do not need to be engaged for more than reasonable number of hours that might cause more stress.

As regard the occupational safety and health standards governments are said to be in the position to and should make safety and health regulations, which should be, enforced by a competent authority. Of course, flexibility of work organisations and methods to improve productivity is necessary should not be at the detriment of workers' rights.

- e. **Training**-Successful and efficient port operations are a function of the skill, attitude and knowledge of the work force. To this end, a well-trained work force is essential in the port. Training is done to provide port staff with the needed skills for safe and efficient performance of their job, to facilitate the movement of staff across the port industry, and enhance the re-employment prospect of redeployed workers.

Training needs are identified through consultations for all categories of work force and developed, adequate training standards introduced and provision made for implementation. This is ensured by governments, Port Authority and other employers and workers organisations. To ensure effective monitoring and supervision of the training standards, ILO recommends the creation of training boards for establishment of the standards and designing of curricula. With adequate training offered workers, they may be prepared for changed employment arising from restructuring (Prevot 1998).

4.7 CARGO HANDLING IN NIGERIAN PORTS AND THE SHIPPERS, SHIP-OWNERS

4.7.1 SHIPPERS EXPECTATIONS FROM THE PORTS

The port is a service provider and as such has customers. These include shippers, shipping lines, shipping agents, importers, clearing and forwarding agents.

As customers shippers and shipping lines want things done the way they want them and ports that figure out how to provide that is successful. According to Roger W. Wigen, John Welch and Stratford S Sherman in the early 1990s said, *"The pace of change in the nineties will make the eighties look like a pick - a walk in the park. Competition will be relentless. The bar of excellence in every thing we do raise every day."*

"Simply doing more of what worked in the eighties Will be too incremental..... And too slow. The winner.....will be those who can develop a culture that allows them to move faster, communicate more clearly, and involve everyone in a focused effort to service ever more demanding customers."

"The lines between the company and its vendors and customers must be blurred into a smooth, fluid process with no other objectives than satisfying the customers and winning in the market place."

Welch and Sherman had a clear vision and in fact the pace is getting fast today, competition is relentless, the bar is moving up daily, and everyone is driven by customers' very **demanding expectations**.

Honestly speaking, customers - shippers, shipping lines want it:

- faster
- better
- cheaper
- their way

Consequently, legitimate corporate and logistic strategies revolve around services by customers' satisfaction, productivity improvement, quality perfection and time compression.

The Onne Port Complex, a Nigerian port serving as a gateway to the nation's economy generates international trade and provides a major channel for inward and outward movement of goods within the economic system. The function of the port goes beyond the rather static gateway concept. From the system's viewpoint, ports exist to provide service to customers. Such services must be efficient and productive cargo transfer to and from the maritime carrier, from and to land-side transport system and even to door services. A condition for achieving this is for the port management to consider the internal environment and strive to serve the aspirations of the labour work force in order to develop and maintain high level of motivation.

The port users that consist of shippers, shipping lines, and others expect efficiency and effectiveness of the port operations as indicated above. This of course seems the most important factor to shippers and ship-owners as it affects the final cost.

4.7.2 OPERATIONAL IMPROVEMENT

The operational objective of Onne Port Complex like other ports is to provide a sufficient level of and efficient service at the least cost. This service level from the customers' viewpoint would include ship and inland transport handling rate, cargo loading and unloading rate, reasonable port charges and protection of stored goods

against bad weather and theft. Apparently, new shipping technologies and handling equipment are being developed constantly and ports are expected to adapt to these changes in order to maintain and increase efficiency. Nonetheless, ports capacity and efficiency can still be increased a great deal through the maintenance of the cargo handling equipment available. Cargo handling equipment however, differ by type and age, state of repair and efficiency. It is therefore necessary to standardise the equipment pool in order to meet the growing demand for particular types according to the types and sizes of cargo and vessels handled. In other words, specific and good mix of equipment of similar make depending on the kind of goods handled should be acquired.

A poor equipment mix causes some inefficiencies within the port which reflect in delays and turnaround time. In fact poor mix of equipment imposes certain constraints on the port complex which include:

- Increased needs for training of mechanics
- Increased number of repair equipment
- Increased needs for the training of driver to familiarise they with different equipment
- Difficulties in managing spare parts as they are not interchangeable

This is possible by carrying out periodically technical and economic study of equipment procurement to ascertain if the need for the disposal of old equipment arises and replace them by more modern, efficient and compatible ones.

The effective maintenance serves to protect the large investments incurred and prevent breakdowns of equipment that cause costly delays in port operations. The lack of maintenance culture causes a lot of breakdowns of equipment, leading to low percent of equipment availability and high downtime as is the case in most Nigerian ports (see tables below).

Tables 15 SUMMARY OF PLANT AVAILABILITY IN CONTAINER TERMINAL (NPA, LAGOS) - 28 JUNE TO 11 JULY

15a (28 June - 4 July)

Total	Working	Percentage	Down	Percentage
103	56	50	51	50

15b (5July - 11 July)

Total	Working	Percentage	Down	Percentage
103	56	54	47	46

Source: Container Terminal Weekly Report

4.7.3 MODIFICATION AND EXPANSION OF EXISTING FACILITIES

Traffic in Nigerian ports like in other nations' ports has changed over the years. The packaging and volume of cargo and the physical form in which the cargo is shipped has also changed. Containerisation is now the traffic of the day. This necessitates the need for the modification and expansion of the facilities to accommodate the new cargo characteristics. This will help to resolve many of the problems of the ports such as congestion or inadequate level of services. Although, special berths have been built to accommodate special cargo traffic. For instance, Tin can Island port for containers and RoRo port for roll on roll off. But the storage and berthing facilities need to be expanded considering the inadequacy of storage space facing the terminals.

4.7.4 CUSTOMS PROCEDURES AND DOCUMENTATIONS

Customs have the statutory function of enforcing government regulations on imports and exports and implementing the approved tariffs. In exercising this function they ensure that goods entering or leaving the country pass through approved seaports.

In the port the importers and the exporters or their agents have to strictly follow the stipulated customs documentation processes in order to obtain clearance for goods to be delivered or shipped.

Experience and complaints from port users reveal that it takes importers or shippers not less than one week on the average to obtain customs clearance. This problem is not far fetched from the long documentation procedures the shippers undertake before having their cargoes cleared. Sometimes the activities of Customs and Excise Department have rather been made difficult, thereby serving as cogs in the wheel of port operations. The artificial delays to entries in the customs long room and at examination and releasing points constitute serious disincentives and bottlenecks to fast movement of goods through the ports. The shippers lose money by means of payment of demurrage and as well lose clients, a consequence of the delays.

The non-fully computerisation of the customs activities also plays a disincentive role to shippers. Thus, an enormous amount of paper work is required for processing documents. What the shippers expect is streamlined documentation procedures for quick cargo clearance. A smooth and easy clearance, strict but fair gives a good image for the port

4.7.5 ADMINISTRATIVE CONTROL

A substantial improvement can be achieved from the type of port ownership and management but also through simple changes in training programmes for dock labour. The benefit from these improvements may be essential to the shippers and shipping lines particularly when it comes to the time factor, safety to handling operations or storage, cargo clearance.

Training will help in fulfilling workers' self-goal of advancement and more importantly to adapt easily to changes in technology by maintaining and upgrading skills. Changing technology without careful planning or changes in organisation without training often results in disaster.

Easing the plight of shippers and shipping lines requires the ports to reduce time for documentation and other administrative formalities. This attracts shippers and ship-owners and serves as an incentive.

4.7.6 LABOUR RELATIONS AND REGULATIONS

The Nigerian ports labour is often subjected to rigid union rules, work rules or simple traditions, consequently, the port labour has become one of the most strike prone labour groups.

The shippers and ship-owners therefore, expect the ports to have a good communication system with the unions and a centralised labour administration, which can achieve the following:

- Uniform and efficient manpower resource allocation resulting in a reduced labour crises.
- Introduction of production incentive such as wage system, working conditions and welfare packages.

-Systematic and co-ordinated regulations for smooth operations.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

The success of a port is determined by its efficiency and this is achieved when ships turnaround is with minimum time and cargoes are delivered within the shortest dwell time, while costs are competitively reduced. Factors that influence the level of efficiency include the customs documentation /release process, the effectiveness of the shipping company/agent in arranging the berthing of vessels, supervision of discharge /loading and granting of clearance for the delivery of cargo. Others are the ability of the consignee or his agent to plan and process prompt delivery of cargo, availability of adequate cargo handling facilities, the attitude and productivity of the dock labour, the port documentation system. The level, spread and frequency of training for the workers including dockworkers, effective co-ordination by the port management.

It is therefore, imperative for the agencies in the port as well as the port management to exercise the awareness of these factors objectively for a sustained efficiency in the port.

Indeed, each of these factors has influences on the efficiency of the port. For instance, the following situations attest to their effects. The customs clearance delay determines the dwelling time of cargo in the ports and therefore, the surface of the yard required for storing cargo. In like manner, labour output and handling productivity in general determines the berthing time of ships and consequently the berth occupancy ratio and the waiting time.

In the landlord port of Nigeria, some of the services which should be the direct responsibility of the private companies are performed by the port authority. Specifically, the Port Authority is incharge of pilotage. Perhaps the underlisted two factors call for the carrying of the assignment by the port authority:

- a.** As a developing country the landlord port system is at its cradle stage. The traffic is less developed to attract private companies to handle pilotage.
- b.** The traffic of the port has been very low, comparing the throughput (see tables 1 and 3). The throughput is insignificant and will be unprofitable for private companies to take over the pilotage contract.

The stability of the economy of the country plays a significant role in the cargo throughput of a nation. With appropriate fiscal and monetary policies initiated, the economy becoming stable, there resulted in economic growth with effect from 1996 and consequently the cargo throughput of the port on the increase.

Although, the turnaround time of ships has been relatively low in relationship to the time in other Nigerian ports it is still high. This is the result of much delay or idle time. Besides, there is seldom poor labour relations, inadequate availability and supply of equipment.

The berth occupancy of the port is low. This does not imply that the handling operations has been efficient. This is compromised by the fact that labour productivity is low and turnaround time high. Rather, the berths are many and therefore under-utilised.

There are some alternatives to reducing berth occupancy ratio instead of making provision for over-capacity or over-investment. Service time could be increased or incentive scheme introduced to motivate the labour force to work harder.

The foregoing notwithstanding, the landlord port pattern is a system to reckon with in comparison with operating ports. This is attested to by the relative efficiency of Onne Port Complex – the only landlord port in Nigeria whose average turnaround time was four (4) days between 1992 and 1997. On the other hand Apapa and Port Harcourt ports – both operating ports had 8 days each between 1994 and 1996.

RECOMMENDATIONS

Based on the study the author makes the following recommendations for the improvement of services and productivity of the landlord port.

-If the port is to meet the users requirements in an efficient way it should be allowed some freedom to manage without much government interference in management decisions. Subject to being responsible for its results, port management should have freedom as regard commercial, operational, financial and development policies as well as personnel issues.

-The requirements for successful government administration are necessarily different from those needed for running of a port organisation such as the Onne Port Complex in a commercial and competitive environment. It may not be ideal to appoint civil servants to finance, personnel and planning positions within the port authority.

-Port tariffs are another important area for freedom from excessive government involvement. There may be a need for government to set maximum tariffs depending on the competitive situation, but it is undesirable for government departments to tightly control any and all variations in port tariffs, even including downward variations intended to help secure additional business, or to improve the utilisation of port facilities. Commercial flexibility has an important role to play.

-Government should only concentrate on regulating the port industry to ensure it operates in the national interest. Competition between operators should be encouraged and the pricing of port services offered by private operators should be freed from excessive government controls.

-Port policies need to reflect and respond to the continuous changes in macro-economic policies, in particular the move toward a more open Nigerian economy.

-Operations should be organised within a system of integrated terminals, partly owned but fully run by qualified private operators capable and will invest in superstructure and equipment, and organised on the principles of unity of command and specialisation.

-Public investment be limited to the infrastructure needed to facilitate growth and development of the port, for instance investment in railways in the port.

-Private initiative in the provision, funding and operations of superstructure and equipment be encouraged.

-There should be uniform and efficient manpower resource allocation resulting in a reduced labour problem. This can be achieved through the development of an internal guidance and career management. There is not only the need for the port authority to identify the professional skills required by the various ports and cargo handling facilities but also the aptitude of the human resources available in order to match at best the skills required and those available.

-There should be an introduction of production incentives such as wage system, working conditions and welfare packages.

-A systematic and co-ordinated regulations for smooth operations is essential. This is with respect to the port authority and stevedoring contractors. There should be co-ordinated rules and regulations between these entities as to the management of dock labour and also the purchase and maintenance of equipment. In this wise it would be worthwhile the dock labour is put under the stevedoring contractors.

-Improvement of labour organisation and management is imperative. It should be noted that there is interdependence between the dock labour and the port management. The survival of dock labour depends largely on the attitude of the management and vice versa, hence, these two entities need to have a common objective of effective and efficient port operations. Port management should therefore ensure a good rapport with them.

-Training. The regular change in shipping technology (ship type, size and cargo packaging) calls for a skilful dock labour work force. Thus, the need for emphasis on training to adapt to the skills required for specific jobs and meet the customers needs.

-Establishment of cordial and good communication flow between the various port users especially between the port authority and the shippers so as to understand and address their needs and requirements adequately.

BIBLIOGRAPHY

Akani, N.B.C. (1994). *Building Successful Port Operations: The Relationship Between Various Port Agencies and Implications For The Future*. A Seminar paper.

Alderton, P.M. (1995). *Sea Transport. Operation and Economics*. London: Thomas Reed Publications.

Baudelaire, J-G (1986). *Port Administration and Management*. Tokyo: international Association of ports and harbours.

Chingalame, E.S. (1997). *Utilisation and Performance Evaluation of Dar es Salaam Container Terminal*. M.Sc. Dissertation. Malmö, Sweden: World Maritime University.

Couper, A.D. 1986). *New Cargo handling Techniques: Implications for Port Employment and Skills*. ILO, Geneva.

Decree No.3 of 1979 of the Federal Republic of Nigeria.

Evans, A.A. (1969). *Technical and Social Changes in the World's ports*. ILO, Geneva.

Francou, B. (1999). *Port Performance Indicators*. Lecture Note. Malmö, Sweden: World Maritime University.

Frankel, E.G. (1987). *Port Planning and Development*. John Wiley and Sons Inc.,USA.

Horck, J. (1999). *Port Operations Management*. Lecture Note. Malmö, Sweden: World Maritime University.

Japan International Co-operation Agency (1995). *The study on Ports development in kiribati* (Summary). Nippon Tetrapod Company Limited.

Labour Act of 1990 (cap. 198) of the Federal Republic of Nigeria.

Mancion, J-M (1998). *Time in Port*. Lecture Note. Malmö, Sweden: World Maritime University.

Maritime Quarterly. The Big Fight. July-September 1998: Vol.3. No.3. Onne: Logistics Centre for West Africa. Apapa, Lagos: Maritime Publications Limited.

Mohd, R.B.J. (1998). *Port management. A Study of Cargo handling and operations in Port Klang.* B. Management Technology thesis. Kuala Lumpur: maritime Academy Malaysia.

Monie, G. De (1995). 'Restructuring the Indian port System'. *Maritime policy and management*, Vol.22, No.3 pp255-260.

Nigerian Ports Authority (1995). *Nigerian Ports Authority Handbook.* Ikeja, Nigeria: Sahel Publishing Company Limited.

Nigerian Ports Authority (Onne Port Complex) Annual Reports.
Nigerian Ports Authority Annual Reports.

Nigerian Ports Authority. Minutes of Meeting Held Between Nigerian Ports Authority Management and Representatives of Shipping Companies, Dock Labour Employers and Dockworkers on June 9, 1992 at NPA, Lagos, Nigeria.

Opurum, Margaret Chigozie (1994). *Port Labour Reforms: Its Implications on Port Performance and Shippers' Satisfaction.* M.Sc. Dissertation. Malmö, Sweden: World Maritime University.

Ovbude, F.O. (1998). *Problems and Prospects of Free Zone. Focus on Onne Free Port Zone.* A seminar paper presented during the Maritime Association of Nigeria (MARAN) forum at Port Harcourt, Nigeria.

Philippe, P. (1998). *Port Labour.* Le Havre: IPER.

Roger, W.W. (1997). *Shippers' Strategies in Transport Logistics.* International Symposium on Liner Shipping VI in Bremen, Germany. Conference Report.

Shuo Ma (1998). *Maritime Economics I.* Lecture Note. Malmö, Sweden: World Maritime University.

Soto, Rios Alexander (1994). *Port privatisation in Costa Rica.* M.Sc. Dissertation. Malmö, Sweden: World Maritime University.

Tempo (1995). *Aspects of Commercial Risks and Aspects of Port Reforms in Container Terminal Management.* Port of Rotterdam.

United nations Conference Trade and Development (1992). *Development and Improvement of ports.* New York: UNCTAD.

Vanguard (Daily Newspaper) Publications of August 3, 1992. Lagos, Nigeria.