

INVESTMENT OPPORTUNITIES FOR OPTIMIZING THE EFFICIENCY OF MARITIME TRANSPORT SECTOR IN NIGERIA

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ABSTRACT

The study examines several investment opportunities for optimizing the efficiency of the maritime transport sector in Nigeria and it reviews the significance of the sector as a vehicle for revenue diversification of the national economy. It highlights the investment opportunities in the sector based on the wide range of service activities provided to vessels, cargo and inland transport. Furthermore, the study identifies alternative sources of funding investments and the need to explore them through bilateral and multilateral agreements with multinational shipping and logistics firms and other nations. The study uses descriptive survey design and simple random sampling technique to draw a sample of 219 from the target population of 396. Descriptive statistics was used and data were obtained from interviews, empirical literature and media reports to identify the investment opportunities, challenges and prospects to enhance the efficiency of the maritime transportation sector. Structured interview (involving focus group) was used to identify the following challenges in the sector: lack of funding, maritime insecurity, foreign dominance, obsolete regulatory instruments, lack of automation of operations, insignificant participation of indigenous shipping operators, and undeveloped inland waterways system. The findings revealed that the challenges identified have contributed to the inability of indigenous shipping operators to compete effectively against foreign firms and that if investment opportunities in the sector were well utilized, they would enhance trade facilitation, ease import/export flow, reduce cost of logistics, and minimize attendant corruption, while improving the efficiency and transparency of port processes. Thus, the paper recommends that Government should: encourage private sector involvement by offering them incentives to invest in infrastructure and services in coastal and inland waterway transportation; explore public-private partnerships, equity investments, and project financing arrangements; encourage investment in the sector towards full digitization through automation to integrate Nigerian port towards port community system.

Key words: *Investment, optimizing, public-private partnership, infrastructure, funding*

INTRODUCTION

Since maritime transport is mostly stimulated and sustained by demand for cargoes, its efficiency could be evident from smooth inbound and outbound cargo flow, seamless vessel traffic and unfettered accessibility from seaports to the hinterland and vice versa. However, the ability of the ports to handle cargoes efficiently is determined by certain factors which include: port hinterland connectivity, adaptation to modern management concept, port capacity, draft of channels and the number of berths. Others are adaptation to information and communication technology to optimize performance and port security architecture to protect lives and guard against pilferage (Eto, 2021).

The investment opportunities in the port sector are visible from the wide range of service activities that ports provide for vessels, cargo and inland transport. This implies that ports have to provide satisfactory services to vessel operators while striving to provide suitable infrastructure based on the expected vessel type and cargo to be handled. All of which are expected to be provided by the combined entrepreneurial efforts of public private investment drive. Therefore, private sector

participation (investment) will play a pivotal role in funding key aspects of the maritime transport sector (Eto. 2023a)

Other funding avenues towards investing in the maritime transport sector are international financial institutions like the International Finance Corporation (IFC) and the Nigeria Sovereign Investment Authority (NSIA) will be key facilitators of these investments. Yet, other sources of funding investments are through establishing bilateral and multilateral agreements with other nations and international organizations, which will provide the financial support and access to technical expertise. Such institutions include the United Nations Conference on Trade and Development (UNCTAD) and the International Maritime Organization (IMO) will be important partners in these agreements (Oluyede, 2021).

PROBLEM

Functional maritime transport infrastructure is the framework that supports the maritime transport system and it is a vital component of the general transport system, being an essential requirement for efficient maritime logistics and maritime transportation (The Draft National Transport Policy, 2021). However, there is a general mobility crisis in Nigeria due to the fact that there is no clearly articulated policy for transport development (Sumaila, 2013). Consequently, a coherent transport policy is essential to stipulate credible sources of funding for investment towards having sustainable maritime transport infrastructure to facilitate logistics in order to promote the ease of doing business. The significance of investment to promote efficiency of the maritime transport sector was demonstrated by the Federal Government when operators in the private sector were invited to bid for seaport terminals for purposes of cargo handling operations and superstructure upgrade in 2006 (Eto, 2021).

The encouragement for private sector investment in the seaports is aimed at improving service delivery, enhancement of management capability, modernization of port development and reduction of government involvement and spending. Therefore, when the port terminals in Nigeria were concessioned, it was to enable the private sector to infuse managerial expertise into port operations and inject private capital into the development of port superstructure while the government concentrated on its functions of maintaining and upgrading the port infrastructure (Eto, 2023a). Hence, when port infrastructures in Nigeria's major seaports started giving way, and the World Bank to had rank Lagos Ports as 358th out of 370 ports (based on Container Port Performance Index - 2021 Report, Tunji, 2022), NPA had to resort to sourcing for loan facility of \$700m from UK Export Finance to commence the rehabilitation and upgrade of the port infrastructure for efficient landside operations (Business Transport, 2024).

The crucial issues militating against Nigerian ports currently have to do with capacity utilization and evacuation corridors. For instance, while the Eastern ports are grossly underutilized owing to shallow draft, poor port access road and insecurity, the efficiency of the Western is obstructed by inadequate evacuation corridors. These factors add up to result in cargo congestion at the ports and traffic congestion on the port access roads. The consequences of these challenges are felt by port businesses that thrive on prompt service delivery and these factors dampen the investment zeal of would-be investors who have identified the numerous opportunities in the maritime sector in Nigeria (Eto, 2021).

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The Significance of Maritime Transportation Sector

Approximately 90% import and export goods are seaborne (Organization for Economic Co-operation and Development, 2022). This buttresses the fact that maritime transportation is the major vehicle for global logistics and it consists of port operations, shipping services, ship building, and ship repairs and inland waterways transport services (Eto, 2023a). Global shipping of export and import cargoes, which is carried out based on the reliability of shipping network and predictability of maritime logistics management, has resulted in shrinking of the transportation gap with the result of facilitating the transportation of goods sold across the world in different countries (Dennie, 2018).

International seaborne trade is the foundation of a healthy maritime sector; and conversely, a vibrant and an efficient maritime transport infrastructure is necessary for robust import and export activities. Thus, in Nigeria the key to economic diversification in the area of non-oil export is the maritime transport sector. This is because, the maritime transport sector provides the platform for trade facilitation and is in position to promote rapid economic growth if public private investment opportunities in the are well utilized (Eto, 2021).

The importance of maritime transportation is highlighted against the background that non-oil export can effectively replace crude oil export as a government revenue earner in Nigeria if maritime logistics activities are facilitated through efficient port maritime access and if hinterland access infrastructures are provided to handle operations in the logistics and supply chain, which connects the international market. A well-implemented diversification strategy requires sustainable transport infrastructure to grow across all sectors of the national economy, and this will lead to increased productivity, job creation, and thereby providing the basis for sustained economic growth (Eto, 2021).

However, the activities of some government agencies could be inimical to the prospects in the maritime transport sector, with unpleasant consequences for efforts towards promoting the sector to be a major revenue earner. For instance, the exorbitant duties, tariffs and terminal charges imposed on shippers and freight forwarders by the Nigerian Customs Service is financially distressing considering that most of the time, the server's downtime extend over protracted period. This development results in the inability of freight forwarders to access and retrieve their consignments from the seaports. According to Hybrid News (2024), the substantial daily losses freight forwarders suffer was estimated at over ₦2.5 billion, which has severe impact on their operations and the sustainability of their business. The least that the Nigerian Customs Service could do was to grant waivers to the freight forwarders to alleviate the financial burden.

Conceptual Framework

Investment Opportunities in the Maritime Transport Sector in Nigeria

Investment opportunities constitute the major independent variable, which would spur efficient maritime transport operations in Nigeria. To this end, Eto (2019) and Eto (2021) have identified the following investment opportunities which abound in the port sector for both local and foreign entrepreneurs:

Port Development and Modernization

Building new green field ports, set aside for coastal berths and construction of new terminals and jetties will be required to ensure smooth and efficient shipping operations.

Value- Added Services

Ports are in position to experience synergistic benefits from the inland terminals to provide value-added services. It provides enormous productivity advantages for a port to also be a logistics centre, inasmuch as the logistics centre has the ability to attract cargo that can be shipped through the port.

Ship Chandlery Practice

Ship chandlery practice in Nigeria is regulated through the Customs and Excise Management Act (CEMA) Section 74. The Nigerian Content Law permits 95% local participation in ship chandlery (Oluwatola, 2024). Ship chandlery activities, regulated by the Nigerian Customs Services, entail supplies to ocean-going ships of items ranging from victuals, oils services, lubricants, etc. Nigeria controls about 65% of ship traffic in the West/Central African sub region and the investment opportunities in this segment are vast (Eto, 2021). However, the operating environment, poor access to capital and the inimical activities of some government agencies make it difficult for Nigerian ship chandlers to compete favourably with their foreign counterparts. The bureaucratic bottlenecks constituted by security and regulatory agencies are unwarranted, inimical to investment climate, counter-productive and antithetical to the blue economy concept (Oluwatola, 2024).

Gaining access to the ports by road and through the inland waterways is difficult due to deficient maritime and land access infrastructures. Added to these challenges is that government agencies like the Nigerian Navy, Marine police, Nigerian Immigration Service, and Nigerian Security and Civil Defence Corps demand for separate illegal approvals. All these are hurdles that cause delays in meeting up with demands of international vessels.

Cargo Operations/Stevedoring Services

The provision of modern stevedoring services is critical in port operation. The deregulation and liberalization policy of the government has opened opportunities for private investors in the provision of modern stevedoring services.

Marine Services

Investment opportunities exist for the provision of essential marine services such as towage, pilotage, hydrographic, navigational aids, nautical services, salvage services, admiralty services, etc.

Haulage/Logistics

Even though Nigerian road transport infrastructural facilities are failing, the waterways transport system is undeveloped and the railway transport system is beginning to pick up, trucking service and the demand for integrated logistics service will continue to increase as long as import activities do not cease. Outsourcing of logistics and transport services to third and fourth party logistics companies is gaining grounds among transnational corporations, particularly air and marine logistics support services in the oil and gas sector. Investments in the provision of rail infrastructure, trucking services and water haulage are viable investment options.

Shipping services

The large maritime traffic generated by Nigeria is currently undertaken mostly by foreign shipping companies. Shipping services make physical distribution of goods between continents possible by ship transport. International trade and commerce are facilitated through the availability of reliable, efficient and adequate shipping services. The promulgation of the Cabotage Act was intended to be the stepping stone to international shipping for the indigenous shipping operators. The instrumentality of the national shipping policy and other institutional measures aimed at attracting private investment in the development of indigenous fleet has remained mere expression of good intention for the maritime industry and the people of Nigeria, no more.

Development of Deep Seaports:

Nigeria embarked on the construction of Greenfield deep-sea ports to satisfy the growing demands of modern day international shipping. This initiative involves a Public Private Partnership arrangement between the federal government and the organized private sector investors. There are various investment opportunities in Nigeria for the development of deep-sea ports with the country having a coastline that stretches over 853kilometers. Aside from the Lekki deep seaport which has since been completed, the Ibom deep sea port in Akwa Ibom State and Badagry deep sea port in Lagos State are some of the deep-sea projects at different stages of implementation.

Inland Dry ports and Multimodal Transport:

The idea behind inland dry ports (IDPs) is to among other things, to facilitate trade, relieve congestion, boost economic growth and improve connectivity. This has necessitated the call upon private investors to invest as concessionaires in the operations of the seven major IDPs established across the country (Eto, 2023b).

Hinterland connectivity & Multimodal Logistics:

Private investors can offer inland or barge transport services through the inland waterways to convey inbound or outbound freight. This would diversify the available transport modes in order to speed up the logistics process between the seaports and the hinterland. The transformation and upgrading of rail corridors and connection of narrow gauges at seaports and the operation of trucks at rail stations for transporting freight to the IDPs, where trains cannot gain access directly, will certainly fast track the evacuation of goods and thereby reduce road traffic and lessen port congestion. There are opportunities for Public Private Partnership investments in this regard.

Block chain Technology:

Vast opportunities are available in the use of block chain technology, in cargo tracking; visibility in the supply chain; recording vessel information including global risks and threats; Investors could engage in integrating smart contracts; maritime policies and digitizing, because automating the documentation saves costs and time for the release and movement of cargo .

METHODOLOGY

Simple random sampling technique was used owing to its ease of use and accuracy of representation. In order to analyze the data gathered, descriptive statistics was used.

Sampling Technique and Method of Data Collection

The study adopts survey research design and used primary and secondary sources of data. Structured interview was the instrument used for sourcing primary data. The study adopted the Taro Yamane formula to determine 219 as the sample size, out of population of study of 396.

In determining the sample size for this research, the Taro Yamane's formula given as (*equ. 1*) was used:

$$n = \frac{N}{1 + N(e)^2} \dots\dots\dots (equ\ 1)$$

Where:

- n = sample size
- N = population size (396)
- e = level of significance (our level of significance is chosen at 5%)

Applying the formula at significant level of 5%;

$$\begin{aligned} & \frac{396}{1 + 396 (0.05)^2} \\ & \frac{396}{1+0.99} \\ & \frac{396}{1.99} \\ & = 198.99 \end{aligned}$$

Therefore, the sample size = 198.99, which is approximated to be 199. However, 20 (i.e.10%) is added to accommodate non-response and this brings the sample size to 219.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Respondents

Table 1: Demographic Analysis of Respondents

Characteristics	Frequency	Percentage (%)
Male	139	63.47%
Female	80	36.53%
Total	219	100

Source: Field survey (2024)

The gender distribution of the respondents is shown in the Table 1. The distribution shows that 139 or 63.47% of the respondents were male while 80 or 36.53% were female. This shows that majority of the respondents were male.

Table 2: Age Distribution of Respondents

18-35	52	23.74%
36-65	156	71.23%
Above 65	11	5.03%
Total	219	100

Source: Field survey (2024)

The age distribution in Table 2 shows that the number of respondents whose age fell into the age bracket 18-35 years was 52 or 23.74%. The distribution shows that respondents whose age bracket fell into 36-65 years were 156 or 71.23% which happened to be the majority. The respondents whose age was above 65 years were 11 or 5.03%.

Table 3: Educational Level

Primary	12	5.48%
Secondary	43	19.63%
Tertiary	164	74.89%
Total	219	100

Source: Field survey (2024)

The formal education of respondents as shown in Table 3 shows that all the respondents attained one level of formal education or another. Those who attained Primary School education were 12 or 5.48%. The respondents who attained Secondary School education were 43 in number or 19.63% and those with tertiary education were 164 or 74.89%.

Table 4: Occupation Distribution

IDP Port Managers	3	1.37%
Exporters	38	17.35%
Importers	80	36.53%
Freight Forwarders	32	14.61%
NIMASA Senior Staff	12	5.48%
NPA Senior Staff	10	4.57%
Nig. Shippers' Council	18	8.22%
Transporters	26	11.87%

Total	219	100
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Source: Field survey (2024)

The occupation distribution shown in Table 4 indicates that 3 or 1.37% were IDP Port Managers. Exporters were 38 or 17.35%. Importers were 80 or 36.53%. Freight forwarders were 32 or 14.61%, NIMASA senior staff members were 12 or 5.48%, NPA Senior Staff were 10 or 4.57%, Nigerian Shippers' Council and Transporters were 18 or 8.22% and 26 or 11.87% respectively.

Table 5: Status Distribution

Status		
Top-level Management	106	48.40%
Senior-level Management	92	42.01%
Junior Management	21	9.59%
Total	219	100

Source: Field survey (2024)

The status distribution of respondents shown in Table 5 indicates that majority of the respondents were the top-level management and they were 106 or 48.40%. 92 or 42.01% belonged to the Senior-level management cadre and 21 or 9.59% were of the junior management level.

Summary of Discussion from Focus Group Interview and Literature Review

CHALLENGES OF THE MARITIME TRANSPORT SECTOR IN NIGERIA

The challenges facing the maritime transportation sector in Nigeria were identified from literature review, interview and media reports to include the following:

(1) Funding

100% of the respondents observed that with maritime transportation consisting of port operations, shipping services, ship building, and ship repairs and inland waterways transport services, and being such a capital intensive sector, the sector requires heavy financing from multiple sources. To that effect, respondents lamented that funding in the maritime transport sector in Nigeria is a major issue, whereas government could explore bilateral and multilateral agreements with other nations and international organizations. They were therefore of the opinion that public-private (both local and foreign) investment in the sector should be encouraged since the investment opportunities are immense. They equally observed that encouraging private sector investment in the sector would enhance the country's port modernization efforts and port process automation towards a single window regime. Altogether, according to respondents, this would enhance trade facilitation, ease import/export flow, reduce cost of logistics, and attendant corruption, while improving the efficiency and transparency of port processes.

(2) Maritime insecurity

Nigeria is not yet fully compliant with the ISPS Code, hence, the United States Coast Guard (USCG) offered the country a three-year plan to work with the Nigerian Maritime Administration and Safety Agency (NIMASA) for the removal of the Condition of Entry (CoE), placed on American-bound vessels from Nigeria. USCG also disclosed plans for bi-annual assessment of compliance level with ISPS implementation at Nigerian ports while working with NIMASA (Eto, 2021).

25% of Africa's maritime traffic is reputed to pass through the Gulf of Guinea (GoG) and Nigeria is the centre of gravity of the GoG (which spans two regions in Africa – West and Central Africa).

This explains why the economic cost of maritime insecurity in the GoG affects Nigeria more than other countries in the GoG (Otunba, 2022).

Nigeria's enormous maritime resources have attracted sea robbers and pirates, high traffic of poachers, illegal, unreported and unregulated fishing activities, and crude oil thieves; illicit trafficking of weapons, apart from the high incidence of human and drug trafficking. With the national crude oil quota put at about two million barrels per day, over 1.7 million barrels of Nigeria's crude oil is stolen. That amounts to over 80 percent of Nigeria's crude oil being stolen. This is the result of maritime security lapses, since it all happens at sea (This Day, 2024).

These threats obstruct the effective exploitation and beneficial use of our maritime resources and what is more, maritime crimes are trans-boundary and migratory in nature, hence it calls for unified response, with the Nigerian Navy taking lead role in the frontal counter-attack against maritime insecurity.

International shipping lines imposed war insurance premiums on cargoes destined for Nigeria following frequent pirate attacks in the Gulf of Guinea and Nigeria's waters. War Risk Insurance (WRI) is a term used in describing exorbitant freight insurance charges on ship cargoes, particularly those to be delivered to regions exposed to piracy or war (Kagan, 2021). The War Risk Insurance Premiums imposed led to high cost of shipping goods to Nigeria. Consequently, Nigeria earned a negative image, which led to (1) reduced vessel calls, (2) diversion of traffic to safer neighbouring jurisdictions, (3) increased risk insurance premiums and (4) general derogation of Nigeria's reputation as a maritime destination (Clement, 2023).

Efforts Made So Far

The Federal Government's determination to rid Nigerian territorial waters of criminalities prompted the deployment of the Integrated Security and Waterways Protection Infrastructure, otherwise known as the Deep Blue Project. The Deep Blue Project is multifaceted, involving the training of selected officers from various strata of the security services and NIMASA as well as the acquisition of assets to combat maritime crimes (This Day, 2019).

Respondents observed that the Deep Blue Project is geared towards building a formidable integrated surveillance and security architecture that will comprehensively combat maritime crimes and criminalities in Nigeria's waterways up to the Gulf of Guinea. The Project provides both land and air based surveillance capabilities with command and control centres located across the country for data gathering and information sharing.

The relentless war against piracy in Nigeria's waters and the Gulf of Guinea (spearheaded by Nigerian Navy under the Deep Blue project) reduced maritime insecurity to the barest minimum such that the Gulf of Guinea recorded near zero piracy attacks for several months since 2021 (Eto, 2021). This feat led to the removal of Nigeria from the piracy list in March 2022. Improved naval operations in Nigeria's waters and enhanced security architecture in the country's sea lanes contributed immensely to Lloyds of London (United Kingdom) removing Nigeria from the list of countries (destinations) to which War Insurance Premium on ships is paid (Omonobi & Oritse, 2023).

According to International Maritime Bureau (IMB), nearly \$16 billion annually is lost to theft, ransom, transport delays and other factors relating to maritime criminalities. However, improvement in maritime security in Nigeria has checkmated sea robbery targeted at shipping lanes, cargo ships, and transport vessels in order to pillage, plunder and kidnap passenger and

crew members (Omonobi & Oritse, 2023). Moreover, respondents observed that Nigeria has set precedence in criminal justice in maritime related matters by promulgating the Suppression of Piracy and Other Maritime Offenses Act (SPOMO) Act, 2019, and this has become a reference point among maritime nations in the sub region. This has made the issue of prosecuting maritime criminals in Nigeria relatively easier and result-oriented (Ayitogo, 2022).

Respondents further observed that although under the SPOMO Act, the Federal High Court in Nigeria has convicted a number of maritime offenders, yet the discretionary powers of judges under the Act have resulted in lenient sentencing or trivial imposition of fines on persons convicted for piracy and sea robbery, rather than life sentence. This, according to them, is tantamount to a mere slap on the wrist in view of the gravity of the offense. Consequently, the success of the criminal justice system in Nigeria towards deterring maritime crimes depends on the courage of the courts to interpret the SPOMO Act and hand down sentence with maximum penalty. This is with a view to ensuring that justice is served to deter or suppress maritime crimes as intended (Ayitogo, 2022).

Challenges of Current Maritime Security Architecture

Africa Center for Strategic Studies (2015) has identified the following factors militating against security architecture in Nigeria's waters:

- (1) Lack of transparent information exchange to strengthen maritime domain awareness: Failure of security agencies to share real-time intelligence is a source of draw-back in the fight against maritime crimes.
- (2) The Nigerian judicial system is lacking in speed and efficiency in the dispensation of justice in maritime related cases and this is a source of discouragement to investors.
- (3) Prosecuting arrested pirates and other maritime offenders is challenging and requires synergy, teamwork and assimilation operations that lead to arrest, investigation, and collation of exhibits.

(3) Foreign Dominance

According to respondents, Nigeria loses an estimated \$50 billion in capital flight annually due to foreign domination of the country's waters. This is traceable to the non-implementation of the Cabotage Act. This estimate factors into consideration the remunerations of other foreigners in the shipping and logistics chain in money that is eluding us in capital flight.

Nigeria has a growing shipping sector characterized by low level of indigenous participation. As a cargo owning nation, the country generates more than 70% of the cargo throughput in West/Central African sub region, yet the sector is dominated by foreign flagged vessels, especially those of developed market economies of Western Europe and America (Onyenucheya, 2023a).

Respondents were of the view that Nigeria has failed to participate in the affreightment of abundant cargoes generated in the country which account for about 70% of the total cargo traffic in the West/Central African sub region owing to lack of Nigerian shipping line. The implication is that the country has to rely on foreign vessels for the shipment of its inbound and outbound cargoes. This is with the significant attendant economic and financial loss, besides the negative security implications.

Respondents further observed that about 98% of the sea freight in Nigeria is done by foreign companies and foreigners make up about 85% of the maritime workforce in Nigeria. This situation, according to respondents, creates numerous avenues of capital flight, which is inimical to the development of indigenous shipping operations and to the national economy.

At a Maritime Sector Presidential Retreat, it was disclosed that overall, Nigeria loses over ₦2 trillion annually in capital flight to foreign ship owners. In the maritime sector, this situation is due to the inability of indigenous ship owners to fully participate in lifting over 150 million tons of cargoes, generated by the country including crude oil exports (Bivbere, 2012).

Therefore, respondents opined that boosting indigenous participation (investment) in the shipping sector would:

- (i) Increase freight revenue for local shipping operators
- (ii) Help conserve foreign exchange and help to develop indigenous capacity for global competitiveness
- (iii) Accelerate the development of Nigeria's defence and security capabilities
- (iv) Create employment opportunities and thus
- (v) Improve the contribution of the maritime sector.

(4) Obsolete Regulatory Instruments and Need to Promulgate Draft Policies

Regulatory changes are a major issue in the maritime transport sector because if well regulated, it would have a significant impact on trade volume, transport costs and economic competitiveness (UNCTAD, 2016).

Thus, respondents were of the opinion that a number of maritime policies and regulations in Nigeria need to be reviewed while those at draft stage should be updated and promulgated into law. They reasoned that maritime transport services are directly related to the nature and dynamism of the maritime transport policy of a country. And that this is so because maritime transport policy is the document that regulates and controls the provision of maritime transport with a view to facilitating the efficient operation of the economic, social and political activities at the lowest social cost. Accordingly, it is needful that all regulatory instruments and policies be reviewed and updated periodically (Tolley & Turton, 1995).

In recognition of the need to review existing regulatory instruments, the new Nigerian Shipping and Port Economic Regulatory Agency Bill, which is currently before the National Assembly aims to repeal the Nigerian Shippers' Council Act in order to check several acts of illegalities in charges in the ports and other segments of the maritime sector (Apeh, 2024). Respondents opined that the review will give the proposed rebranded agency the requisite legal and administrative instruments to effectively assume the role of economic regulator in the maritime and transport industry.

The persistent inefficiencies in the Nigerian maritime transport sector have been ascribed to policy inconsistencies, defects and weaknesses which have resulted in piece-meal and uncoordinated maritime transport programme, planning and implementation (Eto, 2021).

Nigeria is known to have developed various documents related to transport development, which were never implemented. According to Agbakoba (2024), seven (7) transport policy documents were formulated since political independence in 1960, besides the three (3) Master Plans for Transportation Development, five (5) National Development Plan (NDP), three (3) National Rolling Plan and one Economic Recovery and Growth Plan (ERGP – 2017-2020), which was followed by NDP, 2021-2025. The seven transport policy documents are (1) The 1965 Statement of Policy on Transport (2) the 1993 Transport policy for Nigeria (3) the 2003 Draft National Transport Policy Document (4) the 2008 Draft National Transport Policy (5) the 2010 Draft National Transport Policy (6) the 2013 Draft National Transport Policy (7) the 2021 Draft National Transport Policy.

The three (3) master plans are: (1) The 2001/2002 Master Plan for an Integrated Transport Infrastructure (2) The 2006 National Transportation Master-plan (3) The 2015-2043 National Integrated Infrastructure Master-plan. All of these documents still remain at draft stage and have never been implemented thereby giving room for conflicting transport policies across the country, from State to State.

Members of the Nigeria Indigenous Ship-owners Association who were interviewed opined that the review and update of the Cabotage regime will be a major determinant of (1) job creation in the maritime transportation sector (2) growth of GDP and (3) boosting the national economy. Thus, a review of the Cabotage Act will involve the abolition of granting waivers to foreign operators in order to encourage indigenous participation of local shipping operators (Foyeku, 2019).

(5) Lack of Automation of Operations

Respondents observed that it is imperative that a fully digital ecosystem be created in the seaports as well as in the inland dry ports in pursuit of smartness of operations. This would mean maritime single window and port community system through digitalization of operations in order to have ease of doing business. The Nigerian Port Process Manual (NPPM) lays much emphasis on port automation in order to minimize costs of port operations in the country, decrease the long dwell time, eliminate corruption, arrest indiscriminate dumping of empty containers and reduce perennial port congestion (Eto, 2023b).

According to respondents, eighteen years after port reforms which introduced port concession, manual processes are still being used by Nigerian Port Authority in the issuance of authority card to port users, and most shipping companies and terminal operators use manual means for cargo clearance processes. The Nigerian Customs Service rated the automation level of some shipping companies and terminal operators in the first quarter of 2021 as follows (Eto, 2023b):

Grimaldi Shipping	88%
Ocean Network:	75%
CMA CGM	60%
PTML:	92%
BUA:	75%

When a port is automated, it becomes smart and the ease of doing business would be assured. A smart port **is a port that uses automation and innovative technologies including Artificial Intelligence (AI), Big Data, Internet of Things (IoT) and Blockchain to improve its performance.** Ports that aim to become smarter must complement their physical operations with digital processes (Rahman, 2023). Port automation in Nigeria will bring about efficient and seamless cargo clearance processes and procedure which lead to increased revenue and

profitability. It will also lead to the facilitation of creating port community (mandated by IMO) (Onyenuchey, 2023b).

Port operations in Nigeria which involve container stacking, issuance of Delivery Order, submission of bill of lading among several other processes are still being done manually thereby perpetuating the old order of human interface in transacting port business (Ogunyemi, 2021). Under the Convention on Facilitation of International Maritime Traffic (FAL), IMO compels governments to adopt a unified digital platform, referred to as Maritime Single Window (MSW) for exchanging information with ships during their port calls (Anagor-Ewuzie, 2023).

According to Port Technology Team (2019), automation in this regard would help to:

- a) Achieve transparency,
- b) Save cost,
- c) Raise safety for workers
- d) Reduced congestion and pollution at ports
- e) Improve efficiency, by increasing capacity for loading and unloading to save cost and time in operations,
- f) Make the ports more trade friendly,
- g) Improve processing ship entry notice and
- h) Attain faster ship turnaround time among other processes that support trade operations. All of which translate to:
 - i. Paperless operations/transactions,
 - ii. Time-saving operations, to prevent unnecessary delays in maritime traffic,
 - iii. Cost efficient port operations; reduction of labour cost
 - iv. Ease of data management and information sharing, which had proved difficult in time past owing to lack of digital connectivity.
 - v. Centralized and shared data base leading to a fully integrated port operating system, which would foster better business relationship between internal and external stakeholders.
 - vi. Optimizing productivity to meet the expectations of port users.
 - vii. Helping to make better informed operational decisions, leading to increased efficiency, improve collaboration among stakeholders,
 - viii. Lower port costs and ultimately help to meet the ever-increasing customer expectations promptly.

(6) Menace of Abandoned Export Containers at Seaports

In an interview, the Terminal Manager of APM Terminals, Apapa lamented the menace of 616 export laden containers which had stayed in the terminal for upward of 3 months. According to him, the containers were abandoned because they failed to comply with standard process prescribed by relevant government agencies for export operations. He observed that the establishment of Export Processing Terminals (EPT) is to handle export cargoes before being conveyed to the port for onward transportation to overseas market. However, some shippers choose to boycott the EPTs and prefer to convey their export cargoes straight to the ports without following due process. In the view of Ekama (2024), such containers cannot be attended to immediately until due diligence is done which takes time, and consequently affects the quality and value of the contents.

(7) Insignificant Participation of Indigenous Shipping Operators

Respondents identified the following factors as constituting the reasons for the lack of significant involvement of local operators in the maritime sector in Nigeria:

- i. Shipping is a very capital intensive business that requires huge capital outlay. The absence of special financing arrangement (e.g. CVFF) to support the growth of indigenous shipping is a huge challenge. The failure to disburse the CVFF has shattered the hope of local shipping operators.
- ii. There are stringent international maritime rules, regulations and standards (concerning maritime safety, maritime labour laws and environmental protection) that are enforced by foreign governments in exercise of flag, port and coastal jurisdiction, which local shipping operators do not have the requisite capacity to comply with. These constitute a huge barrier to both new entrants and existing indigenous operators to compete favourably.
- iii. Failure of government policy and legislations to help the growth of indigenous participation in the sector. The cabotage law has not been able to promote indigenous participation to boost indigenous tonnage. The abuse of the Waiver Clause led to the failure of the cabotage law to empower Nigerians to boost indigenous tonnage.

In agreement with Daniel (2016), respondents observed that these factors are playing out and hindering indigenous operators in Nigeria's shipping sector from competing effectively against foreign firms.

(8) Lack of Corporation Among Government Agencies

Respondents observed that transport efficiency requires the collaboration and corporation among the different players in the supply chain network in order to avoid unnecessary bottlenecks arising from bureaucracies. This would enhance the operations of the Nigerian Railway Corporation which is often caught in the role conflict and interagency rivalry among government agencies such as the Nigeria Customs Service, NPA, Nigerian Shippers' Council and the terminal operators. However, proper regulatory framework would also eliminate role conflict and interagency rivalry among government agencies (Agbakoba, 2024).

(9) Poor Port Infrastructure

Respondents opined that infrastructure deficit is responsible for Nigerian ports being unable to compete effectively with other ports with result of cargo diversion to such ports in neighbouring countries by importers and shippers. This has often resulted in the loss of huge revenue to the Nigerian economy. This means loss of jobs and business opportunities to Nigerians who are involved in maritime activities. These observations tally with the issues raised by Utulu (2023) in an article titled "Infrastructure Deficit Responsible For Nigeria's Poor Competitive Ports".

Moreover, respondents were of the view that among the infrastructures requiring government's attention in Nigerian ports are poor port hinterland connections (Absence of sustainable multimodal transport linkages) and shallow port channels (draft).

(10) Undeveloped Inland Waterway Transport System

Respondents observed that inland waterways is one of the oldest means of moving goods and services between different locations and that of Nigeria is put at well over 10,000 km while total navigable length is estimated to be 3000km. In Nigeria, the inland waterways constitute the least developed among the different modes of transportation. The low investment in inland waterways

transport services has not allowed for the realization of the full benefits derivable from optimal operations (Jukpor, 2024).

The importance of the inland waterways to the national economy takes its roots in activities such as fishing, solid mineral prospecting, tourism, barge services, water sports, power generation, agriculture/irrigation and industries (Eto, 2021). This explains why it is vital to have functional inland waterways transport services. However, respondents observed that freight transportation by inland waterways is highly under-utilized in Nigeria compared to other large countries and geographic areas like the United States, China and the European Union. The decline of river transport in Nigeria, according to respondents, set in due to over reliance on roads and railways.

A properly developed inland waterways transportation system will (1) contribute to high volume of goods transported across geographical space (2) it will be characterized by low energy consumption and (3) low negative environmental impact (Jukpor, 2024).

General Limitations Affecting Inland Waterways Transport Services and the Institutional Constraints in Nigeria

Respondent agree with Badejo (2010) who made the following observations as constituting the general limitations affecting efficient inland waterways transport service and the institutional constraints in Nigeria:

- a. Government has not made provision for adequate funding for National Inland Waterways Authority (NIWA);
- b. Institutional handicap affect capacity utilization, which calls for improvement of the legal framework that empowers NIWA;
- c. Lack of policy directive that supports and encourages water transport system, which should be a credible alternative transport mode;
- d. No policy provision and incentives to encourage private sector participation in inland waterways transport service;
- e. Unregulated and uncoordinated activities in the inland waterways system and haphazard infrastructure development.

Factors that Compromise Safety in Inland Waterways Transport in Nigeria

Respondents identified the following as factors that compromise safety in the inland waterways transport system in Nigeria:

- a. Use of water crafts that lack regular maintenance
- b. Absence of proper supervision and regulation to enforce safety standards – life jackets, and other support systems are hardly provided;
- c. Water channels – rivers, creeks, lagoons, are not properly provided with illumination at dusk;
- d. Operators of the watercrafts are not thoroughly scrutinized and licensed to assure the safety of passengers;
- e. Siltation of river channels;
- f. Presence of water weeds;
- g. Presence of wrecks.

Challenges of Barge Operations and Ferry Services in Nigeria

Respondents acknowledged the significant contributions of barges in the evacuation of cargoes from the seaports as well as ferry services. The introduction of barges according to respondents

has made noticeable impact in port operations and service delivery. However, according to Uba et al. (2023), some of the challenges are:

1. The presence of wrecks that endanger navigation,
2. Inadequate infrastructural facilities
3. Shortage of qualified human capacity
4. The high cost of operations
5. Insecurity in the waterways hinders cargo movement.
6. Failure of NPA to provide dedicated berths for barge operations in the ports.

Conclusion

In view of the difficulty facing inland and coastal waterways transport services, the Federal Government could consider granting license and rights for public private participation (investment) through concession of waterways transport services in ferry management and jetty operations. The investment opportunities in the maritime transport sector are vast and if properly utilized, the efficiency of the sector would be assured and the declining share of the country's shipping tonnage in overseas trade would be reversed. Moreover, emerging industrial activities in Nigeria are available for entrepreneurs to invest their capital in order to boost the export trade, using the seaports as vital link in the maritime transport logistics infrastructure.

Maritime transportation development hinges on port development, training of maritime personnel – seafarers and shore-based and fleet development and the investment opportunities in these aspects are limitless. Government could encourage the private sector to invest in these segments because they offer significant commercial returns on investment. Findings revealed that if investment opportunities in the sector are utilized, it would enhance trade facilitation, ease import/export flow, reduce cost of logistics, and attendant corruption, while improving the efficiency and transparency of port processes. Thus, if the maritime transportation sector is given its rightful place, and there is provision for adequate maritime infrastructure through massive investment, it would guide against port congestion, guarantee the extension of shipping services to the hinterland, revitalize the inland waterways transport services and promote hinterland connectivity. This would altogether lead to the optimization of efficiency of the maritime transport sector.

RECOMMENDATIONS

Government should:

1. Implement policies and encourage practices that reduce inefficiencies and high costs associated with maritime transport services, such as certain tariffs and charges imposed by Nigerian Customs Services on freight forwarders and by implication on shippers.
2. Encourage private sector involvement by offering them incentives to invest in infrastructure and services in coastal and inland waterway transportation;
3. Explore public-private partnerships, equity investments, and project financing arrangements;
4. Encourage investment in the sector towards full digitization through automation to integrate Nigerian port towards port community system.
5. Government should double down on automation, to avoid need for containers to be physically inspected by customs officials.

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