CHALLENGES AND PROSPECTS TO THE COMPLEMENTARY ROLE OF INLAND DRY PORTS IN SERVING THE HINTERLAND OF NIGERIA

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ABSTRACT
The paper reviews the challenges facing inland dry ports (IDPs) in Nigeria and the inherent prospects in their bid to serve the hinterland as complements to the seaports. It is acknowledged that the attractiveness and economic success of a seaport is ever so dependent on its ability to integrate into the supply chains that connect it to the hinterland. Thus, freight transport network is experiencing an evolution of terminals that connect seaports with their hinterlands. IDPs are fast becoming extensions of the maritime terminals on the landside as they represent mitigation measure against congestion and capacity constraint faced by seaports. Hence, in recognition of the symbiotic relationship between seaports and IDPs, the former need to key into the complementary services of the latter in order to enhance their efficiency and to serve the hinterlands. The paper identifies the challenges that the IDPs in Nigeria face from literature review, media reports, port operators and other stakeholders. The paper found that as a result of poor port hinterland connectivity, the cost element in transporting containers through deplorable roads to IDPs in Nigeria is taking its toll on the ability of the IDPs to have the desired impact on the hinterland because rail transport, which is less expensive, is in abeyance. The paper submits that the Government should provide an enabling environment that encourages private sector to invest in functional and efficient intermodal transport system that enhances port hinterland connectivity. This would facilitate speedy evacuation of cargo to the IDPs, encourage export activities, serve increased volume of trade and boost economic activities of the hinterland.
Keywords: Growth Pole, port hinterland connectivity, intermodal transport, inland container terminals, symbiotic relationship, dwell time, concession, congestion, complementary role and capacity constraint.

Keywords: *Complementary services; port hinterland connectivity; inland intermodal terminal; shippers; symbiotic relationship.*

INTRODUCTION
The freight transport network has undergone an evolution of terminals which link seaport with their hinterlands. Several names apply to these terminals, which include Inland Port, inland intermodal terminal, container freight station, inland clearance depot, inland container terminal, inland customs depot, and inland cargo centre (Mwemezi & Huang, 2012).
According to Trainaviciute (2009), Veenstra et al., (2012), Cullinane and Wilmsmeier (2011) and Roso et al., (2009) cited in Mwemezi and Huang, 2012, the inland dry port concept and conversely that of ICD is still evolving and hence lacks unified definition. However, this paper adopts the definition by Leveque and Roso (2001) cited in Roso and Woxenius (2006), which defines inland dry port as “an inland intermodal terminal directly connected to a seaport, with high-capacity traffic mode, where customers can leave/collect their goods in intermodal loading units, as if directly to the seaport”.

An Inland dry port is similar to a sea port located in the hinterland. Containers are transported by rail or road to the IDPs from the seaport for examination and clearance by customs and other competent authorities. It has all the loading and off-loading equipment needed to handle containers (Shippers’ Council, 2021).
The functions of dry ports are divergent depending on the type of services performed by the facility, which may vary from basic logistics services (e.g., transshipment, storage) to a range of customer-oriented services including cargo consolidation and deconsolidation, maintenance and repair, track and trace, custom clearance, information processing and forwarding (Ng and Gujar 2009).

All things considered, “dry ports” have emerged as vital elements of the integration between the seaport system and the land network (Varese, et al, 2020). Beyond being the physical extension of the storage capacity of seaports, a dry port is a veritable tool by which the dimensions of the port are amplified, in terms of its “catchment area”.
To optimize supply chain management, seaports need to offer value added services, and one way to do this is by introducing IDPs to provide door-to-door transport solution rather than mere port-to-port. By so doing, this results in expanding seaport hinterland.

The rationale for the use of containerships to deliver shipments is premised on economies of scale (Mwemezi and Huang, 2012). However, increase in container volumes results in increased pressure mounted on entire logistics network, which invariably leads to port congestion, high dwell time and higher logistics costs (Japan International Cooperation Agency, 2009; UNCTAD, 2009; Arvis, 2010; cited in Mwemezi and Huang, 2012). This explains the rationale behind the introduction of IDP, which is a port of final destination for imports and a transit point of exit for export located in the hinterland. The aim is to relief seaports of pressure on limited space.
It is due to physical space capacity constraint that seaports are increasingly overwhelmed whenever there is increase in container volumes. This situation has assumed a global dimension faced by seaports as observed by Cuillinane & Wilmsmeier, 2011 cited in Mwemezi and Huang (2012). This has often led to port congestion. Therefore, as a result of growing global trade, ports are required to enlarge their storage areas, within and outside the ports immediate premises in order to cope with increased cargo volume (Eto, 2019). This calls for the establishment of Inland Dry Ports along with functional and efficient connection with the hinterland.
In an attempt to solve the challenge associated with space constraint experienced by most seaports, which cannot expand their territory further, “ports have embarked on implementation of Inland Dry Ports as operational and capacity enhancement strategy for easing pressure at congested maritime terminals (Haralambides and Gujar, 2011 cited in Mwemezi and Huang (2012). This, according to the Port Manager at the Kaduna IDP, they have done, and continue to do, by establishing inland freight terminals in the hinterland in order to bring shipping services close to hinterland-based shippers.
Seaports in Nigeria have been experiencing operational challenges, which have to do with corporate regulations, organization, processes and procedures, planning, communication, port security, and logistics (Eto, in press). These complex operational challenges that Nigerian seaports face require extensive and intensive operational planning that recognizes the significance of Inland Dry Ports (IDPs) to complement the operations of the ports (Shippers’ Association of Nigeria, 2021, Personal Communication). Freight forwarders interviewed in 2021 were of the view that the complementary support provided by the IDPs would assist the seaports to increase their service variations, increase their trade volume and enhance their performance in order to meet the demands of the shipping industry.
Ports of call in Nigeria are expected to rise to the challenges emanating from the growing complexities of port management in order to create and sustain an enabling environment for efficient service delivery. A viable and an efficiently managed seaport is an asset to improve the international supply chain and national economic performance, which requires the complementary role of Inland Dry Ports.
The establishment of IDPs in Nigeria was with the aim of not only reducing transports cost for shippers but also to bring shipping services close to the door steps of shippers in the hinterland and to stimulate export business (Hellenic Shipping, 2020). The advantage of IDP with respect to its cost saving attribute, in minimizing the transportation cost incurred by shippers, makes it a compelling factor to be integrated within maritime terminals.
However, it is one thing to provide satisfactory services that guarantee quick truck/train turnaround at the inland dry ports and a different thing altogether to have a corresponding

customer-centered service at the seaports that assures speedy cargo release. Both the seaport and dry port must provide corresponding customer-centered service delivery in order to have a seamless movement of land freight from the seaport to inland destinations and vice versa. This constitutes one of the gaps in literature because operations at both the seaports and dry ports must recognize the need for efficiency in discharging inbound goods destined for the inland dry ports and in receiving outbound cargoes from the hinterland.

The Meaning and Significance of Inland Dry Ports (IDPs)

An IDP is an area of a given size governed by municipality (or a concessionaire as in the case of Nigeria), encompassing road infrastructure, inland waterway(s) and rail infrastructure(s) (Wiegmans et al., 2015). IDPs are central and intermediate locations. They exert their main influence through their hinterlands, which are the land areas they service. Shippers are particularly interested in the function of centrality and intermediacy performed by IDP (Transport Geography, n.d.).

The hinterland represents a set of customers (distribution, manufacturing, and retailing activities) from which the transport terminal (seaport) draws its business through the IDP as an intermediate point.

Globally, the existence of IDPs spans over 35 years and their advent is in order to allow door-to-door transport solutions rather than just port-to-port thereby expanding seaport hinterland. This helps to mitigate the major challenge of port congestion arising from the continuous increase in international trade through containers (Adejumo, 2020).

Literature Review and Conceptual Framework

Symbiotic Relationship Between Seaports and Dry Ports

The complex nature and functions of seaports makes it necessary to acknowledge the complementary role of IDPs in the overall seaport system and the need to establish same. Seaports have undergone changes that alter their role as nodes in the global network thereby allowing the interconnection between the forelands with the hinterland. This interconnection is made possible by the door-to-door transport solutions rather than just port-to-port, which has enabled the expansion of seaport hinterland (Eto, 2021).

IDPs are meant to enhance seaport performance by enlarging their capacity in order to make them competitive. Seaports rely on IDPs to achieve superior performance in service delivery/elasticity and economies of scale.

In order to buttress the point about the intrinsic link between seaport and IDPs, Kinyua et al., (2021) have identified high freight rates, poor ship turnaround time, cumbersome process in cargo clearance, and inadequate storage capacities experienced by seaports as arising from the absence or non-functional IDPs.

Klink (2000) cited in Mwemezi & Huang (2012) asserts that by investing in inland terminals and participating in their operations, a seaport can register its presence in inland regions. Therefore, inland terminals may be seen as extended gates through which transport flows can be better controlled and adjusted to match conditions in the port itself.

The essence of IDPs is to relieve port congestion, address limited space at the seaports, increase port hinterlands and their competitiveness, increase the efficiency of cargo movements and global supply chain logistics, as well as reduce environmental impacts of heavy truck movements and rail traffic in urban areas near ports (Bergqvist et al., 2014).

The role of IDPs in the global supply chain continues to grow, but not without the challenge of determining the location and number of depots to be inserted in the logistics network in order to achieve the purpose intended. The global increase in containerized traffic, which has resulted in the emergence of IDPs in the hinterland of seaports around the world (Korovyakovsky & Panova, 2011 cited in Olah et al., 2018) has not had the same effect in Nigeria.

The emergence of IDPs as intermodal freight terminal in the hinterland helps to replicate seaport activities by bringing the seaport close to shippers based in the interior places of a country.
In showing support for the extended gate concept, Veenstra et al., (2012) cited in Mwemezi & Huang (2012), opined that the functions of dry port can result in significant benefits in terms of modal shift, logistics performance and regional development.
The enthusiasm that heralded the establishment of IDPs in Nigeria was not matched with commensurate implementation efforts and operational drive. Hence, Nigeria loses over $12 billion (N6 trillion) annually on agricultural produce that otherwise could have been processed and exported to international market if efficient port hinterland connectivity and functional IDPs were in place (Money Management Series, 2021). This illustrates the fact that the IDPs are not serving the hinterland as intended, and the reasons are identified subsequently in the paper.
The ability of the seaport to meet the demands of the hinterland market is a function of the ability of the IDPs to operate effectively as the physical extension of seaports in the hinterland. When the port is overwhelmed with excessive cargo volume, which can easily lead to congestion, it is expected that IDPs would alleviate the situation by absorbing the excess through functional port hinterland connectivity made up of an enabled inland waterways and overland transport services, such as efficient rail and road transport system.
Being an inland cargo terminal, the IDP provides the alternative solution to space shortage brought on by cargo congestion at the seaport. Efficient seaports need the complementary role of IDP, adequate and functional inland transport system to facilitate speedy cargo evacuation from the seaport through efficient port hinterland connectivity.
When seaports are organized to accommodate IDPs in the overall port system they would have a significant impact on trade volume, transport cost and economic competitiveness. IDPs are dependable allies of seaports as they provide assistance for the latter to compete for hinterland markets as neighbouring ports make concerted efforts to expand their hinterland for market opportunities.
According to Mohammed (2019), when a seaport is faced with international competition from regional neighbours, it is the IDPs that they would lean on as dependable allies to assist in expanding the scope of international port competition. On the whole, the impact of IDP operations on seaport competitiveness is through the following:

- Enhancing seaport performance;
- Increasing service variations for seaports;
- Encouraging seaport-hinterland connectivity and improving the proximity between them;
- Increasing seaport trade volume and
- Enhancing seaport physical storage capacity

The operations of IDPs are widely acknowledged as crucial to enhancing the functions of seaports as trade facilitator, whose impact should be felt by shippers in both coastal and hinterland axis under the jurisdiction of the port.
Inland Dry Ports become necessary when there is lack of sufficient storage space in seaports; a situation that if not promptly addressed can cause port customers to switch to competing ports. The emergence of inland container depots can be considered as an approach to develop efficient facilities and services for inland distribution of cargo in an attempt to bring the seaport services to the hinterland.

The presence of IDPs where certain services are provided is of paramount importance in current practices in maritime logistics. Such services include consolidation of goods, customs services, information processing activities, short-term storage and value-added manufacturing services for the containerized goods take place prior to shipment to the next destinations (Crainic et al., 2015 cited in Olah et al., 2018).

As sea freight flows increase, it generates an equivalent corresponding growth in inland freight flows. On the other hand, the presence of IDPs in the hinterland would spur activities in the inland locations, which would invariably boost the ability of intermodal transport systems to handle the increase in international trade (Olah et al., 2018). This implies the generation of opportunities across sectors of the economy.
Economic activities generated in the hinterland are facilitated by IDPs and the outcome of their activities are subsequently conveyed to the ports. This is because IDPs are developed to serve as extension of seaport operations in the hinterland and they support the overall operations of intermodal transport system (Bask et al., 2014 cited in Olah et al., 2018, p 271).

The development of IDPs, which is an important component of intermodal transport, could play a major role in promoting intermodal transport (Hanaoka & Regmi, 2011 cited in Olah et al., 2018). In Europe, the increase in containerized traffic has resulted in the development of inland container terminals in new locations in the hinterland of seaports (Korovyakovsky & Panova, 2011 cited in Olah et al., 2018).
In order to emphasize the significance of IDPs, Wang et al., (2016) cited in Olah et al., (2018) have noted that the development of IDPs reduces customs costs, improves rail-sea intermodal capacity, and minimizes transportation time for hinterland shippers.

Regional Approach to Setting Standard and Principles for the Development and Operation of Dry Port

In order to promote and develop inland dry ports (IDPs) of international importance, having recognized them (IDPs) as veritable avenues to establish an international integrated intermodal transport and logistics system within Asia and between Asia and its neighbouring regions, the Intergovernmental Agreement on Dry Ports was opened for signature at Bangkok on November 7 and 8, 2013 and entered into force on April 23, 2016. Prior to this, the Ministerial Conference on Transport, which held in the Republic of Korea in November 2006 had resolved to accord priority to the promotion of intermodal interfaces.
Intermodal interfaces such as inland dry ports were to serve as efficient cross-over points where freight could switch modes without delays or damage. Having recognized the essence of such intermodal facilities, the 66th Commission session mandated the Economic and Social Commission for Asia and the Pacific (ESCAP) to fashion a way to develop an Intergovernmental Agreement on Dry Ports. Hence, following the negotiation process and the development of the draft Agreement, the final version was adopted by the 69th Commission Session on May 1, 2013, but came into force on April 23, 2016 (ESCAP, n.d.). The Agreement offers a regional legal basis to push the development of intermodal facilities, including dry ports, to the top of the region's transport agenda.
As of February 1, 2020, 14 ESCAP member States were Parties to the Agreement and covers over 245 dry ports in Asia (ESCAP, 2013).
According to ESCAP (2013), "a dry port provides services for the handling and temporary storage of containers, general and/or bulk cargoes that enters or leaves the dry port by any mode of transport such as road, railways, inland waterways or airports". Meaning a dry port is an inland intermodal terminal connected by road or rail to a seaport and it operates as a centre for the trans-shipment of cargo to inland destinations.
The Intergovernmental Agreement on Dry Ports spearheaded by the Economic and Social Commission for Asia and the Pacific offers a uniform definition of a dry port that measures up to international standard and importance. The Agreement further identifies the network of current and potential dry ports of importance for international transport operations and provides guiding principles for their development and operation (ESCAP, 2013).

Perhaps one of the reasons shipping companies are yet to buy into the IDPs in Nigeria, as they fail to issue through bill of lading both for import and export (Hellenic Shipping, 2020), is because there is no regional body like the ESCAP to spell out guiding principles for the development and operation of dry ports in the country. The lack of patronage experienced by dry ports in Nigeria has not changed despite the Federal Government's pronouncement of the dry ports as port of origin and destination for sea freight.

The reason IDPs have been accorded international importance by ESCAP, with definite plans to push the development dry ports to the top of the region's transport agenda is because they are considered as vital means to establish an international integrated intermodal transport and logistics system within Asian countries and with its neighbouring regions (ESCAP, 2013).
Nigeria needs such regional body with similar drive to make her IDPs function as intended. For instance, ESCAP is reputed to be implementing capacity-building activities to support countries in establishing and operating dry ports as integral part of a region-wide effort to develop an efficient logistics industry. And as part of its activities aimed at promoting the implementation of the Intergovernmental Agreement on Dry Ports, ESCAP prepared a Regional Framework for the Development, Design, Planning and Operation of Dry Ports of International importance (ESCAP, 2013).
The Regional Framework identifies basic issues affecting the development and operation of IDPs and for each of these fundamental issues, it proposes a related target and offers guidance on ways to attain each target. This is precisely what Nigeria needs to get her IDPs up and running. The promotion of the Regional Framework was upheld by ESCAP Resolution 74/2 adopted in 2018.

The optimism behind proposing that a regional framework be adopted in order to set standards and principles for the development and operation of dry ports in the West and Central African sub region is against the background of the successes of existing sub-regional organizations to which Nigeria belongs. Some of such organizations which Nigeria currently belongs are the Gulf of Guinea Commission (GGC), Fisheries Committee for the West Central Gulf of Guinea (FCWC), West and Central Africa Memorandum of Understanding on Port State Control (Abuja MoU) and Maritime Organization of West and Central Africa (MOWCA). Even though they may have differences stemming from their different colonial experience and language, and hang-ups, they still find common grounds to forge ahead to achieve their purpose.

Therefore, regional approach to setting standard and principles of developing and operating IDPs is what Nigeria should encourage in the West/Central African sub region, in order to derive the maximum benefits of inland freight terminals. By promoting the development of an intermodal regional network of IDPs, a sub-regional framework in West and Central African would strengthen connectivity, enhance the use of current infrastructure and encourage the increase in the level of integration between the different transport modes.
Therefore, the significance of IDPs in facilitating maritime trade and the overall impact on sub-regional economy are sufficient reasons to encourage West/Central African nations to adopt a regional approach developing and operating IDPs as exemplified by the Regional Framework adopted by ESCAP.

The Inland Dry Ports and the Hinterland in Nigeria
Olah et al., (2018) define the port's potential hinterland as the area that can be reached at a cheaper cost or shorter time than from another port. This, according to the Managing Director of AP Moller, Nigeria makes the need for functional and efficient port hinterland connectivity imperative considering the competition by ports for the same hinterland markets. It is noteworthy

that hinterland connections are the veins of the port. It is therefore imperative to develop and maintain the road, rail, inland waterway and pipeline networks in order to accomplish a smooth freight flow, both inbound and outbound (Bernard, 1995).

According to Transport Geography (n.d.), the hinterland is a land area over which a transport terminal, such as a port, sells its services and interacts with its users. It accounts for the regional market share that a terminal has relative to a set of other terminals servicing a region. It regroups all the customers directly bounded to the terminal and the land areas from which it draws and distributes traffic. Depending on its nature, the terminal serves as a place of convergence for the-traffic coming by roads, railways, or by sea/fluvial feeders.

IDPs are instrumental to the size of the regional market share that seaports have relative to the share of other seaports competing for the same hinterland. The effectiveness of seaports in servicing the hinterland market is a function of the impact of the IDP. Yet, the impact of IDPs is waning because rail freight services to the hinterland has stopped and now done mostly by trucks with limited capacity.

An importer interviewed observed that the privatization of seaport operations in Nigeria through concession agreement has resulted in quick ship turnaround and improved service delivery. And that this is with the result that the seaports are able to receive more cargoes than available space can conveniently take, hence the need for the IDPs. In line with this reasoning, a freight forwarder asserted that port privatization (concession of ports) calls for the development and operation of IDPs to complement the services of seaports in the hinterland.

Hence, in order to evacuate cargoes from the seaports to inland destinations, in preparation to receive additional imports, port hinterland connection through inland transport system is necessary. This calls for the revitalization of the rail and inland waterways transport services. The inland waterways transport services are yet to receive commensurate attention that the rail transport is getting from the Federal Government of Nigeria in recent times. Inland waterways transport services are mostly still undeveloped in Nigeria, even though barging services through the River Niger to Onitsha River port would have served the interest of shippers who are based in the South east (Chukwuma, 2014).

The rehabilitation of the roads and the revitalization of the rail transport services along with the introduction of barging services to move land freight between the seaports and the IDPs would position the IDPs to provide the hinterland with complementary services, and this would be a huge relief to the seaports.

In an interview, the Port Manager of Kaduna IDP observed that Nigerian Railway Corporation is yet to meet demand for wagons to operate rail haulage and this runs contrary to the aim of deepening maritime business in the hinterland and to render services to hinterland shippers. And that the Kaduna Inland Dry Port is in need of minimum of 5 locomotives and 100 wagons to carry out effective operations.

Aside from the challenge of port hinterland connection, the Port Manager of the Kaduna IDP identified part of the challenges faced by the inland dry port to also include inability to transport cargoes straight from port of loading (overseas) to the IDP as port of destination. This, according to him, has caused a setback for hinterland shippers in Northern Nigeria and eroded the advantages in terms of time factor in taking delivery of consignment at the port of destination.

Oni (2008) and Olah et al. (2018) observe that the dry port becomes ineffectual in its complementary role in the hinterland if the envisaged cargo throughput falls short of expectations or if the transport infrastructure is inadequate. The author emphasized that since dry ports depend on functional multimodal transport, there is need for efficient integration of all the modes of transport that are critical to port hinterland connectivity. Oni (2008) notes that weakness in any part of the link would affect the effectiveness of the entire transport chain. However, literature is

silent on the need for the IDPs to establish Domestic Export Warehouses which would assist exporters to conduct their pre-export operations within the facility as a one-stop entity. This would eliminate the logistical constraints associated with non-oil exports in the hinterland.

Reasons for Establishing Inland Dry Ports in Nigeria

According to Shippers' Council (2021), seven locations were approved by the Federal Executive Council in Nigeria for the execution of IDPs in the country, and they are:

1. IsialaNgwa, Aba
2. Erunmu, Ibadan
3. Heipang, Jos
4. Zawachiki, Kano
5. Zamfarawa, Funtua
6. Jauri, Maiduguri
7. ICNL, Kaduna

It was as a result of large volumes of imported cargoes inundating Lagos ports that led to the establishment of the seven IDPs. Most of these proposed IDPs are still on the drawing board, while the Federal Government is still scouting for private investors to move in with their resources for a take-off, based on Design, Build, Finance, Operate, Maintain and Transfer model of the Public-Private Partnership arrangement (Shippers' Council, 2020).

Out of the seven proposed and approved IDPs in Nigeria, only the Kaduna IDP has been commissioned (on January 4, 2018), and functional, but the supply of imported cargoes from seaports has been in trickles due to non-linkage of rail transport between the former and the latter. In the view of Adejumo (2020), other factors that accounted for the introduction of IDPs in Nigeria were:

- Ship delay and prolonged ship turnaround time,
- Delay in cargo discharge and delivery operations at Lagos ports,
- Safety and security challenges imposed on seaports,
- Increasing cost in port operations in Nigeria,
- Decline in expected revenue at the seaports, and
- Cargo diversion to neighboring countries.

Furthermore, according to Adejumo (2020), due to seaports' location in the southern part of the country, which is rather far from the operational base of shippers in the hinterland, clearing goods was extremely difficult. This forms part of the basis for establishing the IDPs in Nigeria, and by so doing, the following objectives were targeted:

- Creation of employment opportunities and other related socio-economic services in the ICD location.
- The ICD could also be used as a strategy for regional development and population redistribution.
- Redevelopment of the road and rail transport systems in the country.
- Boosting of export activities.

The Effect of Privatization on Port Operations and the Need for IDPs

The port concession exercise in Nigeria was as a result of the inefficiencies of port and shipping logistics in Nigeria, which handles 70% of cargo traffic in the West and Central African sub region (Eto, 2019). The concession of the ports was aimed at the following:

- Increase efficiency of port operations
- Decrease cost of port services
- Increase the competitiveness of Nigerian ports
- Make Nigerian ports the hub of international freight and trade in the West and Central African sub region.

The impact of port concession as per efficiency of port operations (average berth occupancy and vessels turnaround time) in Nigerian ports notwithstanding, the place of IDPs is still indisputable as complementary entities to seaports. Ordinarily, the partial privatization (concession) of the ports should have necessitated the revival of the IDPs and the establishment of new ones, owing to increase in cargo throughput.

Admittedly, the concession of ports in Nigeria has had some measure of positive impact on operations in terms of berth occupancy and vessels turnaround time. According to Omoke et al. (2015), at a 0.05 level of significance, the berth occupancy and average turnaround time of vessels calling at Nigerian ports improved from 51.35% to 72.47% and 8.1 days to 4.83 days respectively.

These improvements led to increase in cargo throughput which could not be evacuated easily because of the following factors identified by Eto (2021):

- Containers occupying the entire port terminal space in the absence of holding bays for empty containers and lack of truck parking bay for the over 3000 trailer/tankers that ply the port access roads daily;
- Non-linkage of the ports to rail and waterways to speed up cargo evacuation from the ports;
- Non-implementation of inland container depots to receive cargoes that are hinterland-bound, which contribute to cargo dwell time;
- Over reliance on the port access roads to transport cargoes in and out of the port;
- General poor port hinterland connectivity, which has not encouraged use of inland waterways and rail transport to receive outbound into the port and evacuate outbound cargoes out of same.
- Increase in cargo traffic has highlighted the space capacity shortage at Lagos ports, and since there is a limit to how many new terminals and other facilities can be added to assuage the problem, the need for IDPs becomes compelling.

It is in light of the foregoing, that it has become imperative to call for the revitalization of the rail line and rehabilitation of the roads connecting the seaports to the hinterland in order to keep the IDPs busy with the supply of outbound cargoes from the hinterland and inbound cargoes from the seaports.

Challenges and Prospects of IDPs Serving the Hinterland in Nigeria

In Nigeria, rail transport for land freight destined for the IDPs is lacking. Rail cargo transport remains in abeyance while road transport dominates and contributes to the slow evacuation of cargoes from the seaports. This contributes to eroding the efficiency of service delivery occasioned by port privatization and results in the low patronage of IDPs in Nigeria.

In an interview, members of the Nigerian Shippers Association observed the following to constitutes some of the challenges facing the IDPs in Nigeria:

1. The political will to implement and operate inland dry ports in Nigeria is lacking judging from the poor/dysfunctional inland transport system.
2. The stoppage of rail freight transport services is affecting the volume of cargo that the IDP receive.
3. The Federal Government is not doing enough to encourage private partnership in inland dry port development even though there is growing presence of private initiative in ports in other countries.
4. Shipping companies are yet to fully recognize the need to issue through bill of lading, both for import and export coming to and going from the IDPs as ports of destination and origin respectively.

5. The challenges facing seaports have bandwagon effects on the inland dry ports in that whenever the former has glitches with timely evacuation of sea freight, the latter experiences idle time.
6. There are no functional scanners at the Kaduna and Kano Inland dry ports.
7. In most cases, the trucks moving containers from the seaports to the inland dry ports are not road worthy, and as such they break down frequently on the highway thereby causing delay in delivery of consignments.
8. There is inadequate lighting at the Inland dry ports, and this encourages acts of criminality.

The resultant low economic activities at the IDPs, arising from the poor transport connection between the seaports and the hinterland, leads to "high shipping costs, which reduces the rate of growth of both manufactured exports and GDP per capita" (Clark et al, 2001). Hence in Nigeria, the prohibitive costs of transporting containerized cargoes by road transport to the IDPs contributes to depriving the IDPs of sufficient cargo throughput to justify their existence as port of origin and port of final destination for export and import respectively (Hellenic Shipping, 2020).

While the Federal Government of Nigeria is still waiting for the private sector to respond by indicating interest to participate in the dry port business, only the IDP in Kaduna has a substantive concessionaire, which is known as the Inland Containers Nigeria Limited. Following the commissioning ceremony of the Kaduna Inland Dry Port January 2018, the facility was given the full status as a port of origin and final destination for export and import respectively (Adejumo, 2020). However, activities at the Kaduna IDP are at a low ebb due to lack of inter modal transport system linking it to the seaports in Lagos, Port Harcourt, Warri, Onne or Calabar.

The Port Manager of Kaduna Inland Dry Port noted that the irregular movement of rail freight from the seaports to the IDP has severely hampered its economic activities and viability, thereby resulting in losses in excess of 100,000 TEUs that constitute Republic of Niger's transit cargoes to Cotonou port. This huge revenue loss can only be reversed when the KIDP is linked with functional rail transport.

The representative of Nigerian Shippers' Council in Kaduna IDP observed that as a result of the challenges besetting the IDPs in Nigeria, they have not been able to respond meaningfully to:

- the growing container volumes,
- lower port congestion,
- enhance port productivity, and neither have they
- contributed to increasing seaports' terminal capacity and competitiveness against other ports (such as Cotonou port, in Benin Republic) seeking same hinterland markets in Nigeria.

Nigerian IDPs have not been adequately linked to the seaport through efficient high capacity transportation system to enable customers pick up their consignments as if directly from the seaport. Consequently, the deplorable state of maritime-land access infrastructure in Nigeria led to the decline of agro-allied commodities export from 7000 tonnes in the 1960s to a measly 100 tonnes in the 2000s (Eto, 2021).

Prospects

Nigeria boasts of handling about 70% of all seaborne trade in the West and Central African sub region due to her huge population and economy (Bello,2017), yet at continental stage, only three countries (namely Egypt, Morocco and South Africa) handle 51% of goods transported by sea on the African continent (Kinyua et al., 2021). In the view of Nigerian Customs Service, if the country would be an active participant with economic benefits to show for it, in the African Continental Free Trade Area (AfCFTA) regime, Nigeria needs to improve on the present port capacity shortage. This would make the implementation of IDPs imperative.

According to the Shippers' Association of Nigeria, the successful execution of the IDPs would have meant bringing shipping services to the door steps of shippers who are based in the hinterland. It would have meant huge market opportunity presented by land locked countries like Chad, Mali and Niger. Even if Republic of Benin will eventually establish an IDP close to Niger Republic, for now, Nigeria has the advantage of IDP in Kaduna and Kano awaiting effective connection to the seaports in order to tap the market opportunities provided by neighbouring landlocked countries.

Landlocked countries depend on neighbouring maritime nations to gain access to overseas markets, just as Republic of Niger relies on ports of Cotonou (Benin Republic), Lome (Togo) and Port Harcourt as channels to overseas markets (Mohammed, 2019).

Other prospects associated with IDPs are employment creation, encouraging the development of other businesses related to port activities and enhancing the localization of industries in the hinterland.

According to the Port Manager of Kaduna Inland Dry Port, if the Kano and Kaduna Inland Dry Ports were functional as expected, it would have been more convenient and cheaper in the immediate term for neighbouring landlocked countries like Niger and Chad Republics to transit their imports through the two dry ports. For instance, Hellenic Shipping (2020) reckons that it would have been cheaper for Niger to transit her cargoes from the Kaduna Inland Dry Port (about 250 kilometers to Maradi in Niger) or Kano IDP (about 150 kilometers to Maradi); than from the Cotonou seaport from which Niger currently receives her import, which is over 1,500 kilometers to Maradi.

Conclusion

Growing global trade requires ports to enlarge their storage areas, within and outside the ports immediate premises in order to cope with increased cargo volume (Eto, 2019). One way of doing so is to establish and implement IDPS. This would serve multiple purposes such as (1) sparing hinterland based shippers the agony of traveling long distances to clear goods at the seaport (2) reducing port congestion (3) enhancing seaport competitiveness (4) enhancing port productivity (5) eliminate the tendency for cargo diversion to neighboring countries. This would require sincere commitment of Government to providing friendly business environment for Public Private Partnership in order to offer functional and efficient port hinterland connectivity that gives premium to intermodal transport system. This would facilitate speedy evacuation of cargo to the IDPs and encourage export activities, which would in turn boost economic activities of the hinterland.

A regional framework like the Economic and Social Commission for Asia and the Pacific (ESCAP) to set standard and principles for the development and operation of dry port is needed in the West and Central Africa to guide the introduction and operation of IDPs in Nigeria. The proposed regional body, which is expected to borrow a leaf from existing organizations like Maritime Organization of West and Central Africa (MOWCA) and Gulf of Guinea Commission, would spell out guiding principles for the development and operation of dry ports that would measure up to international standard and importance. This would ginger Nigeria to get the implementation of IDPs right.

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