

River Port and Deep-Sea Port Developments in Nigeria: Implications for West African Gateways and Hinterland Markets

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How to cite this paper: Chilaka, E. (2022). River Port and Deep-Sea Port Developments in Nigeria: Implications for West African Gateways and Hinterland Markets. *American Journal of Industrial and Business Management*, 12, 531-561.
<https://doi.org/10.4236/ajibm.2022.124029>

Received: March 1, 2022

Accepted: April 16, 2022

Published: April 19, 2022

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Abstract

The steady development of river and deep-sea ports in Nigeria are examined, with a special focus on the changing trends of inter-port competition in-country and among West African rivals. In 2018, whereas Togo overtook Nigeria in annual container throughput volume and Onne Port, from 2015, recorded higher throughput volume in-country, than the two previously dominant Lagos ports, other regional rivals such as Cotonou, Tema, Abidjan and San Pedro recorded higher year-on-year throughput increases than Nigeria, posing the logical question of what the future holds in a vibrant liberalized market apparently set for redefinition through Chinese intervention. The study used archival, primary and secondary sources and qualitative analytical methodology. Interviews of Nigerian Port Authority (NPA) staff, port operators and cargo logistics agents were conducted and latest throughput data of Nigerian ports were verified during the research. The findings include the high number of Nigerian deep-sea port proposals which are hardly supported by the current national (and transshipment) traffic volumes, and even less so by the weak multimodal transport infrastructure, although the new China-backed Lekki Deep-sea Port might redeem lost grounds. The study recommends ways NPA can use the new presidential orders to redirect unfavourable traffic flow patterns in the region.

Keywords

Deep-Sea Ports, Nigerian Ports, Inter-Port Competition, Hinterland Markets, West African Shipping

1. Introduction

The status of Lagos as the colonial and postcolonial seat of power and a major

maritime gateway since the 1850s positioned her port system for steady infrastructure developments until capacity overstretch and competition from rivals across the border began to challenge the dominance in the 1970s (World Bank Report No. ACS17308; Peil 1991; Smith, 1978: 18ff). As of the late 1890s, Lagos was daubed “the Liverpool of West Africa” by the local press for the vibrancy of its maritime traffic (Echeruo, 1977: p. 26). Thus, the focus on river ports and deep-sea ports developments in Nigeria rightfully begins in Lagos where even in ancient times, her surf ports in places such as the Bar Beach, the Lekki beach, and the banks of the Ogun River and the Badagry Creek, were comparatively busier and larger than other West African locations such as Dahomey or Accra (Smith, 1978: 34ff; Dioka, 2001: p. 41; Adefuye, 1987: p. 40). Most of the surf ports later diffused into the solid colonial port architecture of the early 20th century based on two major termini at Lagos and Port Harcourt (Ogundana, 1970: p. 172). Although even the latter have given rise to significant spatial and technological improvements over the years, the present modern river ports dotting the Nigerian coastline are still trailing international standards of depth, which partly explains the spate of deep-sea and deep-water port proposals in the new millennium.

No doubt, the existing literature on the historical underpinnings of Nigeria’s port and maritime industry is substantial, including the pace-setting works by Dike (1959), Hoyle and Hilling (1970), White (1970), Ogundana (1970), Audige (1995), Olukoju (1996), Debrie (2012), Streatfeild (2018), Badejo and Solaja (2017), and Chilaka (2019). However, certain aspects of the evolution of her ports system, especially the trend of deep-sea port developments since the new millennium, are yet to be properly situated in the analysis, including the latter-day causative factors of port congestion, overstretched ageing infrastructure, and the aftermaths of the recent port reform and concession programmes. This paper fills some of that gap. The study traced essential historical antecedents of the Nigerian port system but dwelt largely on in-country inter-port competition and the interplay of international market forces and trade liberalization which shifted the turf into regional competition amongst the leading West African ports, current market shares and the race to hub port status, and the disruptive role that could be introduced if the new developments at the Lagos and Lekki free trade zones (such as the Lekki deep-sea port and the ambitious Dangote Petroleum Refinery) fully come on stream with their advertised features. The paper is divided into five main sections, namely: the history and colonial politics of port development in Nigeria, the post-colonial patterns of new ports developments, the Nigerian port reforms and concession programme, the market liberalization outcomes in West Africa, the competition for regional hub status and hinterland markets, and the conclusion.

2. History and Colonial Politics of Ports Development in Nigeria

From 1485 when the Portuguese arrived at the Bight of Benin, maritime trade

along the West African coast was conducted along surf ports as experienced by the pioneer carriers, Woermann Linie and Elder Dempster (Herman & Federau, 1974; Davies, 1973). The sandy beaches of the Atlantic Ocean and the banks of inland rivers provided the landing bases for the midstream loading and offloading of exports and imports—a practice that was not peculiar to Africa. Even the famous Port of Hamburg in the 1850s, for other reasons, used midstream discharge to load and unload ships (Herman & Federau, 1974: p. 10). In West Africa at this time, however, it was a familiar sight for skilled fishermen or the famous Kru-Boys from Liberia and Ivory Coast, who were professional surf port stevedores and deckhands, to row out in flat-bottomed canoes to meet sailing ships anchored in open bays to unload the mail, such as “bales of fabrics, crates of arms and ammunition as well as an assortment of metalware, over to the coast [beaches]”, and on the return trip haul “barrels of whisked palm oil...elephant tusks...” or other raw materials such as palm kernel, rubber, or timber and mail for loading (Herman & Federau 1974: pp. 36-39). A more comprehensive list of the exports of the era included gold, ivory, pepper, civet, palm oil, palm mats, ambergris, wax, hides, skins, cotton, rive, wooden bowls and millet while the imports were cloth, brass bracelets, corals, wine, shells and beads, which all conformed to the rudimentary stevedore’s technology at hand (Davies, 1973: pp. 19-20).

In the absence of commercial aviation, intercontinental travel was wholly by sea and passengers who arrived at the West African surf ports were equally afforded the basic disembarkation aid, “mammy chairs”, which dropped them in the canoes for the bumpy canoe transfer to the beaches while larger cargoes were received by lashing several canoes together. The indispensability of this mode of transfer gave rise to the formation of surf boat services and the erection of storehouses or hulks by the major liners which called at African trading stations, hence increasing the scope of the initial cross-cultural contacts between Europeans and West Africans. After centuries of these commercial activities which spanned the infamous slave trade era, however, the government of the Lagos Colony, in 1907, commissioned the dredging project which cut through the obstructing sand shoal to enable laden ships’ access into the Lagos harbour. A depth of six metres was achieved and the East and West moles constructed to protect the channel and water basin for stable port operations. Thereafter, ocean-going ships could enter the Customs Wharf at the Lagos Marina, the first being the mail steamer *S/S Akoko*, which berthed on 1 February 1914 (NPA, 2000: p. 30). Henceforth, it required constant deepening campaigns by the Marines Department, using a flotilla of dredgers including *The Lady Clifford*, *Child*, *Queen Mary*, *Sandgrouse*, and *Romulus* to keep the port open and the sand/spoils were dumped at the nearby Iddo Island or the sea (Colonial Reports Annual No. 1245 Nigeria, 1924: p. 24).

Nevertheless, further development of the port and railway industries during the colonial period followed the exigencies of sociopolitical realities and the

projects accounted for most of the loans incurred by the government (*Colonial Reports Annual No. 878, 1914: p. 4, 30*). With the port operation made an inter-agency affair, cargo handling was consigned to the Nigerian Railway Department while the Marines Department maintained the channel and managed vessel berthing arrangements, and the Port Engineer at the Public Works Department was in charge of the quays (*Dennis, 1983*). It is likely that the lack of an elaborate focus by a designated agency rendered the port industry an orphan which was not availed long-term planning. However, the Marines Department which appeared to command the preponderant oversight of the maritime activities was headed by

the Director of Marine, [who] was responsible for all maritime matters in the Colony and Protectorate of Nigeria such as harbours, inland waterways, navigation aids including lighthouses, a buoyage system (moulded on that of Trinity House), hydrographical surveys, harbour pilotage, the satisfactory accommodation of shipping and a regular supply of coal for use by the Nigerian Railway, the electricity power station at Ijora (Lagos) and its own dockyard with a 3,000 ton dump sufficient to supply its fleet of sea-going vessels, mobile and moored dredgers (bucket & suction), ocean & reclamation tugs and inland waters steam launches (*Dennis, 1983*).

This administrative setup lasted till 1955 when the Ports Act was passed to establish the Nigerian Ports Authority (NPA) as the statutory agency responsible for all port operations and activities in the country. With the decision of the colonial government to develop the port at Apapa in 1913, the first construction of four deep-water berths, completed in 1921 which achieved 548 metres of hard quays was followed in 1948 by additional 762 metres of berthing space which was constructed in a new land reclamation (41 hectares) devoted to transit sheds, warehouses and marshalling yards for railway activities (*NPA, 2000: pp. 30-33*). Sequel to these developments, various factors dovetailed to elevate the status of Lagos and, by implication, its ports' industry, in the national and international scheme of things.

First, the population of the city was boosted by the amalgamation of the Southern and Northern Protectorates one year later, in 1914. Census data showed a rising trend for the population of Lagos from 40,000 in the 1880s to 73,800 in 1911 to 126,108 by 1931 (*Aworawo, 2004: p. 277*). Second, despite the colonial officials' personal liking for the rolling savannah landscape of the Northern Protectorate over the malaria-infested forest regions and mangrove swamps of the South or the aquatic meshes of Lagos, the maritime endowments of the latter were the ultimate deciders of economic significance as the colonial rulers were not in Africa for a picnic. Lagos offered the serviceable harbours for receiving imports from the metropolis and the evacuation of assorted raw materials overseas. In addition to the regular exports listed above, other products such as rubber, coffee, pepper, indigo, cotton, groundnuts, and cocoa were added to the ship manifests leaving Nigeria for the mills of the Industrial Revolution churning

in gateways such as Liverpool, Nantes, Rotterdam and other European industrial centres. In Nigeria, the Lagos port was the major gateway for this trade and commanded a hinterland which stretched as far as Cameroon, Niger, Tchad, and Mali. Thus, its throughput maintained a steady rise through the years. As of 1914, the Lagos port throughput flowed from the lagoon trade and the rail-borne trade, with the former accounting for not less than 150,000 tons of goods for import and exports (Olukoju, 1992: p. 167). Generally, maritime trade was on the increase. In 1923, 800,000 tons of cargo was landed at Lagos port, increasing to 1,960,000 tons [695 ships] in 1938 and 5,569,000 tons [2233 ships] in 1962 (Colonial Reports Annual No. 1197, 1923: p. 28; Akintola-Arikawe, 1987: p. 108).

Nevertheless, the Lagos ports did not attain national predominance easily. Even though sand shoals had hindered steamers drawing more than 9 ft from the Lagos harbour until the completion of the remedial dredging works in 1914, and Forcados, the transshipment port for Lagos-bound cargoes, competed for dominance with Lagos, the latter had other advantages (Burns, 1929: p. 233). For example, Lugard noted during the 1914 amalgamation's administrative changes that

[I]n view of the expansion of the Administration at Lagos, the capital of the Colony and the Southern Provinces...and the growing necessity for some practical scheme of segregation for Europeans...it was also decided to remove the headquarters of the Southern Provinces Administration to a site near Yaba, six miles from...the swamps which surround Lagos Island (Colonial Reports Annual No. 878 Nigeria, 1914: p. 37).

This secure accommodation for European and other metropolitan communities in Lagos boosted international trade and her port industry, a status she enjoyed for long in contradistinction to faraway Forcados or other locations in the Niger Delta or the adjoining Western Region. However, the competition from the Niger Delta ports happened at various junctures in the sociopolitical and economic development of Nigeria. For example, during the era of consular rule, when maritime trade in the Bight of Benin was concentrated at the Lagos port zone alone, the trade in the Bight of Biafra, a few hundred miles to the east, was different as it took place simultaneously in five separate ports, namely, Bonny, Old Calabar, New Calabar, Brass and the Cameroons (Ogundana, 1970: p. 167). However, the throughput volume of the Lagos port, based chiefly on the trade flow from its hinterland in Lagos, the Yoruba states and northern Nigeria, surpassed the Niger Delta ports. The record for 1908 showed that the Lagos port's throughput volume was comparatively higher in value (£3,697,000) as against Forcados' £1,180,000 and in customs receipts (£339,442) as against Forcados' £147,429 (Olukoju, 1996: pp. 30-47).

Apparently, the large market and rich agricultural productivity of the south west region and its higher demand of imported products accounted for the higher Lagos port traffic—a market which had been developing as a regional hub since the 1851 Treaty of Cession. Furthermore, the trade of the Northern Region became tied willy-nilly to the Lagos metropolis and its port system. It is notable

that the Northern Region had developed certain affinities with Lagos, including as a ready market for livestock and minerals (natron), and a base for large contingents of Hausa recruits of the West African Frontier Force (WAFF) (Ukpabi, 1966; Colonial Reports—Annual No. 409, 1902).

Nevertheless, the politics of colonial ports development was affected at the juncture when the railway line was introduced into the multimodal transport network of Nigeria. This marked another milestone in the supremacy contest of the Lagos port system vis-a-vis other gateways. Ordinarily, the Kano-Tripoli trade route was a rival to the Lagos gateway until the construction of the Lagos-Kano railway line made northern Nigeria and its surroundings a hinterland to Lagos ports. The politics of developing the colonial railways was underscored by many factors. One, the railway development projects designed by the colonial officials in the Northern and the Southern Protectorates, although adjudged critical for efficient transportation, diverged markedly in their technical and geographical details. The Southern Protectorate's rail network was designed to go from Lagos to Jebba at 3'6" gauge while the Northern line was a 2'6" gauge whose track was designed to be laid from Kano through Zungeru and Baro to the Lower Niger port of Forcados (HC Deb 27 May 1909 vol 5 cc1368-9).

Two, the deep-seated snub of the Southern Protectorate and its elites by many colonial officials stationed in the Northern Protectorate and the equally strong resentment by the Northern political leaders of their region's partial dependence on Southern Nigeria's finances for defraying administrative expenses of the North deeply divided the national government (Udochu, 1987; Longmore, 2020; Flint, 1978). Three, Northern leaders were riled by the fact that the South's financial prosperity was derived mainly from customs duties on alcoholic beverages forbidden by Islam. One outcome of this ill-feeling became the northern proposal for the separate Baro-Kano railway line with a terminus at Forcados which should bypass the Lagos port system (Oshin, 2004: p. 107). In the ensuing supremacy contest, the Northern leaders were backed by the Selbourne Committee and Lord Lugard, the Governor-General and chief architect of the rail network which he had planned to go "from Kano to Baro on the Niger which would enable him to ship produce without passing through Southern Nigerian territory since under the terms of the Berlin Convention of 1885 the Niger was an international waterway" (Crowder, 1986).

In opposition to all these, however, the Governor of the Lagos Colony, William Macgregor, argued that the ongoing "Lagos Railway" should proceed from Ilorin "to the heart of the Hausa country, probably to Kano, perhaps someday to the Nile" (Olukoju, 1996: p. 38). On their part, the railway engineers, Shelford and Son, sided with Macgregor, for, it was a critical juncture when the track they had laid from Lagos to Ibadan faced funding decisions that could be hampered by the face-off or any emergent adverse policies. At this juncture, it was obvious that despite the overarching British plans for one Nigeria, the North was often hesitant and undecided; in fact, the Premier of Northern Nigeria, Sir Ahmadu

Bello, continued to complain about the “mistake of 1914” in reference to Northern reservations about the forced Nigerian nationhood (Dike, 1956: p. 36).

Thus, the British Colonial Office, was cautious to keep the North within Nigeria and ready to kowtow to northern interests. If the region insisted on an independent rail line, the Lagos railway could be hampered commercially, especially when it was obvious that the Forcados port possessed better navigational attributes and a deeper natural entrance than the Lagos port with its sand shoal problem which would require constant expensive dredging campaigns to keep it open. Eventually, however, the situation was politically resolved and harmonized. In 1907, the new High Commissioner of Northern Nigeria, Percy Girouard, propounded a more holistic railway concept made up of three prongs: one each in the south west (Lagos), southeast (based on Calabar River) and the north (based on the Niger-Benue Rivers). Thus, Lugard later reported to the Secretary of State that “[T]he railways of north and south were amalgamated during the year...and increased their earnings by nearly 50 per cent” (Colonial Reports—Annual No. 825 Southern Nigeria, 1913: p. 4). All said, by the early 1920s, the colonial government had

...embarked on a loan programme costing over £12,500,000 for the completion of the Nigerian Eastern Railway (thus giving two outlets by rail from the interior of the country), the improvement of the Lagos—Kano Railway and the provision of adequate terminal facilities at Lagos and Port Harcourt, and new railway workshops at Ebute Metta and Enugu (HL Deb 10 May 1922 vol 50 cc 345-346)

The Kano-Zaria-Zungeru-Baro rail line was completed in 1912, although its full inter-modal usage was hampered by the low draught and rocky outcrops of the River Niger between Baro and Lokoja which, despite vigorous dredging campaigns, proved unreliable for all-season transportation (Geary, 2013). With a depth of less than 4 feet achieved by dredging, the colonial authorities gave up the struggle in 1913, with the conclusion that the Lokoja-Baro section of the Niger was impossible to maintain as a navigable channel for large stern-wheelers throughout the dry season – the wreckage of the *Bassa* within the vicinity served as a warning against future voyages (Olukoju, 1996: p. 39). These omens worked in favour of the Lagos port and railway system and boosted traffic there. In 1914, for example, huge tons of kolanuts was imported from the Gold Coast and Sierra Leone through Lagos destined for Kano while exports of hides and skins, cotton lint, tin and groundnuts from the northern region were added to the traditional palm oil and palm kernel cargoes which left the Lagos ports for overseas markets in the same period (see Table 1 and Table 2 below on Principal Imports and Exports for 1914). Even passenger transportation between Kano and Tripoli began to be programmed on the new rail line as Kano-bound Arab traders took ship to Lagos and the railway to their destination.

Thus, despite its challenges during the colonial era, the erstwhile difficulties faced by traders during the hinterland road closures by Egba middlemen against

Table 1. Nigeria principal imports 1913, 1914 compared.

	1913 (£)	1914 (£)
Fish	134,998	109,625
Grain and Floor	125,192	131,527
Kola Nuts	117,324	155,144
Spirits	452,939	347,796
Tobacco, Cigars, &c	230,962	192,473
Cutlery, Hardware, &c	154,857	153,211
Cotton piece goods	1,529,361	1,392,654

Source: Colonial Reports—Annual No. 878 Nigeria Report for 1914, p. 7.

Table 2. Nigeria principal exports 1913, 1914 compared

	1913 (£)	1914 (£)
Cocoa	157,480	171,751
Cotton Lint	159,223	50,791
Hides and Skins	197,214	505,785
Groundnuts	174,716	179,219
Tin	568,428	706,988
Tin Ore (tons)	(4142)	(6175)
Timber	106,050	86,522
Palm Oil	1,854,384	1,571,691

Source: Colonial Reports—Annual No. 878 Nigeria Report for 1914, p.7.

the direct flow of exports to Lagos or the prohibitive caravan tolls by the Royal Niger Company on southbound traffic and the Kano-Tripoli trade route, the Lagos port system eventually grew to become the preferred port in the emerging Nigerian economy. Historically, *Ogundana (1970: pp. 172-173)* traced the rise and fall of major ports in Nigeria beginning from 1500, including Gwata, Bonny, Old Warri, Old Calabar, New Calabar, Bonny, Brass, Lagos, Akassa, Sapele, Degema, Port Harcourt and Okrika and argued that some of these and a few others such as Koko and Opobo were established during the British imperial scramble in Africa to facilitate “political and economic control of the interior, or as bases for transport developments...” Ultimately, however, the volumes of the ports’ individual traffics is more significant in the measure of their economic importance or hinterland coverage—a factor constantly gauged by the availability or otherwise of railway interconnection. Thus, although, fourteen ports were active in Nigeria as at 1912, with Lagos, Burutu and Calabar handling 41 per cent, 15 per cent and 11 per cent of the national throughput, respectively, by 1950 active ports had reduced to seven with Lagos still handling the highest volume, 63 per cent, while Burutu and Calabar had been displaced by Port Harcourt and Sapele

with 17 per cent and 8.5 per cent, respectively (Ogundana, 1970: p. 173). Lagos' share of the import traffic also grew from 42 percent in 1912 to 77 per cent in 1950 whereas the export trade, dominated by bulk wet cargoes (oil and gas), passed through the specialised terminals such as Bonny, where 12.3 million tons out of a total 19.3 millions was shipped between 1965 and 1966 (Ogundana, 1970: p. 175).

It is essential to note that whereas colonial maritime trade was mostly country-bound as colonial rulers jealously guarded their African possessions and concomitant spheres of influence, decolonization in the 1960s and 1970s diversified the ports' fore-lands and made the jostle for hinterland markets more competitive especially along the Dakar-Luanda range which served the dominant global carriers such as Elder Dempster, Woermann Line, Grimaldi, Maersk Line, Mitsui O. S. K. Line and American President Line (APL) at the time. Thus, we shall attempt in the next section, a closer look at the prospective hinterlands of Nigeria's port systems and their eventual performance relative to the outreach of regional rivals at Tema, Abidjan, Lome and Cotonou, both to analyse the trend of their throughput volumes and forecast the likely fate of emerging deep-sea and deep-water port developments.

3. The Post-Colonial Patterns of New Port Developments

The main pattern of post-colonial port development in Nigeria was mostly reactive to historical operational issues. For example, British merchants in the 1920s frequently complained about the "...serious delays in transportation of produce, etc., due to shortage of rolling stock and locomotives and to congestion at the ports caused by inadequate wharfage and warehouse accommodation" (HL Deb 10 May 1922 vol 50 cc345). This was corroborated in 1936 when the Nigerian Railways Director of Works criticized "the deplorable lack of foresight in laying out the wharves and sheds at Apapa and Port Harcourt without thought of road access" (Chilaka, 2019: p. 122). Thus, the post-colonial pattern of port development and expansion of facilities and infrastructure was driven by the quest to ameliorate deficiencies such as increasing the number and availability of quay aprons, harbor spaces and navigational aids. Hence, port-to-hinterland communication infrastructure and marketing was blindsided due to such poor initial planning, the incremental developments to satisfy short term exigencies, the non-provision of railway connections and the excessive dependence on road transportation. These constraints eventually posed challenges for Nigerian ports' competitiveness for transshipment services to her landlocked neighbours.

In hindsight, the overly use of incrementalism and ad hoc measures to address deficiencies appear to be the culprit for the lack of long-term planning in the development pattern of the Nigerian ports. To the four berths commissioned in Lagos in 1921 an additional six berths (762 metres) were constructed in 1948 with sheds, warehouses and marshalling yards whereas in Port Harcourt, the coaling berth constructed in 1913 to Enugu for coal evacuation was enhanced in

1927 with the addition of four berths (NPA, 2000: pp. 31-33). This summarized the basic ports and rail superstructure bequeathed by the colonial government. During the post-independence First National Development Plan, 1962-1968, additional six berths of 943 metres were added to the Lagos port (called the Second Apapa Wharf Extension) while four berths were added to the Port Harcourt system. The civil war of 1967-1970 created the security alibi under which the privately developed ports in the Niger Delta, namely: Sapele (from African Timber and Plywood), Warri and Burutu (from United African Company (UAC)) and Calabar (from Palm Line Agencies, Elder Dempster and UAC) were taken over by the NPA on behalf of the Federal Military Government at a total cost of N3.35 million paid in compensation (NPA, 2000: p. 32). After the civil war, the 1970-1974 Second National Development Plan contained provisions for reconstructing and rehabilitating war-damaged port infrastructure at Lagos, Port Harcourt, Bonny, Koko and Calabar, valued at a total of N4.1 million. Such *ad hoc* developmental pattern is contrary to the practice in advanced European, North American and Asian economies where port infrastructure developments were typically futuristic and based on existing or emerging trade and cargo streams. According to Marnot (2020), the ports of Europe

were not only points of departure but also the places to which fabulous cargoes returned from other continents and, for precisely this reason, the great ports undoubtedly numbered among the main centres of the accumulation of capital and wealth in early modern Europe. Europe's major ports both supported and symbolised Europe's global power: the Hanseatic ports and those of Northern Italy were overtaken by Seville, Cadiz and Antwerp in the 16th century, followed by Amsterdam in the 17th century, London, Liverpool and Bordeaux in the 18th century and finally the ports of the Northern Range since the last third of the 19th century.

Conversely, the ports run by the NPA under a service port model until the new millennium were bureaucratic complexes fashioned wholly as state-owned enterprises. Thus, the upgrade executed under the Second National Development Plan in 1974, as other developments, were fully financed by the government unlike in advanced economies where the private sector and market forces influenced such developments. Nevertheless, the status of Nigeria's port infrastructure by the mid-1970s when congestion such as the inglorious "cement armada" hit was a total of sixteen general cargo berths in Lagos, six in Port Harcourt, 4 in Warri, 3 in Calabar and 2 in Burutu (Ogundana, 1978: p. 77). With a combined national capacity of 6.5 million tonnes when the Federal Military Government placed the order for 16 million tonnes of Portland cement for barracks construction in 1974, programmed to be delivered through the Lagos port, it was no wonder that the gateway broke down under the strain in 1975 (Chilaka, 2017a). Moreover, the situation was worsened by the backlog of uncleared army imports, relief materials, reconstruction equipment and industrial machinery.

The aftermath of the resultant congestion gave rise to the enhancement of existing ports nationwide and the hurried construction and commissioning of the Tin Can Island Port, the Ikorodu Lighter Terminal and the Kirikiri Lighter Terminals I and II in 1977, and new ports in Warri, Sapele and Calabar by 1982.

Another reason for incremental and ad hoc pattern of development was Nigeria's federal system of government which placed ports administration and control in the Exclusive List of the Constitution where only the Federal Government exercised jurisdiction. Thus, inputs into developments and upgrades could only be driven by powerful pressure groups or influential end-users such as European merchants and operators acting through the Lagos Chamber of Commerce and Industry (Lawal & Okunola, 1989). Private sector initiative was largely restricted until the port reforms of 2001 yielded cargo handling operations to private terminal concessionaires in 2006. Hence, developing the ports beyond the colonial-era framework was beset by bureaucratic, institutional and political problems such as nepotism and favouritism, which made appointments to headship of NPA a political affair heavily tilted towards rent-seeking lackeys and henchmen, contrary to global best practices. Moreover, staff lethargy, corruption, and ineptitude led to heavy outsourcing of equipment handling services from the mid-1990s, culminating in 2003 when payments to NPA contractors cost N49 billion (about \$544m) and its total operating expenses exceeded 95% of its total income (Nigerian Ports Today, 2016: pp. 16-17). Thus, expert managerial expertise was clearly lacking. For example, incompetence was blamed for the errors which led to the "cement armada" crisis when "...on average, \$4100 per day" was paid in demurrage per ship for over 450 cement ships delayed for over 180 days—a scandal in which Nigeria lost nearly \$1 billion, which allegedly triggered the overthrow of General Yakubu Gowon's regime, as affirmed by Lord Denning in a judgment on the "cement armada" court case brought against Nigeria by unpaid shipowners (Cranfield, 2007: p. 115; Ogundana, 1978: p. 79; Trendtex Corp'n, 1977) 3612 W.L.R. 2012. The crisis marked a turning point in Nigeria's port history.

4. The Nigerian Port Reforms and Concession Programme

The historical rot in the Nigerian port industry elicited persistent clamour and a nationwide yearning for change which culminated in the reform programme introduced in 2001. Launched by the Minister of Transport, Ojo Maduekwe, it was regulated by the Bureau of Public Enterprises (BPE), with the World Bank and CPCS Transcom of Canada as transaction advisors. According to a prior World Bank report on the ports:

By the 1990s, the Nigerian ports were demonstrating very low levels of efficiency, which resulted in long turnaround times for ships and increased container dwell time. It often took weeks to unload and reload a ship instead of the 48 hours considered standard in other regions, such as Asia. Moreover, the workforce was overstaffed and unproductive, cargo was sub-

ject to massive levels of theft, and port-related charges were excessive. Perhaps worst of all, the port infrastructure required substantial renovation and rehabilitation, and such investment was going to require substantial external financial support, which the federal government was reluctant to provide given the existing operating inefficiencies (Leigland & Palsson, 2007).

The reform targeted changes in three core areas, namely, operational, institutional and structural. Operational reform transferred cargo handling from the NPA to the concessionaires which emerged through a competitive bidding exercise. In Lagos, this exercise produced eleven private terminal operators, and twenty-nine, nationwide (See **Appendix 1**). This was by far the most orchestrated aspect of the reform programme which also enriched the federal treasury by over \$2.4 billion in lease fees, throughput fees and commencement fees (Oritse, 2021; Agu, 2017). In addition, the concession programme also freed the government from injecting funds into ports operation unlike before and committed the terminal operators to an agenda of port infrastructure improvement and maintenance which should constantly renew its value. Moreover, with the privatization of channel management services, and enhancements in the provision of dredging, pilotage and berthing services, the Lagos ports overcame the former navigational and grounding problems that hitherto frustrated the entrance of big ships and 24-hour channel service delivery at global-best-practices levels.

Secondly, the reform agenda implemented institutional changes. In the new dispensation of NPA as a landlord instead of the erstwhile service port role, the Federal Ministry of Transport retained supervision and policy-making roles while the landlord also became a technical regulator for the industry pending the promulgation of the Ports and Harbours Bill and the National Transport Commission (NTC) Bill. When finalized, the NTC Law would establish a port economic regulator for the port industry. Delays have dogged the legislation but in February 2014, there were indications that the Nigerian Shippers Council (NSC) would transmute into the NTC's port economic regulator (Chilaka, 2017b; *Nigerian Ports Today*, 2016: p. 25). The third prong of the port reform programme was structural and dealt with administrative restructuring whereby the day-to-day schedule of the organization was decentralized, with authority delegated to quasi-autonomous operating units and zones to solve the problem of bureaucracy and achieve shorter lines of decision-making, implement local solutions for local challenges, and attain higher levels of efficiency and accountability. In practice, NPA's administrative structure was zoned into Eastern Ports, with headquarters in Port Harcourt; Western Ports, with headquarters at Apapa, and the Headquarter office at Marina, for overall control and command of all zones and units.

At the conclusion of the reforms, cargo handling, port re-development, stevedoring services and 'terminal' security were conceded to private terminal operators while NPA took charge of maintaining common-user port infrastructures such as internal port roads, port access roads, dredging services, channel manage-

ment, lighting, buoys, aids-to-navigation, and 'global' security. In 2008, a 25-year greenfield concession at Tin Can Island Port under build-operate-and-transfer (BOT) model was won by Grimaldi Lines and its local affiliate, Ports and Terminal Multiservices Ltd (PTML), and developed into a Ro-Ro port at the cost of US\$64m (*Nigerian Ports Today*, 2016: p. 25). Other concessions at the Lagos ports include Eko Support Services Ltd (an offshore services terminal located at Bull Nose in Apapa Port) and the Lagos Deep Offshore Logistics (LADOL) Free Zone (a deep offshore fabrication terminal based at Tarkwa Bay). At the Eastern Ports zone, the reform programme also recorded an impressive outing as concessionaires emerged at Port Harcourt, Onne, Calabar, and Warri (see **Appendix 2**). Subsequent developments have seen deep-sea and deep-water port proposals at Lekki (Lagos), Badagry (Lagos), Ibaka or Ibom (Akwa Ibom State), Olokonla (Ogun State), Bonny (River State), Escravos (Delta State), and Agge (Bayelsa State) being forwarded to the NPA since 2009, with the Lekki Deep-sea Port, adjacent to the ambitious 650,000 barrels-per-day Dangote Refinery, slated to start operation in the fourth quarter of 2022 (*Oritse*, 2022; *Salau*, 2020; *Odjegba*, 2019; *Chilaka*, 2017c). However, the fact that so many deep-sea and deep-water port proposals at so close proximity to one another would be highly nonviable seems to be lost on the promoters of the projects.

Benefits of the Port Concession Programme

Overall, many advantages accrued to Nigeria sequel to the successful port sector reforms. One, local and foreign private-sector operators further established the country as investor-friendly added to the earlier telecoms concessions which revolutionized digital telephone and data services in the country. These showed that with the right legal guarantees for foreign investors' profit repatriation, Nigeria could be perceived as a haven for foreign direct investments unlike during the military era when foreign investors feared the absence of appropriate legal environment and transparent governance protocols. Two, the new joint venture (JV) agreements on dredging and channel management services between NPA, Depasa Marine International and Dredging International for the Lagos and Bonny pilotage districts created the Lagos Channel Management (LCM) and the Bonny Channel Company (BCC) which improved channel and berth draughts from -8 metres at pre-concession to -13.5 metres in the two locations after the concession. This improved confidence levels internationally to boost patronage of the Nigerian ports.

Three, the entrance of foreign investors raised operational standards to 'global best practice' levels and raised throughput levels nationwide. For example, at pre-concession in 2005 the total throughput volume was 44.9m tonnes (*Nigerian Ports Today*, 2016: pp. 8-9). However, this volume surged after the concession programme. From 2015 to 2018, for example, the combined throughput amounted to 293.9 m metric tonnes or an annual average of approximately 73.5 m metric tonnes. Also, NPA's former overhead costs for stevedoring and operating equipment were erased, with its annual wage bill slashed through the lay-off of 7000 staffs, even though N32 bn was needed to settle their terminal benefits.

Thus, the organization was made leaner and smarter, with reduced bureaucracy. Moreover, the retrenched staff, many of them stevedores and dock workers, formed the labour pool from which the successful private terminal operators engaged their workforce. Furthermore, cargo safety and general port security improved with the implementation of ISPS Code, while the Apapa port railway line was reconstructed to restore port-hinterland communication. As at 2016, the pace of terminal infrastructure development and new equipment acquisitions by the concessionaires (see **Table 3**) was faster and larger than the period from 1955 when NPA began operations. In monetary terms, over N37 billion, Euro33 million and \$849.7 m had been spent by all concessionaires on terminal improvement projects (*Nigerian Ports Today*, 2016: p. 76). At the policy level, the NPA also announced a 25-year master plan for port development in Nigeria to address the longstanding nationwide skew in capacity utilization of port facilities although the outcome of this policy move is yet to fructify.

5. The Market Liberalization Outcomes in West Africa

The 1975 “cement armada” crisis became arguably the biggest signpost of the looming internationalization or liberalization of port services in West Africa as it forced Nigeria to negotiate with the port authorities in Ghana, Benin Republic and Togo for special berths reserved at commercial rates for ships diverted from Lagos. However, even the negotiated two berths at Tema (for which N11 million was paid monthly) and Lome and Cotonou ports proved insufficient for the plan to unload big cement ships onto smaller vessels which could berth in other Nigerian ports and directly onto lorries for overland haulage across the land borders to Nigeria (*Ogundana*, 1978: p. 80). Incidentally, the alleged marginalization of Nigeria’s eastern port facilities was temporarily redressed during the

Table 3. Reported expenditures on terminal improvement by concessionaires.

Concessionaire	Naira	Euros	US \$
ENL Consortium	6,716,054,237.11	7,000,000.00	
Apapa Bulk Terminal	25,635,978,321.96		5,000,000.00
PTML			100,000,000.00
APM Terminal			478,000,000.00
Eko Support Services			215,000,000.00
Intels (Calabar)	492,757,702.00		3,251,391.00
Shoreline Logistics (Calabar)	2,263,196,773		8,683,015.60
Ecomarine Terminal (Calabar)	939,000,000.00		
BUA Terminal (P.H.)	564,509,607.00	26,026,000.00	32,445,000.00
PTOL (P.H.)	569,000,000.00	142,000.00	7,334,000.00
Total	37,180,496,641.07	33,168,000.00	849,713,406.60

Source: *Nigerian Ports Today* (2016), Vol. 5 No 19 May 2016: 8-9.

crisis as ships were diverted from Lagos to Warri, Sapele, Port Harcourt and Calabar and just about any available Niger Delta ports to stem the overflow of Lagos-bound cement ships; the agitation to correct the age-long imbalance continued thereafter (Cranfield, 2007; Omoweh, 2001). In retrospect, the usage of West African ports for the emergency relief of the Lagos port congestion proved to be a foretaste of the eventual fate which befell Nigerian ports from the late 1980s when importers preferred to divert their cargoes to Cotonou port following the spate of problems experienced in Lagos, including exorbitant port charges, delays in ship turnaround time, lack or mismanagement of equipment or slow and deceptive dock worker habits, excessive bureaucracy and high levels of pilferage and insecurity of cargoes (Leigland & Palsson, 2007).

In fact, the trend of cargo diversion worsened henceforth, fed by smuggling, and evolved into a steady competition by regional rivals against the Lagos ports. A recent investigation by *Leadership* revealed an annual loss of N130 billion by Nigerian ports since 2015 in favour of regional rivals (Cotonou, Lome, Tema and Abidjan), with a cumulative loss of about N650 billion estimated to such cargo diversions from 2015 to 2020 (Babalola, 2021). Across the region, the year-on-year growth ratio of throughput is lowest in Nigerian ports whose 2020 gross total of 78.4 m tons (-2.2%) has a lower annual increase than Togo's 25.5 m tons (+12%) or Ghana's 26.4 m tons (Babalola, 2021). Not only has Nigerian ports lost cargoes destined to the country herself, it has also forfeited the transshipment cargoes she used to handle for landlocked ECOWAS neighbors—a trend that deepened with the expert management takeover of the Cotonou Port by the Port of Antwerp International, an arm of the Port of Antwerp. The high quality of services introduced by the expatriate team outpaced the toddler tendencies in the Lagos port system, whose comparative port capacity is handicapped by channel and berth draught limitations (-13.5 m), slow customs cargo release procedures, inner city traffic gridlocks and high dwell time of transit cargoes. On the other hand, the Cotonou port system equally boasts of 13.5 m draught but with a faster single window cargo release system and a smarter transshipment arrangement (with dedicated in-dock free zones) for cargoes destined to Niger, Nigeria, Mali, and Burkina Faso which constitute 37%, 4%, 4%, and 5%, respectively of the total throughput (Voorspoels, 2018). Transshipment cargoes are fast-tracked by being railed to Allada and Zongo dry ports for unstuffing to avoid congestion around the port precincts, a feat that is largely absent in Nigeria's multimodal infrastructure for hinterland communication.

Hence, the joke that 'Cotonou is the busiest port in Nigeria' stems from its popularity among Nigerian importers of secondhand vehicles, fairly-used clothing, Chinese fabrics and household appliances (Okanla, 2020). Lome Port also boasts of Cotonou's robust port facilities (with -16.5 m draught) and efficiently faster cargo clearance procedures and transshipment cargo regime. Thus, with such region-wide competition for markets and trade, West Africa's port industry have evolved beyond the colonial trappings. Debrrie (2012) has noted the role of

containerization and the hub-and-spoke dynamics of modern cargo transportation in this development and the opening of the West African market to the spate of private terminal concessions since the new millennium, as shown in **Table 4**.

6. The Competition for Regional Hub Status and Hinterland Markets

The post-“cement armada” port constructions and the private terminal concessions of 2006 became the basis for the current status of port infrastructures and commercial viability during the second decade of the new millennium. After the new port constructions of the early 1980s, there arose the problems of idle capacity due to uneven utilization of the ports and poor maintenance of the installed infrastructures and equipment. Despite stated intentions to evenly spread activities in Nigerian ports from Lagos to Calabar, the over-concentration of operations in the Lagos ports system due to historical and commercial attractions became a *fait accompli*. Nsoedo (2019) has argued that the over-concentration was inherent from longstanding policies of the Northern-controlled federal government which discriminated against the southeast and Niger Delta regions as a fallout of the civil war (Abiodun, 2020). However, the NPA attributed the causes of the lower patronage to several factors.

One, importers usually chose the destination of their cargoes based largely on the location of final use of the imported goods. It argued that this was one of the reasons Lagos had more appeal, being the commercial capital of the country and the domicile of hundreds of factories and industries. Two, the problem of perceived insecurity at the eastern ports due to past piratical attacks against ships

Table 4. Major port terminals, concessionaires in West Africa.

Ports	Major Terminal Operators	Concession Period
Dakar	Dubai Ports World	2008 (25-years)
Conakry	GETMA, Bollore	2009, 2011 (25 years)
Abidjan	Bollore, AP Moller (Maersk)	2004 (15 years)
Monrovia	AP Moller (Maersk)	2010 (25 years)
Tema	Bollore, AP Moller (Maersk)	2007 (20 years)
Lome	MSC, GETMA/Bollore	2009 (35 years)
Cotonou	Bollore	2009 (25 years)
Lagos (Tin Can)	Bollore, Grimaldi	2006 (15 years)
Lagos (Apapa)	AP Moller (Maersk)	2006 (25 years)
Lagos (Lekki)	Tollaram Group/CMA CGM/CHEC (Cosco?)	2008 (45 years)

Source: Author’s compilation from secondary data, including Debrie (2012). The West African port system: global insertion and regional particularities, *EchoGéo* [En ligne], 20 | 2012. DOI: <https://doi.org/10.4000/echogeo.13070>.

often resulted in additional costs (called war insurance) which are added to the charter party for goods destined for unloading there (Chukwu, 2021). Three, due to the long period of non-use, many of the eastern ports lacked adequate equipment for cargo handling, although the situation began to improve since the onset of port concessions in 2006. Four, many of the eastern ports were sited at long distances from the sea and had shallower draughts of between 5 - 9 m vis-à-vis Lagos Port's 12 - 13.5 m. Also, unlike the Lagos ports of Apapa and Tin Can Island which are less than 10 kilometres from the sea, the ports at Calabar, Warri and Port Harcourt are 101 kilometres, 110 kilometres, and 90 kilometres respectively, from the sea.¹ Moreover, the NPA explanation argued that port access roads and interstate highways to the hinterland were more dilapidated than the situation at the Lagos ports, coupled with the problem in the Niger delta ports of decaying colonial-era infrastructures deemed beyond repairs. For example, a part of the Port Harcourt Port quay wall at the BUA terminal had collapsed, compounding the problem of its draught limitation—a situation which indicated, according to the port authority, that “the Rivers Port has reached the end of its useful lifespan, though it is still in use.”² Also, in Warri, the Escravos Bar had silted and the breakwater had collapsed for ten years, coupled with a peculiar ‘nuptide’ which grounded movement whenever it occurred for up to seven days. According to NPA, these factors worked against the popularity of the eastern ports vis-a-vis the preferences for importers and exporters.

While the pros and cons continued to be debated, the aftermaths were stark. For example, consequent upon the lack of use, the Sapele port, which laid fallow for many years, was assigned to the Nigerian Navy, exclusively for naval operations. Also, the under-utilisation of installed facilities at the eastern ports and the over-utilisation of infrastructures at the Lagos ports led to the frequent breakdowns of operating equipment and facilities, as were decried in several studies and reports (World Bank Press Release 62/42, 1962; World Bank Report No. 137a-UNI, 1973; Uchendu, 2020). The net effects on shipping activities at the Niger Delta ports were lack of patronage by the class of big ships which routinely call at Lagos, until special mitigating measures were taken, according to Hadiza Bala Usman, NPA's managing director.³ Consequently, she recalled that “Onne Ports received MSC GRACE, its first container vessel in 12 years in August last year [2020]. The Port also received JPO VOLANS, the first gear-less and largest container vessel to call at any Eastern Port on December 8, 2019... In April 2020, the Rivers Ports in Port Harcourt received its first Roll on/Roll off (RoRo) while the Calabar Port has received flat bottom vessels for the first time in years since

¹See “Mohammed Bello-Koko: I Was Appointed NPA's Acting MD on Merit”, Thisday January 17, 2022.

<https://www.thisdaylive.com/index.php/2022/01/17/mohammed-bello-koko-i-was-appointed-npas-acting-md-on-merit/> retrieved 7 February 2022.

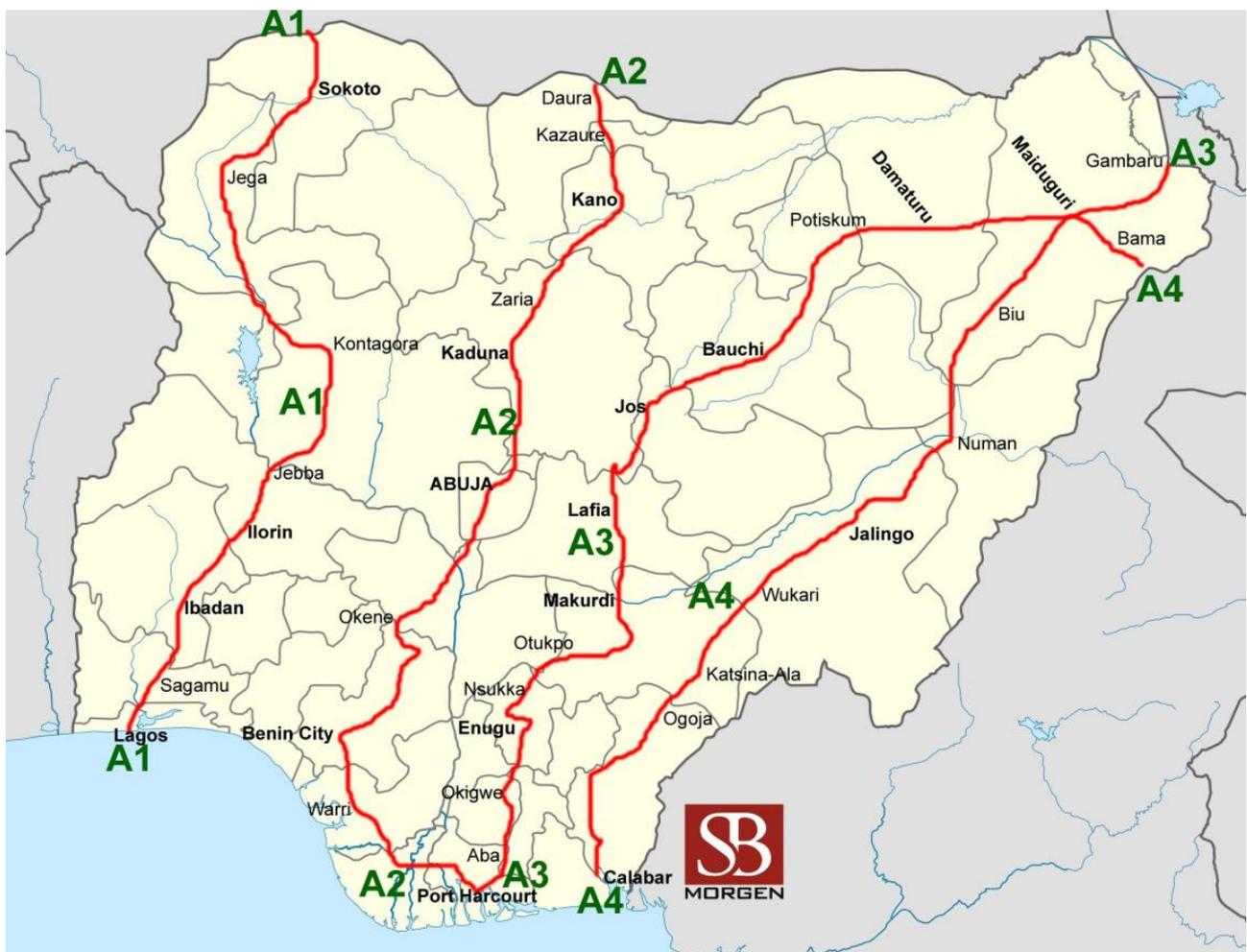
²See “Mohammed Bello-Koko: I Was Appointed NPA's Acting MD on Merit”.

³Eromosele Abiodun, “Eastern Ports as New Bride”, Thisday 21 August 2020.

<https://www.thisdaylive.com/index.php/2020/08/21/eastern-ports-as-new-bride/> retrieved on 25 January 2022.

2017” (Abiodun, 2020). She attributed the achievements to concerted mitigation through the deployment of well-trained pilots and requisite equipment such as tugboats and pilot cutters for berthing modern vessels, and round-table discussions with local leaders on security collaboration. Moreover, in 2018, NPA began incentives to attract more ship calls to the zone. It contracted Dredging International for the maintenance dredging of Warri Port’s Channel and Escravos bar (-7.6 m) as well as implemented a new 10% rebate on harbour dues at the eastern ports for all carriers which call there with ships of not less than 500 GRT.

In view of foregoing, the capacity of Nigeria’s port clusters to compete as hub ports for their primary, secondary or remote hinterlands can be assessed. **Figure 1** shows the highway map of Nigeria, with Trunk A roads designed to channel port traffic through major towns and industrial centres from the port gates to the northern parts of the country and beyond to the borders to her landlocked neighbours. Route A1 runs from the Lagos Ports Complex through the southwest and northwest parts of the country to Sokoto and the Nigerian border at



Source: <https://sites.google.com/site/roadnumberingsystems/home/route-lists/nigeria-federal-trunk-roads> accessed 28 January, 2022.

Figure 1. Nigeria federal trunk roads.

Illela. Route A2 runs from Warri Port Complex through the north central zone and Abuja to Katsina and Kongolam on the same Nigerian border. Routes A3 and A4 traverse from Port Harcourt and Calabar Port gates, respectively, through the south east, north central and north east parts of the country towards Maiduguri and Gaboru, Bama and Banki, all border towns with Cameroon and Tchad. Obviously, the import of the road networks underscores the planners' design of road haulage for moving national and transshipment cargoes from Nigerian ports to the immediate and remote hinterlands.

Dyck and Ismael (2015) found that shippers' preference for ports is based on a number of factors, such as "the number of voyages, inland freight rate, inland intermodal connectivity of the port and the existence and availability of container facilities....route factors, and costs and service factors...flexibility and ease of use, marketing strategies of the port, personal contacts and the level of cooperation developed between the shipper and the port". They found that transshipment, intermodal cargo catchment and the port's location were key factors in port competition, selection, throughput volumes and attractiveness to shipping lines. However, a survey of shippers in Nigeria identified efficiency, frequency of ship visits and adequate infrastructure as major criteria for port selection (Ugboma, Ugboma, & Ogwude, 2006), although the more relevant analysis for this paper would be a focus on how these factors are shaping the contest for primary and secondary hinterlands in the greater West African region port industry.

Two levels of analysis shall be made on this wise, namely, the status of throughput and port calls amongst Nigeria's national ports (Table 5) vis-a-vis their capacity to contest for primary or secondary hinterlands, on the one hand, and the pan-national contest for hinterlands in the West African market. Map 1 shows the designed cargo evacuation plan for the various ports in Nigeria, whereby two major directions of hinterland deliveries are possible, namely, southeast-northeast-Tchad-Cameroon border and southwest-northwest-Niger-Mali-Burkina Faso axis. On inter-port basis, the southeast ports used to play second fiddle to the Lagos ports system in terms of throughput volumes, following the historical, institutional, technical and marketing factors argued above. However,

Table 5. Cargo throughput, various Nigerian ports, 2015-2018 (metric tonnes).

Port	2015	2016	2017	2018
Apapa	20,250,771	18,541,041	19,099,690	20,010,677
Tin Can Island	16,407,133	15,648,919	15,464,385	15,057,472
Warri	7,829,862	6,836,616	5,197,773	7,165,907
Rivers	4,457,785	3,574,235	3,536,873	3,595,995
Onne	26,314,828	23,434,241	26,049,226	26,528,748
Calabar	2,127,259	2,329,984	2,187,689	2,318,705
Total	77,387,638	70,365,036	71,535,636	74,677,504

Source: Nigerian Ports Authority.

the emergence of Onne Port disrupted the order markedly as it took the lead since 2015 (see [Table 5](#)). As at 2018, Onne Port still led with 26.5 m tons against Apapa's 20 m tons and Tin Can Island Port's 16 m tons. Probably, the Lagos ports would continue to lead in break-bulk cargoes. Industry sources confirm that the lead by Onne Port was boosted when Onne Multipurpose Terminal (OMT) began operations adjacent to West African Container Terminal (WACT), a subsidiary of AP Moller Terminal. Both terminals are said to be preferred by traders at Port Harcourt, Aba, Onitsha and Warri as well as the usual patronage from oil-and-gas firms operating in the Niger Delta based on the port selectivity index of efficiency, frequency of ship calls and availability of infrastructure and good corporate governance. Moreover, another specialization of the Port Harcourt and Onne Ports lies in local and international transport facilities for the oil and gas sub-sector where they feature an array of terminals, jetties, and critical infrastructures for oilfield exploration, drilling and transportation of crude oil and white products (see [Appendix 1](#)).

Hence, the eastern ports now command robust capacity for cargo deliveries in their primary hinterlands of the south-east, south-south and possibly north-central areas of the country whereas their capacity to contest for service to the upper north central, north east Nigeria and Tchad/Cameroon markets is hobbled due to poorly-maintained inland road networks and the Boko Haram insurgency whose resultant insecurity since 2009 rendered the north-east corridor unsafe and economically comatose, according to [Granville \(2020\)](#). However, the eastern ports' capacity to service their primary and secondary hinterlands could be boosted if the Eastern District of the Nigerian Railway Corporation to the national rail network is made fully functional. Presently, only Port Harcourt Port and Warri Port (Aladja Jetty) are connected to the railway network. The Port Harcourt line broke down more than ten years ago and a N19.2 billion reconstruction contract awarded to a Turkish company in 2011 failed to be satisfactorily executed, rendering rail services in the district, moribund ([Andeh, 2021](#)). For the Warri Port, the broad gauge line from Itakpe to Warri terminates at the Aladja Steel Jetty and not the main merchant shipping terminals. Thus, both ports require better connection to active rail lines for evacuation of cargoes.

This leaves mainly the Lagos ports as the major Nigerian candidates for the competition against regional rivals at Benin Republic, Togo, Ghana and Cote d'Ivoire for hub port status and transshipment services to the landlocked hinterlands. As noted above, the Lagos port is in a losing race to the regional rivals based on the latter's smarter competition using upgraded infrastructure, better management, and safer, friendlier sociopolitical operating environments. For example, the Cotonou Port (Benin Republic), in 2017 outsourced the management of the Port of Cotonou to the Port of Antwerp International (PAI) for three years, whereby the latter took over daily management of operations, leaving only legal, IT, and human resources functions in the hands of Beninise. The main aim of the move was stated to be the increase of port productivity, strengthening of market position and "reform of the port to compete with the

surrounding ports”, especially Lagos (Voorspoels, 2018). Port Authorities in Cote d’Ivoire, Ghana and Togo are racing to make rapid infrastructure upgrades to their channels and berths, expand yard space and storage facilities, with the keen competition triggered by the liberalized trading environment which gives the mega carriers the discretion to choose any ports in the region as hubs. The key characteristics for preferred hubs include deeper draught for bigger ship calls, large spaces for consolidated cargo handling, efficient hinterland connection, reasonable regulatory atmosphere, and better liner shipping connectivity index (LSCI) (see Table 6). As at the 4th quarter of 2021, the LSCI for Ghana (37.19) and Togo (36.24) trumps Nigeria (20.77).

Also, Table 7 and Table 8 show various indices of the operations of leading West African ports. The port call and performance statistics show that ship dwell times in Benin (1.17 days), Cote d’Ivoire (2.1 days), Ghana (1.51 days), and Togo (1.39 days) are all lower than Nigeria’s (3.59 days) whereas Togo’s annual container throughput in 2020 (1,725,270 tons) was higher than Nigeria’s (1,528,520 tons) despite being Africa’s largest economy to which over 65% of the maritime

Table 6. Liner shipping connectivity index, various west African ports.

Quarter	Q4 2017	Q4 2018	Q4 2019	Q4 2020	Q4 2021
Economy					
Benin	18.12	18.85	17.95	18.40	19.14
Côte d'Ivoire	18.98	19.61	19.97	19.98	19.28
Ghana	19.58	20.08	36.65	39.99	37.19
Nigeria	21.23	21.29	21.53	21.25	20.77
Togo	33.69	33.92	34.61	36.57	36.24

Source: UNCTAD. <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx> retrieved 30 January 2022.

Table 7. Port call and performance statistics, various ports, West Africa.

		Other: Year (2020)			
Measure		Median time in port (days)	Average age of vessels	Average size (GT) of vessels	Average cargo carrying capacity (dwt) per vessel
Economy Comm. Market					
Benin	All ships	1.17	12	38,118	27,623
Côte d'Ivoire	All ships	2.06	15	28,263	25,967
Ghana	All ships	1.51	13	30,522	26,865
Nigeria	All ships	3.59	14	32,838	36,286
Togo	All ships	1.39	17	36,973	29,620

Source: UNCTAD. <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx> retrieved 30 January 2022.

Table 8. Container port throughput, various ports, West Africa.

Year	Other: Measure (TEU (Twenty-foot Equivalent Unit))				
	2016	2017	2018	2019	2020
Economy					
Côte d'Ivoire	902,058	907,600	919,000	918,669	974,872
Ghana	954,700	1,009,400	1,063,000	1,100,205	1,050,696
Nigeria	1,404,000	1,408,000	1,560,000	1,484,000	1,528,520
Togo	380,800	1,193,800	1,395,700	1,500,611	1,725,270

Source: UNCTAD. <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx> retrieved 30 January 2022.

shipping traffic is destined. Thus, in the long-term, the older Lagos river ports (Apapa and Tin Can Island) might not be considered hot contenders for regional hub-port role. Instead, the new Lekki Deep-sea Port (Nigeria), prepping for commissioning in 2022, with –16 m draught and possessing the space, international corporate governance and off-take cargo carriers (CMA CGM), might become a game-changer in the emerging dynamics of the box trade in the region.

In a 2017 World Bank report on West Africa's container concessions, the container haulage market in the region was found to be dominated by Maersk Line, MSC and CMA CGM to the tune of 80% while the terminal concessions were concentrated in the hands of AP Moller (Abidjan, Tema, Lagos), Bolllore Africa Logistics (BAL) (Abidjan, Tema, Cotonou, Lagos) and MSC (Lome). With the coming on stream of the Lekki deep-sea port, therefore, only slight changes are expected, as CMA Terminals (a subsidiary of CMA CGM) joins the box haulage dynamics of the major carriers and terminal operating companies (TOCs) already entrenched at Abidjan, San Pedro, Lome, Tema and Cotonou (see **Table 4**). However, the terminal marks a major footprint of the famed Chinese Maritime Silk Road around the world as China Harbour Engineering Company (CHEC) has considerable investments in the project which establishes basis for further integration into Africa's 200 m-plus most populous country (Griffiths, 2020). Farid Salem, CMA CGM Group's Executive Officer, said in 2018 at the signing of the MOU to operate the Lekki deep-sea port's container terminal that the "Lekki Port will allow us to bring to Nigeria larger container ships from Europe and Asia", thus forming a hub for cargoes destined for Togo and Benin (Offshore Energy, 2018; Chilaka & Olukoju, 2020). The 2-berth Lekki container terminal, with 1200 m quay, and a total yard capacity of 2.5 million TEUs would be equipped with 13 quay cranes to support the 14,000-TEU ships the carrier plans to deploy.

According to insider sources at the NPA, a three-phase development plan for the Lagos Free Trade Zone-based Lekki deep-sea port was envisaged, with the container terminal planned to kick off first. It will be followed by a dry bulk terminal, and a liquid bulk terminal in the final stage. The envisaged throughput

for containers was projected to be 1 m TEUs per annum in the first 15 - 18 years. Interestingly, the Dangote Petroleum Refinery being developed in the same axis is domiciled in a separate nearby complex known as the Lekki Free Trade Zone.

For the evacuation of containers and petroleum products, existing road networks are planned to link the port to Lagos through the Epe Expressway, which also leads to a by-pass through Ijebu Ode (road being dualized) to Sagamu, Ibadan and Benin City expressways. The construction of a rail line to connect the free zones to the national network starting from 2023 is planned to be on public-private partnership (PPP) arrangement, according to the NPA sources. Moreover, the potential of the Lekki port to enhance Nigeria's transshipment cargo throughput may be brightened by the operations of the Dala Inland Container Depot (Kaduna), the Katsina Dry Port, and possibly, the Kano-Maradi railway project, if the projects run as planned.

7. Conclusion

The Nigerian seaports system experienced steady development from the era of slave trade to the present day mainly due to their strategic location and a huge market. The Lagos ports which thrived on the environment of being the seat of political power and commercial capital also maintained steady development albeit within the constraints of the colonial administration. The post-independence situation did not change much until the port reforms of the new millennium engendered a competitive concession programme, brought much-needed foreign direct investment and kick-started international standards of best practices. As ports in the ECOWAS sub-region switched to the terminal concession model, the new era of competition based on post-colonial liberalized market environment operated by the mega carriers and international TOCs sees the erstwhile throughput dominance of Nigerian ports overtaken by the Togolese port in the container market and the rivals in other key performance indicators.

However, the new competition in the region which could eventually bring down freight rates would hardly be determined by port size but by factors such as macroeconomic viability, shipping liner connectivity index, cargo dwell times and ship turn around times—areas where Nigeria's traditional weaknesses could hobble her ports' dominance, despite large additions like Lekki Deep-sea port. To this scenario, however, a slew of Nigerian measures at the Seme border post may up the ante. For example, the closure of Nigeria's land borders since 2020 was aimed not only at curbing smuggling but also to better regulation of the Seme post, the busiest and most prosperous land border station in the entire ECOWAS region, where traders exploited the ECOWAS Trade Liberalization Scheme (ETLS) to undercut the import duties and port dues charged at Nigeria's major maritime gateways, Apapa and Tin Can Island Port. The recent re-opening is said to give the Nigerian Customs Service better grasp of the flow of trade (Olawuni, 2022). Secondly, a new rule that all cargoes passing the Seme border must be containerized aims to enhance customs revenue, further streamline trans-

actions, and possibly redirect trade towards the maritime ports, which would help Nigeria deal with the competition from the Port of Cotonou and Lome.

Thus, whereas regional rivals of the Lagos ports seem set to make inroads into Nigeria's big maritime services supply chain, the latter must work harder at several junctures of the business cycle listed below, in order to keep their positions or forge ahead and reclaim lost market shares. First, the present transportation challenges against free-flowing port-hinterland connectivity must be addressed with the addition of functional railway lines to critical gateways such as Tin Can Island Port, the Lekki Deep-sea Port, Port Harcourt Port and Warri Port. Railing containers and fuel wagons would also solve the notorious Apapa traffic gridlock which messed up life in the port city since the early 2000s (Elusoji, 2017).

Second, Nigeria needs a new conversation with the terminal concessionaires to have a competitive regime of port charges relative to the lower tariffs in neighbouring ports as the cost differential partly accounts for cargo diversion to neighbouring ports and the lure for smuggling.⁴ Also, the adverse effect of the war risk insurance premium attached to Nigerian ship calls which hike retail prices must be addressed by combating insecurity and dastard pirate attacks against ships in the Gulf of Guinea which accounted for 43% of the global scourge in the first quarter of 2021.⁵ With the massive reduction in pirate attacks acknowledged by the IMB, following serious implementation of the Nigeria's SPOMO antipiracy law and patrols by the EU's Coordinated Maritime Presence in the Gulf of Guinea waters, the scourge and its consequences are bound to be curtailed in the future, if present trend is maintained. Moreover, improved corporate governance of the cargo release procedures through pruning of multiple agency interventions to reduce dwell times to the advertised two days and the introduction of single-window documentation procedure, could improve ship turnaround time as well. In fact, the Presidential Enabling Business Environment Council (PEBEC) decried the fact that "[t]here are too many regulatory requirements...An agric exporter can't export perishable produce after months...because our certification processes are slow, others from outside nations (from neighbouring countries based on an ECOWAS agreement) with faster processes can bring their products and sell here, while our own businesses are still on the queue of regulatory agencies" (Adegboyega, 2022). Thus, curing the Nigerian trade of such maladies is critical for re-establishing robust competition against the rival ports in the region.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

⁴See "Smugglers reign large despite border closure", The Guardian (Lagos) 27 November 2020. <https://guardian.ng/news/nigeria/national/smugglers-reign-large-despite-border-closure/> retrieved 2 February 2022.

⁵See "Gulf of Guinea remains world's piracy hotspot in 2021...", ICC 14 April 2021. <https://iccwbo.org/media-wall/news-speeches/gulf-of-guinea-remains-worlds-piracy-hotspot-in-2021-according-to-imbs-latest-figures/> retrieved 2 February 2022.

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Appendix 1: Bonny/Portharcourt Pilotage District: Ports, Berths and Jetties

BONNY				
S/NO	BERTHS	DEPTH (m)	OPERATORS	
1	LNG 1	16.3	NLNG	
2	LNG2	16.3	NLNG	
3	BRT	14	MOBIL	
4	MOF	13	NLNG	
ONNE PORT				
S/NO	BERTHS	DEPTH (m)	OPERATORS	
1	Onne FOT (Berth 4, 5, 6)	10.0	INTELS	
2	WACT (Berth 7, 8)	11.0	WACT	
3	FOT 1, 2, 3	9.5	INTELS	
4	FLT 1	10	INTELS	
5	FLT 2, 3, 4	8.0	INTELS	
6	Brawal	7.5	BRAWAL	
7	Notore Jetty	9.0	NOTORE	
8	Dangote Jetty	9.0	DANGOTE	
9	Atlas Jetty	9.0	ATLAS	
RIVERS PORT				
S/NO	BERTHS	DEPTH (m)	OPERATORS	
1	Ibeto Cement	9.0	IBETO	
2	PTOL Berths 1, 2	6.5	PTOL	
3	PTOL Berth 3, 4	9.0	PTOL	
4	BUA Berth 5	5.0	BUA	
5	BUA Berth 6	7.0	BUA	
6	BUA Berth 7, 8	8.0	BUA	
7	Bitumen Jetty	7.0	NPA	
JETTIES				
S/NO	NAME	LOCATION	DEPTH (m)	OPERATORS
1	Master Energy	Port Harcourt	6.0	Oil Energy
2	Petrostar Jetty	Aker Base	6.0	Petrostar
3	Delmar Jetty	Aker Base	6.0	Petrostar
4	Shorelink Jetty	Port Harcourt	6.5	Shorelink
5	Liquid Bulk Jetty	Aker Base	6.0	Blueseas

Continued

6	Saipem Jetty	Aker Base	6.0	AGIP
7	Neptune Jetty	Aker Base	5.5	Neptune Oil
8	Modant Marine Jetty	Iwofe	5.5	Modant Marine
9	Shell Kidney Island	Port Harcourt	6.0	Shell
10	Okrika Jetty	Okrika	9.0	NNPC
11	Japaul Jetty	Eastern ByePass	5.0	Japaul Marine
12	Julius Berger	Eastern ByePass	5.0	Julius Berger
13	Bourbon	Eastern ByePass	5.0	Bourbon Services
14	Eagle Cement	Choba	6.0	Ibeto
15	Agip Mile 4	Aker Base	6.0	AGIP
16	Agip Brass	Brass	6.5	AGIP
17	Nigerian Agip Oil Services (NAOS)	Ogbogoro	5.5	AGIP
18	Nestoil	Abuloma	6.5	Nestoil
19	Dredging Int'l Nigeria Services	Borokiri	5.5	Dredging Int'l
20	Nigeria Shipbuilders Ltd.	Port Harcourt	5.5	Nig. Shipbuilders
21	SPDC Nigeria	Bonny	5.0	Shell
22	Aiteo Energy Resources	Abonnema Wharf	5.0	Aiteo Energy

Source:

<https://nigerianports.gov.ng/wp-content/uploads/2017/07/BONNNY-AND-PORTHARCOURT-PILOTAGE-DISTRRICT.pdf> retrieved 31 January 2022

Appendix 2: Concessions, Operators and Cargo Catchment, Nigerian Ports

S/No	Operator	Concession	Cargo catchment
1	Apapa Bulk Terminal Ltd	Apapa Terminal A	Flour, Wheat, Dry Bulk
2	Apapa Bulk Terminal Ltd	Apapa Terminal B	Flour, Wheat, Dry Bulk
3	ENL Consortium	Apapa Terminal C	General Cargoes
4	ENL Consortium	Apapa Terminal D	General Cargoes
5	Greenview Dev. Nigeria Ltd	Apapa Terminal E	Sugar, Cement, Dry Bulk
6	A P Moller Terminals Ltd	Apapa Container Terminal	Containers
7	Josepdam Ports Services Ltd	TCIP Terminal A	General Cargoes
8	Tin Can Island Container Term.	TCIP Terminal B	Containers
9	Ports & Cargo Handling Serv.	TCIP Terminal C	General cargoes
10	Five Star Logistics Ltd	TCIP Ro-Ro Terminal	Ro-Ro, General Cargoes
11	Ports and Terminal Multiservices Ltd	TCIP Ro-Ro Greenfield	Ro-Ro, Containers
12	Ports and Terminal Operators Nig Ltd	Port Harcourt Terminal A	Containers, General Cargo

Continued

13	Bua Ports & Terminals Ltd	Port Harcourt Terminal B	Cement, Dry Bulk
14	Intels Nigeria Ltd	Onne FOT A	Offshore Support Services, Project Cargoes
15	Brawal Oil Services Ltd	Onne FLT A	Offshore Support Services, Project Cargoes
16	Intels Nigeria Ltd	Onne FLT B	Offshore Support Services, Project Cargoes
17	Intels Nigeria Ltd	Calabar New Terminal A	Offshore Support Services, Project Cargoes
18	Ecomarine Ltd	Calabar New Terminal B	Offshore Support Services, Project Cargoes
19	Addax Logistics Nigeria Ltd	Calabar Terminal C	Offshore Support Services
20	Intels Nigeria Ltd	Warri Old Terminal A	Offshore Support Services, Project Cargoes
21	Associated Maritime Services Ltd	Warri Old Terminal B	Offshore Support Services, Project Cargoes
22	Global Infrastructure Nigeria Ltd	Warri New Terminal A	Offshore Support Services, Project Cargoes
23	Atlas Cement Co. Ltd	Jetty FOT Onne	Cement, Dry Bulk
24	Intels Nigeria Ltd	Warri New Terminal B	Offshore Support Services, Project Cargoes
25	Julius Berger Plc	Warri Terminal C	Project Cargoes
26	Guftainer Ltd	Koko Terminal	Project Cargoes
27	Lily Pond Container Depot Nig Ltd	Ijora Container Depot	Containers
28	Lagos Deep Offshore Logistics Base	Tarkwa Bay Free Zone	Offshore Support Services, Project Cargoes
29	Eko Support Services Ltd	Bull Nose Apapa Port	Offshore Support Services, Project Cargoes

Source: (Nigerian Ports Today, 2016: 25ff).