Impact of Reforms on Port Performance in Lagos Port Complex, Nigeria

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Abstract
Maritime transport plays a vital role in nations that are accessible by sea. It contributes to the Gross Domestic Product (GDP) of a nation. Prior to port reforms, Nigeria ports were faced with numerous challenges. Thus, leading to low performance and productivity. Therefore this paper examined the impact of reforms on port performance in the Nigerian ports.The sampling technique adopted for this study was stratified sampling.Both inferential and descriptive statistics were employed. Descriptive statistics were used to analyse ship traffic, cargo throughput and infrastructural provision while inferential statistics analysed the effect of port reforms on cargo clearance. The result showed an increase in cargo handling equipment, dredging equipment, improvement in access channels and an increase in ship traffic. Also, port reform has an impact on cargo clearance with r = 0.749. It was concluded that there is a strength of association between port reform and cargo clearance. It was recommended that Modern handling equipment that will ensure 48 hours clearance should be provided by the concessionaires. Availability of the railroad is highly crucial to reduce gridlocks on road infrastructure.

Keywords: maritime transport, port, performance, reforms, cargo clearance

1. Introduction

Maritime transport plays a vital role in nations that are accessible by sea. It contributes about 90percent of the world international trade (Gabriel, 2019). Its significance cannot be overemphasized as it contributes to the Gross Domestic Product (GDP) of a nation. Various activities take place in the industry and its environment. Such activities like importation and exportation of cargoes and other related services become an attractive location for different personnel such as haulage companies, police, insurance agents, dockworkers, stevedores, Clearing and Forwarding agents among others too numerous to mention. Because activities, the port is experiencing congestion by both personnel and freight which are now posing economic loss and safety threats to ports and the country at large (Okorigba,2008). Nevertheless, ports form a vital link in the overall trading-chain and consequently, their level of efficiency and performance determine to a large extent a nation's international competitiveness. However, in order to achieve and maintain a competitiveness edge in the international

markets, nation's port authorities need to understand the underlying factors of port competitiveness, and continually assess its performance so that appropriate business strategies can be devised (Tongzon, 1994). UNCTAD (1976) as cited in Mokhtar and Shah (2006), states clearly that ship turnaround time is a crucial operational indicator to be considered for port performance improvement, where is portrayed port capability and ability to provide tremendous services with high productivity and performance to the port user.

Therefore, the port authority, port operators and policy makers need to understand the key factors influencing the ship turnaround time. Port users are looking into berthing side as it can actually determine the whole aspects such as cost, voyage, marketing, planning and scheduling. The pivotal key here is the turnaround time for vessels, as it can solve a lot of things for the shipping industry. Attempt to reduce ship turnaround time as part of the whole of the supply chain would mean that the process from raw material to a user can be reduced and economies of scale could be achieved.

However, there are factors influencing port productivity in Nigeria. However, prior to port reforms, Igbokwe (2013) asserted that there has been little improvement on the efficiency and productivity of the port management in meeting the International Maritime Organization (IMO) stipulation of 48 hours cargo clearance. Nigerian Ports were marred with either obsolete, malfunctioning, broken down or in sufficient handling equipment and plant (Somuyiwa and Ogundele, 2015). Thus, retarding the cargo handling operations,

stacking, and the exit of cargoes from the gate. Consequently, leading to low productivity, longer ship turnaround time, high port charges, and demurrage payment. These factors to make Nigerian Ports user-unfriendly and unattractive to some shipping lines. Thus, prompting shippers and importer to route their cargo to neighbouring ports of Cotonou in the Benin Republic (Kareem, 2000). The paper focuses on the impact of port reforms on cargo clearance.

1.1 The concept of reform

The word reform is derived from a Latin word 'reformo' which means a change in a system that will cause an improvement. It came into existence in the late 18th century and today, it is termed as a change in method of funding, operating maintaining, administering and managing a system (Adeyanju and Ojekunle, 2014). Eytan and Luis (2003) opined that the purpose of the reform program is to achieve greater microeconomic efficiency and also promote economic growth and also, reduce public sector borrowing requirements through the elimination of unnecessary subsidies.

Sector reform is inevitable in our modern times due to the scarce resources available to the government in providing service to the members of the public. In order to enhance efficient and effective service delivery, the government seeks the intervention of the private sector. It creates a platform through which private investors can participate in public works and services. This is achieved through a contractual agreement known as Private Public Partnership (PPP). In this manner, the private investors bear the significant risk. Other approaches of reforms include

privatization which includes the transfer of public service to private ownership and control. It can be outright privatization or equity privatization. concessioning, management contract, outsourcing, commercialization etc.

1.2 Port reforms

Port reforms in Nigeria came into existence in 2006 (Mogbojuri, 2020). Reform is a policy measure by the government for revitalising and strengthening the operations and modalities of the industry to achieve increase efficiency and productivity (Ndikom, 2006). It, therefore,aimed at deregulating, decentralising, privatizing the sector and fostering healthy competition within it. According to Ndikom (2015) emphasized that the situation in Nigerian ports prior to reform was that of disjointed and uncoordinated activities and vices in such area as;

a.   Stevedoring operation

b.   Operational agencies

c.   Security of the port and imported goods

d.   Importer and exporter activities

e.   Port tariffs and charges

f.   Statutory and non-statutory charges

g.   Operations and documentation procedures

h.   Government policies

1.3 Port performance indicator

The performance of ports and terminals is important because it affects a country's trade competitiveness. There are many determinants to port/terminal performance – labour relations, number and type of cargo handling equipment, quality of backhaul area, a port access channel, land-side access and customs efficiency, as well as potential concessions to international terminal operators (UNCTAD, 2015). Thus port efficiency has a great impact on container throughput.

Container port throughput is usually measured in the number of TEUs moved. In 2011, the container throughput for developing economies grew by an estimated 8% to 406.9 million TEUs. This growth is lower than the 15.8% seen in the previous year when businesses restocked inventories depleted because of uncertainties surrounding the global economic crisis. The growth rate for container throughput in developing economies for 2012 is still weak, estimated at 4.8 %.Baran and Górecka (2015),

However, Tatcchia et al (2008) are of the opinion that operations in most ports of developing countries are frustrating slow. The efficiency of a port is of great importance to her performance. According to The African Development Bank (ADB) (2007) cited in Ogundele, (2014) lamented the woes of Nigeria and predicted that based on her potentials, she could substantially fast track her economic growth if she can improve her efficiency capacity at the port.

Port throughput volumes can also be analyzed in various ways, such as divided by the length of quays to measure productivity or by the total throughput of a given port range or maritime region to measure a market share. The precise modal split, monetary value, and hinterland geographic distribution of traffics remain, however, often inaccessible on a large scale (Itoh, 2013).

2. Methodology

This study was conducted in Lagos Port Complex, Lagos, Nigeria.Lagos is an administrative division of Nigeria, located in the south-western part of the country. The smallest in area of Nigeria's states, Lagos State is arguably the most economically important state of the country with a population of **16,506,023**.Lagos Port Complex has a bearing of latitude $06^025.7N$, Longitude 003020.53E with a container handling capacity of 3.9 million TEU.Both inferential and descriptive statistics were employed. The sampling technique adopted was stratified sampling. This is a type of sampling used in expository research in which the researcher selects a sample to meet specific criteria. According to Krishnaswami and Satyaprasad (2010), "the method is appropriate when what is important is the typicality and specific relevance of the sampling units to the study and not their overall representativeness to the population."

Hence, the sample was drawn from the population of the Nigerian Ports Authority, terminal operator and shippers located in Apapa Lagos. This technique was considered for its convenience in terms of cost and time. According to the formula developed by (Krejcie and Morgan, 1970) at least 20% of the target population was important for the study. Mugenda and Mugenda, (2012), at least 10% of the target population was important for the study. 10% of 1500 will be used for the purpose of this study.

3. Result
3.1 Ship traffic from 2007 to 2016

Figure 4.1 shows the trend of ship traffic from 2007 to 2016. There is an increase in term of ship traffic at the port from 2007 to 2011. This is an upward trend. However, it slopes downward from 2012 to 2016.Mogbojuri (2020) claimed that this is due to the economic recession at Tincan Island Port in Lagos Nigeria.
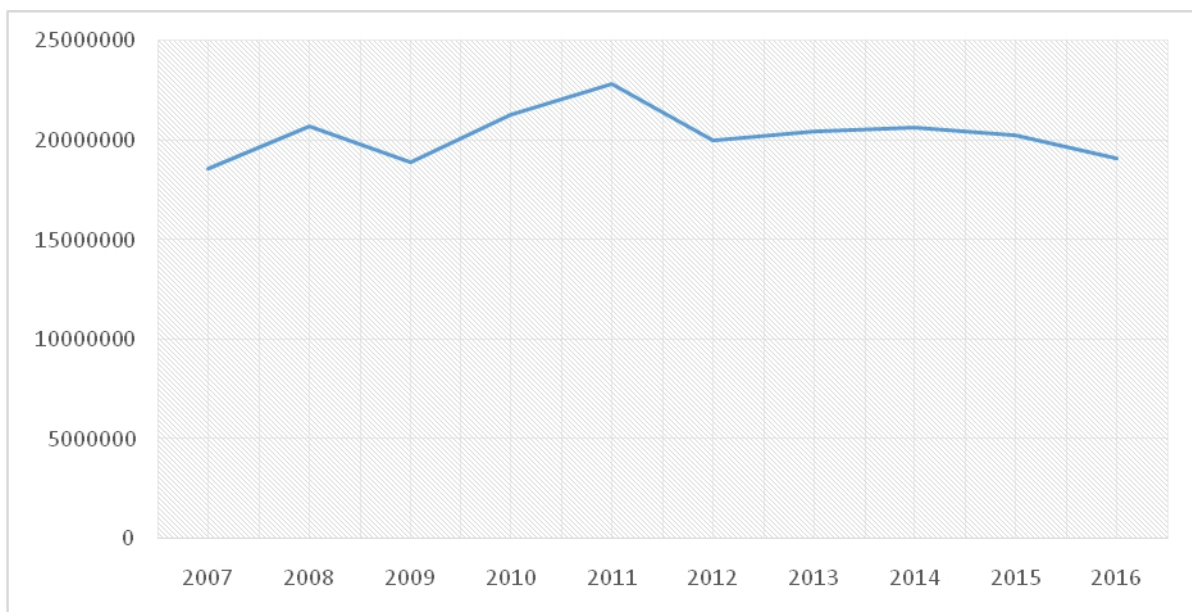

Figure 1: Graph of ship traffic *(Source: Author's fieldwork, 2020)*
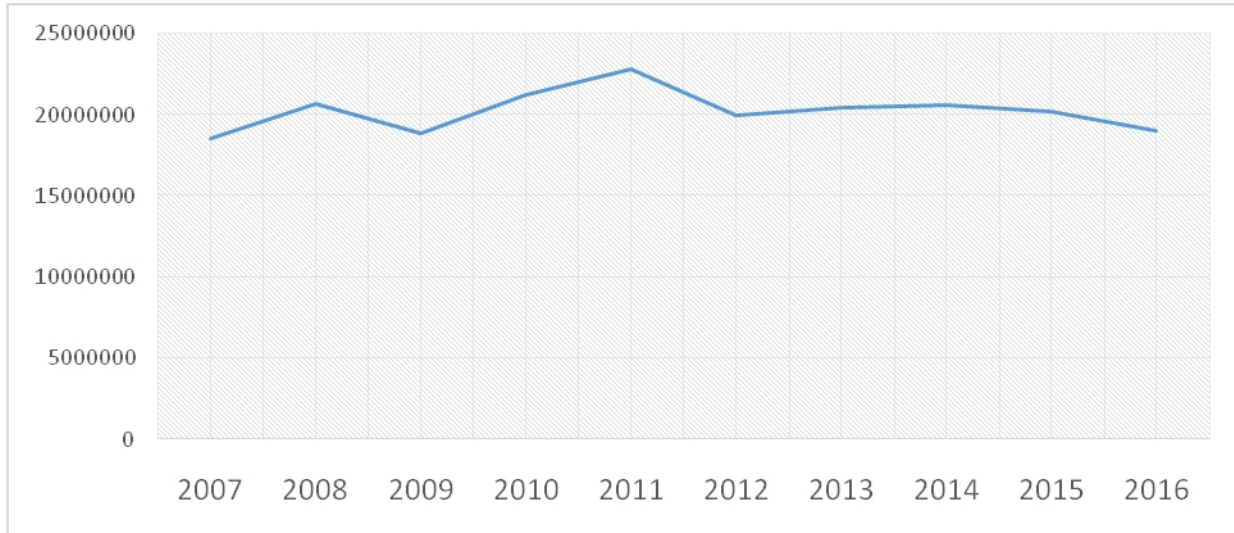
3.2 Cargo throughput from 2007 to 2016

Figure 2: Container throughput. (Source: Author's fieldwork (2020))

Figure 2 shows the trend of container throughput from 2007 to 2016. There is an increase in term of container throughput from 2007 to 2011. This is an upward trend. However, there is a downward trend from 2012 to 2017. Somuyiwa and Ogundele (2015) opined that the post-reform era more cargo handling equipment have been procured, storage capacity have been increased and expanded, latest cargo handling equipment with high lift capacity have been procured.

3.3   Impact   of   infrastructure development on port productivity

Infrastructural provision is a major challenge that influences port productivity. Figure 3 shows that there is an improvement in cargo handling equipment in the post concessioning era while there is little or no improvement on the rail road. Ihenacho (2005) asserted that infrastructural provision is a major factor to successive governments and managers in the port industry.
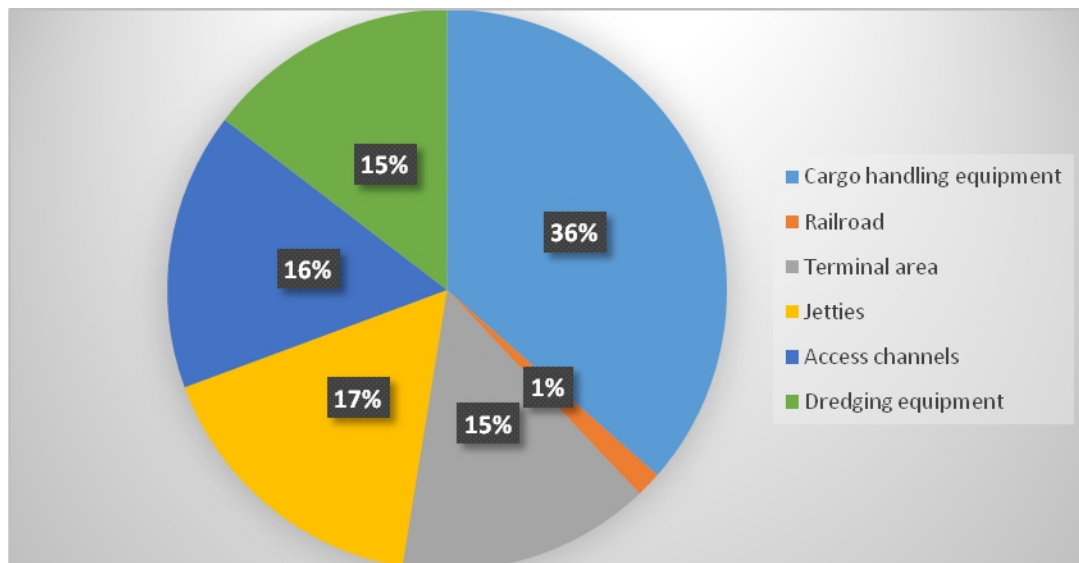
Figure 3. Infrastructural provision*(Source: Author's fieldwork, 2020)*

3.4Port reform shows no effect on cargo clearance

Table 4: Correlation

		port reform	cargo clearance
port reform	Pearson Correlation	1	.749**
	Sig. (2-tailed)		.000
	N	150	150
cargo clearance	Pearson Correlation	.749**	1
	Sig. (2-tailed)	.000	
	N	150	150

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Author's fieldwork (2020)

The result showed that port reform has an impact on cargo clearance with r = 0.749. It means that port reform influences cargo clearance in the post- concession era. Ndikom (2015) opined that the pre-concession era was marred with port inefficiency such as malfunction and obsolete equipment, ill-managed personnel and graft in the port systems. Somuyiwa and Ogundele (2015) revealed in their findings that there was no relationship between equipment and productivity prior to port – reform exercise. Because cargo handling types of equipment were few, unserviceable and obsolete, thus, cargo throughput during this period dropped considerably resulting to lack of patronage of the port and loss of foreign exchange earnings for the government. On the other hand, more types of equipment were procured by concessionaires in the post-reform era, the latest types cargo handling plant have been procured and best global shipping practices have been put to use by concessionaires. Thus, resulting in more employment and income generation for the government and other stakeholders.

Conclusion

It was concluded that there is an increase in cargo handling equipment, dredging equipment improvement in access channels, increase in cargo throughput and ship traffic. Also, port reform has an impact on cargo clearance with r = 0.749. It means that port reform influences cargo clearance in the post- concession era. It was concluded that there is a strength of association between port reform and cargo clearance. It was recommended that Modern handling equipment that will ensure 48 hours clearance should be provided by the concessionaires. Availability of the railroad is highly crucial to reduce gridlocks on road infrastructure.

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