



DETERMINANTS OF MARITIME TRADE IN NIGERIA: A THEORETICAL UNDERPINNING

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ABSTRACT: *This paper studies the determinants of Maritime Trade in Nigeria: A Theoretical Underpinning. The objective of this study is to establish the conceptual and theoretical constructs that determines Maritime Trade in Nigeria. The study adopted a theoretical approach and examined key literature, theories and empirical works. The findings from this study showed that maritime trade contributes to economic growth and concludes that growth in Maritime trade is necessary for Nigeria maritime subsector growth and recommends amongst others the full and speedy implementation of the port reforms as this will assist open up the Nigerian seaports for increased trading activities and maritime revenue; It further urged the government to create enabling environment for indigenous vessel owners and operators through granting of access to the country's Cabotage vessel Financing funds to acquire bigger and sophisticated vessels to boost international Shipping business.*

KEYWORDS: Maritime Trade, International Trade, Ports Reforms, Trade Theories, Port Congestions

INTRODUCTION

Shipping industry plays a vital role in global economy considering that approximately the 90% of the global trade in terms of volume is carried on ships and the selected dry-bulk segment, the backbone of the international Maritime trade, absorbed in 2013 its 70.2% (Angeliki, 2015). Due to the fact that shipping firms operate and compete on a worldwide basis, having no borders just like the oceans, shipping industry is affected by international and not national factors (Angeliki, 2015). Viewed differently, there are other features describing the peculiar nature of shipping and differentiating the ship from a mere transportation mode. Global demand for commodities together with energy fluctuate the demand for Maritime transportation causing great volatility to freight rates. So, the current carrying capacities could still be improved to meet up with developed countries like the United States and other developing countries like Brazil and Taiwan.

Maritime trade businesses are meant to contribute significantly to economic growth of a country (Peng and Almas, 2010; OECD, 2003) and this has been responsible for the rapid growth of the Chinese economy (Kraay, 1999), available evidence from the Nigeria economy does not justify this trend; Hence the need to develop a theoretical underpinning of determinants for Maritime trade businesses expected to trigger growth in the Nigerian Economy. Ndikom (2012), opined that the management and administration of Maritime trade businesses in Nigeria has been in the hands of unskilled and inexperienced personnel and this has resulted to poor productivity and inefficiency of the port system and administration in Nigeria.



The objective of this study is to examine both conceptual and theoretical underpinnings that determine the growth of Maritime trade in Nigeria. It is the view of the authors that these constructs apart from contributing to literature, will also stir up interests in this aspect and contribute to the global economy.

REVIEW OF RELATED LITERATURE

Concepts of Maritime Trade

Maritime trade has also powerfully permitted a huge variety of resources to be better accessible widely and has thus facilitated the wide-spread distribution in the world. It is also seen that Maritime trade has promoted a high level of inter-connectivity and interdependency and, today on the principles of free trade are broadly acknowledged through the General Agreement on Trade and Tariffs (GATT), between people who would formerly have considered themselves completely independent. According to International Monetary Fund, the possible benefits are vivid: growth can be accelerated and prosperity more widespread; skills and technology can be more equally distributed, so that both persons and countries or regions can take advantage of economic opportunities previously unimagined (Global Economic Outlook, IMF, 2004).

Evolution of Maritime Trade in Nigeria

Maritime trade in Nigeria dates back to the pre-colonial days around the 15th and 16th centuries, when Portuguese traders and explorers landed on the Nigerian coastline. Such was similarly witnessing in neighboring West African coastlines which possessed goods such as cocoa, cotton, rubber, and other agricultural cash produce which were sought after. Basically, as at then, the movement of the agricultural crops and produce was done in the exporter's ships. Meaning that they organized the business in a whole aspect from buying raw materials produce from the coastline settlers to bringing it back to them as processed goods. For example, John Holt began trading in West African shores around 1850 and later acquired his company shipping vessel in 1808.

Challenges of Maritime Trade in Nigeria

It has been observed that there exist numerous factors that really encumber maritime ports operating environment in most African countries, Nigeria inclusive as a case in point. This shows that Nigerian ports are unique with their high charges and tariffs when compared with other ports around the world even from an African extraction. Aside this, the ports are established closely to cities that are highly populated, so both port operational performance and human traffic could become very difficult. In addition, the crucial problems that Maritime trade has faced in our ports includes:

(a) Inadequate Berthing Space:

The berthing space for the vessels are inadequate when compared to standard ports and international ports overseas. Over reliance on the road is killing our ports too and this is one of the major challenges we must overcome. The waterways and the railways could be developed as alternative mode of evacuating cargoes from the ports used.



(b) Poor Dredging Problems:

The waterways include rivers, lakes, creeks, lagoons and canals where businesses are carried out and these routes are supposed to be highly navigable to enable ease of doing business, but the inland water ways are too shallow for some big vessels.

(c) Vessel Delay Problems:

For instance, it takes trailers almost two weeks for one to enter Apapa and Tin Can Island ports and another two weeks to come out. Similar tasks could be handled in few days in Benin and Ghana. Unluckily, over 70 per cent of Nigerian cargoes are being presently diverted to neighboring countries. Emaghara and Ndikom (2012) associated time wastage/delays at seaports in Nigeria to inadequate functional cargo handling gears which also was seen as the most critical factor causing delays at the port.

(d) Inadequate Finance and Funding of Ports Operations Especially in Port Infrastructure

The Nigerian ports battled with poor infrastructure (roads, rail, quay, delays in cargo clearance and general inefficiencies in cargo handling largely due to manual processes. The major hindrance in the ports is the roads. Bad state of the roads is not limited to Lagos ports alone. In ports like Port Harcourt, Onne port and everywhere, the roads leading into and out are bad.

(e) Proliferation of Government Agencies in Port Activities:

For importers to clear their consignments at the ports, they pay all sort of illegal charges, through numerous agencies, thus, making it costlier to patronize the Nigerian ports and leading to diversion of cargoes to Ghana where they pay less.

(f) Operational and Procedural Delays and Inefficiency:

Nigerian shipping companies are so feeble that they cannot even compete in their own coastal waters. Presently about 90 per cent of Nigerian shipping companies have liquidated and those that are still in business are finding it hard to survive because they lack capacity for competition. Ndikom (2013), in an assessment of the challenges and opportunities for shipping lines services in Nigeria, concluded that adequate cargo handling machineries led to faster turn-round time of vessels at seaports.

(g) Government Policy Inconsistency:

Today, Nigeria is missing in the global maritime space. Nigeria's ranking in the Ease of Doing Business on trade across border, which actually has to do with the core components of the ports, import, export and transit and regulatory procedures, stands at 183 out of 190 countries and the last in Africa. This means that our import and export are the worst in Africa and almost the worst in the world. Considering the impact that inconsistency in government policy has created, we have lost almost N7 trillion (seven trillion naira) yearly, aside looking at the computing the cost of the business, almost 800 companies have closed down.

**(h) Sea Piracy Problems:**

Between 2018 and 2019, sea pirates have attacked as many as 88 vessels bound for Nigerian ports (in just one year) and this is bad news since these vessels are supposed to bring goods to the country. Barr. Hassan Bello, the executive secretary of the Nigerian Shippers' Council (NSC) said that the security threat to the nation's waterways was affecting competitiveness of Nigerian ports, thus impacting negatively on the nation's Gross Domestic Product (GDP). He further disclosed that shipping companies had been complaining that they are now compelled to provide private security cover as they import goods into the country (Leadership news, 2019). Furthermore, we must understand that this situation is not the best as such costs incurred by the shipping companies will be transferred on the shippers thus, leading to high costs of goods in the market.

(i) Obsolete Plants and Equipment:

The assessment of Somuyiwa and Akindele (2015) reveals that equipment and plants used in handling cargo in the Nigerian ports are either obsolete, broken down, insufficient or malfunctioning and this has negative effects on cargo management operations. The condition of things however has changed over time especially after the concession of the port operation. Now, latest cargo handling equipment with high lift capacity were obtained particularly at Tin Can port, Lagos in line with the port terminal concession policy.

(j) Dock Labour Problems:

It is obvious that private terminal operators no longer rest on the obsolete and outdated equipment inherited from NPA since their investment resulted to equipment with new technologies that now require special knowledge to operate. The high technical demand of the new equipment is throwing A lot of challenges is coming forth as the high technical demand of these new equipment is an issue facing operation of cargo handling at the terminals of the port.

(k) Shipping Operating Costs:

Over the years, there have been technological improvements which have led to a reduction in operating costs of the vessels. Automation in port operations, economies of scale, and improved fuel efficiency, help to reduce financial and environmental cost. Nevertheless, the initiative to invest in lower operating costs may have some negative repercussion on freight rates. For instance, as carriers invest in vessels that are bigger and more energy efficient in the current market situation, in order to achieve economies of scale or to improve fuel efficiency, they also unintentionally contribute to an oversupply of capacity. The individual carrier may benefit from cost savings as a result of deploying bigger vessels, but all carriers bear the burden of the resulting oversupply and lower freight levels. This in a way still benefits the importers and exporters.

Overflow of shipping capacity coupled with a weak economy has been a main factor affecting freight rates in recent times. In an effort to deal with low freight rate levels and to leverage some earnings, carriers have looked at measures to improve effectiveness and optimize operations in order to reduce unit operating costs.



THEORIES OF MARITIME TRADE GROWTH

Institutional Improvement Thought of Douglass North

The Institutional improvement thought was developed by Douglass North (1958), he tried to extend the existing freight market knowledge by superimposing the freight rate of American Export and British Import data. Douglass North explained that the decline of freight rates as at the nineteenth century was due to three main factors of shipping productivity which include, development of external economies, use of technological innovations and Boosting the efficiency of freight markets. Later in the 19th century came communication technology offering increasing availability and speed of telegraphy facilities which ensured proper and timely communication between owners of vessels, thus making the period a crucial one. Charterers and also Masters of ships. Imperfect market condition (Fama, 1970) was mitigated and uniformity in the movement of rates was partly maintained. Another indication is reported with respect to technological improvements.

Theory of Comparative Advantage

If a country like Ghana grow cocoa only on an inaccessible rain forest and Nigeria grows can produce palm produce only under glass, then both countries' populations can eat more cocoa and palm produce (i.e., they could achieve measurable trade growth) if they specialize and trade – as long as the shipping services are less expensive than the savings in production costs. Furthermore, if we consider David Ricardo's (1817) theory of the comparative advantage, even if one country could produce both commodities with less land or manpower than the other country, it still profitable for both countries to concentrate on their products and still trade with one another. Ricardo gave an example using Portugal in their production of cloth and wine, where they had absolute advantage concerning both products: It needs 80 man-months to produce X liters of wine and 90 man-months to produce Y meters of cloth, whereas England needs 120 and 100 man-months respectively. From the There is a comparative advantage for England concerning cloth, thus, a rational decision of Portugal and England will imply that the first specializes in growing wine and the latter in producing cloth, leading to Portuguese exports of wine to England and English exports of cloth to Portugal.

Trade Theories

The product life cycle theory explained the international trade patterns of the 1960s when the US dominated the global economy and most new products originated in that country (Vernon and Wells 1986). As demand for the product increased gradually in other developed nations, it was initially met through US exports until the production itself moved to those countries because of higher US labour costs. Furthermore, once the product became standardized, US production was typically replaced with exports from other developed nations first and, in the long-run, exports from developing countries. However, the limitations of this theory are far too many in the contemporary global economy where production is dispersed to different parts of the world simultaneously and no one particular nation is in a position to claim hegemony in international trade. The new trade theory is hinged on increasing returns to specialization that arises when an industry is faced with high economies of scale. The presence of such economies of scale in production would lead to the existence of only a limited number of global players in the market. Firms that are first-movers are likely to benefit from their early entry and quickly establish, thus, erecting entry barriers for other firms. It has been argued that to be successful



in such a condition, in addition to the firm being lucky, entrepreneurial, and innovative, the nation itself must have a strategic, proactive trade policy that facilitates first-mover advantage in key and newly emerging industries (Hill 2000). The national competitive advantage theory as postulated by Porter (1990) states that the existence of a diamond that consists of factor endowments, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. In practice, the different theories of international trade obviously complement each other and make their own contributions. They apply as much to trade in goods as to trade in services – including Maritime trading services. Under almost any model, it is “potentially possible to find a free trade consumption point and an appropriate lump-sum compensation scheme such that everyone is at least as well-off with trade as they had been in autarky” (Suranovic 2002). And, accordingly, “international economic integration yields large potential welfare effects” (Anderson and Wincoop 2001).

Empirical Reviews

Traditional agricultural and mining products such as cotton, cocoa, palm produce, groundnuts, rubber, hides and skins, tin, coal and columbite among others, were the foundations upon which trade relations were built, yet the nation still has a good reputation in the region. But with the discovery of oil our recipients were given a greater boost and very rapidly oil receipt dominated foreign exchange earnings by accounting for over 98 percent by 1996. That for several years after independence, the emergence of oil prosperity, in the country denied any serious attention to be paid to the prospects of non-oil exports trade, until the Structural Adjustment Programme (SAP) by the government in 1968.

Okon (2004) in his report on *Global integration and the growth of Nigerians Non-oil export* describe exporting as the process of earning profits by selling products or services in foreign markets. He further gave the concepts of exportation; he said “*Exportation must be based on the principles of local sufficiency*”. This shows that a country that will participate in any export trade, should have a particular product or group of products in large quantities and it must be easily available in reasonable sufficiency. Nigeria’s economic performance despite our possession of numerous resources, has unfortunately been driven by only the oil and gas sector to the extent that even progress recorded towards genuine economic development prior to the discovering of oil in commercial quantity has been virtually eroded.

DETERMINANTS OF MARITIME TRADE GROWTH

Competition and Market Regulation

The Nigerian maritime transport system level of competitiveness is low compared to those of established and developed countries such as Egypt, Morocco within the Less Developing Countries category (LDC). This is measured among other things by the size of vessels patronizing them and traffic intensity of the ships. Price-setting in Maritime trade transportation significantly depends on the level of effective competition. Competition in the trade markets depends on the size of the market and effective market regulation. Any impediment to free competition and the potential existence of collusive behaviour, atomization and monopolies will have impacts on price structures, and these factors are discussed in the following paragraphs.



Historically, shipping lines have tried to concentrate activities in accordance with other market players at certain points, as they are aware of the benefits of economies of agglomeration and scope. This has given room for the development of hub-and-spoke strategies and share capacity, in which the hubs are nodes for high-volume services to interchange cargoes and to transfer cargo to secondary routes.

The diverse dimensions of shipping lines, the equilibrium of power between shippers, shipping lines and ports, and barriers related to inland transportation can affect the evolution and features of competition in maritime business and shipping networks.

Policy makers need to carefully observe concentration processes in the maritime industry and be aware of possible negative effects on the trade and competitiveness of a country's exports, predominantly in network peripheral countries and regions. Figure 3 illustrates the decreasing number of shipping companies providing services in individual markets.

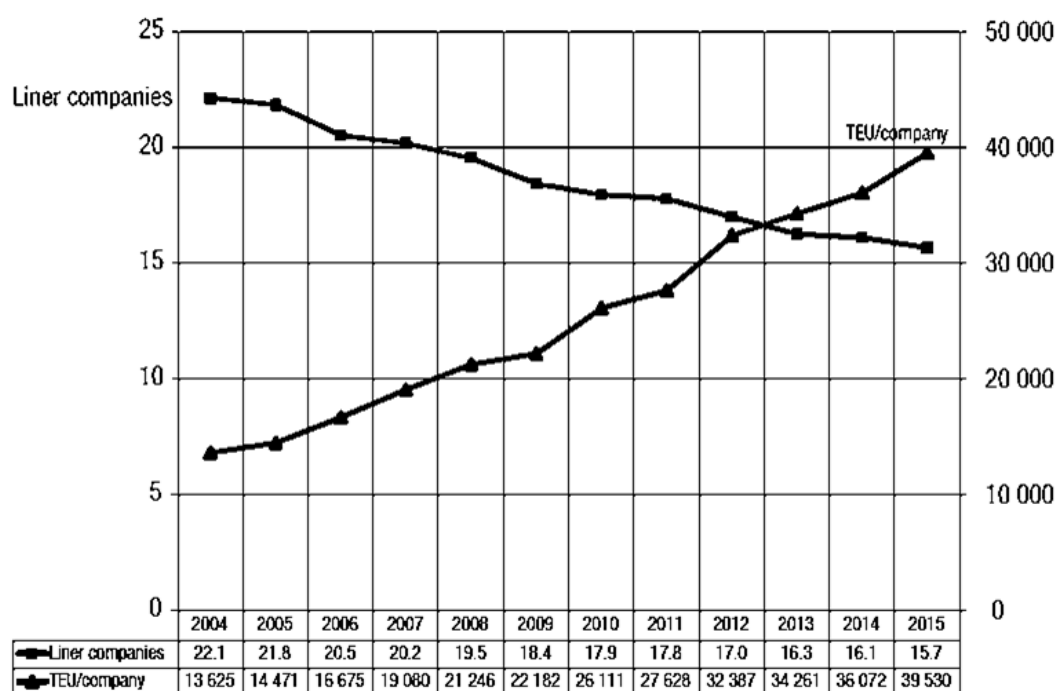


Figure 1: Presence of liner shipping companies: Average number of companies per country and average container-carrying capacity deployed (TEUs) per company per country (2004–2015) (Source: UNCTAD secretariat, based on data supplied by Lloyd's List Intelligence)

World Economy

World economy is a singular most important factor influencing Maritime trade in the 21st century. This world economy generates the demand for raw material import for manufacturing industries as well as trade in manufactured products. Hence, the growth of sea trade has a directly proportional relationship to the growth of world economy.



Three aspects of world economy that affects demand for Maritime trade include;

1. Rate of change of import and export trading business cycle. This implies that as the business cycles shortens between import and export, rate of growth of world trade increases, and as this happens, the rate of utilization of the maritime transportation services increases.
2. Long-run relationship between countries that transact on specific goods increases. The reasons for this include:
 - i) Fast rate of depletion of local raw materials and resultant dependence on foreign raw material suppliers.
 - ii) Changes in industrial developments puts pressure on Maritime trade to surge.
 - iii) Relocation of economic activities from production and construction to services
 - iv) Economic status may change over time due to new discoveries and industrial explosion.
3. Emergence of economic vulnerabilities may affect world economy which in turn affects Maritime trade (A good example is the effect of the 1930 depression on the shipping markets).

Nature of Maritime Trade Commodity

The nature of the Maritime trade commodity may have short-term or long-term effects. The short-term effects are those that affect seasonal and stock-building products. Agricultural products thrive more during harvesting periods and grain products tend to be higher during festive seasons.

More important is the impact that developments in particular commodity trades have upon the medium-term rate of growth of demand for sea transport. Particular commodity trades may follow a different growth trend from the world economy as a whole due to changes in the demand for that particular commodity (e.g. demand for Asian manufactured goods tend to drop during the COVID'19 pandemic period).

Distance Covered

The average distance between major sea ports in the world determines vessel owners' willingness to ply such routes. A ton of oil transported from the Middle East to West Europe via the Cape generates two or three times as much demand for sea transport as the same tonnage of oil shipped from one port to another.

Elasticity of Demand

This measures how quantity demanded of a product or service respond to a percentage change in price. For maritime economics, elasticity of demand indicates the responsiveness of the demand for the different shipping services to a change of the various freight prices. An increase in freight prices will lead to a proportionate decrease in quantity demanded and vice versa.



The actual responsiveness of demand to changes in freight price will be influenced by;

- i) The existence of alternate transport means (e.g. trains, air lines). The more elastic the demand for services offered by one form of transport, the easier it is to substitute these services by other modes.
- ii. The quality of services provided. High standard services generate inelastic demand.
- iii. The adjustment period over the which the change occurs.
- iv. Resultant income of the people.

Effect of Political Disturbances on Shipping Demand

Political disturbances in the form of interparty violence, wars, revolutions, coups, hostilities, political nationalization of foreign assets, electoral violence and chronic large-scale electoral malpractices, non-recognition of ruling parties by shipping giant nations etc affects the readiness and willingness of vessel owners to ply such navigational routes and thus the development of such country's maritime sector and invariably its Maritime trade business volume. We thus admonish that for effective growth and development of the Maritime trade businesses, there should be strong democratic processes in place in such countries laced with solid international diplomacy to continually attract large percentage of Maritime businesses.

Availability of Merchant Fleets

Merchant fleets are fleets used by business merchants to convey persons and or cargos of goods from one country port to another. Countries that have large number of merchant fleets tend to transport more products through the sea than those with less number as this follows a simple rule of demands and supply. This can be enhanced by encouraging indigenous vessel owners to access ship funds from the government particularly through the Cabotage Vessel Financing fund window as this will increase the number of available merchant fleets, bring down maritime transportation costs and cause more indigenous business owners to engage in Maritime trade.

Transport Cost

The freight cost paid by merchants will determine whether they will utilize the option of conveying their merchandize or products through the ship or other modes of transport as this will assist in enhancing their revenues while reducing their costs. It is believed that Maritime transport costs have progressively reduced over the past five decades with ships becoming bigger in size, greater in efficiency at port terminals, and more efficient organization in its operations.

Safety and Sea Security

This is the safety of people and property at sea from all forms of hazards existing on the sea and also, safety of the marine environment from all forms of pollution. The hazards on the sea include attack by pirates and sea marauders, storms and all forms of sea related accidents. The marine security is the security of the ships and port facilities from terrorists and piracy activities and this includes the prevention of ships and transported cargos from being hijacked by sea terrorists and use as terrorist's assets. The patronage of Maritime trade will increase with proper perception of our waterways as being safe to travel on by merchants and the authorities



including the Nigeria Maritime and Safety Agency (NIMASA) are urged to put in place appropriate security apparatus that will safeguard lives and goods within the Nigerian territorial waters and boarders. Also, it is important that relevant incentives and infrastructures are provided to coastal communities within these areas to encourage their involvement in maintaining a safe and peaceful sea life.

Speed

Adequate standards should be put in place to ensure that vessels that meet high international standards are allowed to ply the Nigeria waterways and that meets specified speed limits. This will encourage merchants to utilize local vessel services since they are convinced of the timeliness of their cargo and people transportations.

Technology

One major hallmark of the shipping industry is its operation efficiency and with the advent of the digital age, huge pressure is place on the shipping sector to take advantage of the benefits that new technology must offer. One of such is the increase in online consumer purchases and the need for fast turn-around on handling and shipping times. When there is no physical contact between a brick-and-mortar vendor and the customer for instance, means that the burden of processing the order now falls to the shipping company, in addition to shipping and delivering the product. This increased logistical component, implies adopting new technologies more important than ever. E.g, use of Eco-friendly ships, Automated Ships and Trucks etc.

Demographic Redistributions

Demographics refers to spread and distributions in population and how it affects economic activities. Studies have shown that world's population is concentrated in Asia with China and india being the two most populous countries in that continent while other continents such as North America are experiencing aging populations. The Asian continents are favoured to continue to have high consumer populations and hence, demand for shipping will favour the territory more. Nigeria may as well become the china of African continent and provides opportunity for development of our Maritime trade.

Globalization

Globalization involves bring buyers and sellers of commodities and services in remote locations in the world together through the instrumentality of electronic trade. Container shipping and availability of container transport services will help to stimulate global world trade, making it feasible for buyers and sellers to exchange products or cargo of goods and services over long distances through the sea. Hence, the shipping industry serves as a globalization nexus to connect exporters and importers as well as facilitate trade exchanges.

Congestion and Delays

Port congestions is the overcrowding of the port terminals with container ships before the clearance of such containers at the wharf. This will result to delays in cargo clearing and demurrage payments by importers. Congestion may be caused by introduction of new legislation and tariffs by the government, change in operation procedures, peak seasons, government shut down of the ports etc. Congestions of vessels may result to container trucks



blocking the major highs for upward of two to three weeks or more causing all sorts of hold-up and traffic delays. Maritime trade will grow in countries that have well developed port and infrastructure systems and experiences minimal seaport congestions and delays.

New Legislations to Increase Safety and Reduce Environmental Pollution

Maritime trade tends to increase in countries with greater safety legislations with appropriate legislative framework that minimizes environmental pollutions. Government of countries are encouraged to put in place suitable adequate legislation that will aid reduction in environmental pollutions due to its adverse health implications.

Shipping Speculators

Future forecasts in the shipping sector could often increase or reduce demand for Maritime transportation. More investments in shipbuilding will be experienced where speculators are of the view that volume of cargoes to be transported through the waterways will increase in the future. Also, using media power and the electronic prints could favour a surge in Maritime trade.

Transport Reliability

Merchants are willing to pay premium on shipping freights for shipping services that provide timely delivery of their containers or cargoes. The patronage of Maritime trade will rise when shippers are convinced of the delivery timeliness of their merchant cargoes.

Availability of Transport Substitute Mode

Transportation of goods may be carried out by merchants using different transport modes. Shipping will be preferred where the goods concerned is of low cost and very high volume.

Dispersed Manufacturing

Some years past, Japan had the biggest manufacture hub in the world but today, it has shifted to China that manufacture the biggest volume of consumer goods and about one-third of the world's container traffic movement is within China. It is projected that in the nearest future, the world manufacturing hub may shift to other economies and it's the country with very large and well-developed seaport that will be able to host such global manufacturing explosion.

New Port Reforms

New reforms and legislations will help to increase shipping services efficiencies and demand for shipping services. We therefore, urge the various government agencies and authorities to put in place appropriate infrastructures that will assist in the implementation of modern port reforms in Nigeria.

CONCLUSION AND RECOMMENDATION

This paper reviews main theoretical ideas on shipping and productivity of Maritime trade. Although, technology should have had an important impact on shipping freights, the difference between two periods is mainly derived from globalization of shipping service. We have also



seen that participation in sea borne trade has improved in Nigeria over the years, there is still potential capacity to improve and this is hindered by fear of high cost of transport and huge capital demands in the entire engagement. It is therefore noteworthy to say that government deepening of sea coasts and port anchorage to welcome bigger vessels and raising awareness of Maritime trade in the country is vital to increase our carrying capacity and long-run improvement in international Maritime trade.

Based on the foregoing, we recommend that:

- i. The government and its agencies should undertake the full and speedy implementation of the 2016 Port reforms in Nigeria and the supporting 2017 federal executive order.
- ii. There is urgent need for indigenous vessel operators to be given access to the cabotage vessel financing fund through the establishment of a Maritime infrastructural and Sustainability Bank, to help drive the development of the Maritime industry and Maritime trade in Nigeria.
- iii. There is need for confidence building by the government in the minds of local and foreign merchants on safety and security of our waterways, to attract increased global Maritime trade businesses.

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