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A Critical Evaluation of the Challenges and Opportunities of Shipping Line Services in Nigeria

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Research Article

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ABSTRACT

This paper reviews the nature, characteristics, trends, and problems associated with shipping line services as regards movement of cargos from one port of origin to other port of destination. Over the years, these critical services have never been encouraging due to some inherent problems associated with ship owners, shipping company, consignees, consignors and the freight forwarders as it relates to cost of freight, which is not in the interest of the importers. The paper also analyses the critical challenges and opportunities of the shipping lines in terms of freight costs and movement. There is need therefore for the study to look also on the problems/ challenges and opportunities of shipping line services in Nigeria which came as a result of the slow rate of growth of the Maritime industry in Nigeria and the need to critically analyse the situation. The maritime industry being one of the world's most international industries is the bedrock of development. Primary and secondary data were used in the work. Interviews were also conducted which where necessary and questionnaires were administered to the respondents. The questionnaires were distributed among the staffs of Maersk Nigeria limited and Ideke Shipping limited. 89 out of the 100 distributed were returned. In analysing the data, comparisons were made by the use of percentages and ratios. Chi-square test of independence was used to determine if there is any significant relationship between the activities of pirates and the profitability of shipping lines. It was then discovered that there is a significant relationship between government policies and shipping operations, between the activities of pirates and the profitability of shipping lines and that adequate cargo handling machines leads to faster turn-round time of vessels.

Keywords: Shipping lines, shipping company, shippers, cargo, opportunities and challenges, Ports and Maritime industry.

INTRODUCTION

Maritime transport which is also called water borne transport is one of the modes of transportation of goods and /or persons, which has for centuries been the main prerequisite for trade transactions between nations and regions, and has without doubt, played an important role in creating economic development and prosperity(Igbokwe, 2001).

The maritime industry occupies a very prominent position in the economies of nations all over the world. The industry in its strict sense embraces all business activities which take place within the maritime environment. These includes offshore economic activities such as fishing, salvage, towage, underwater resource exploitation/extraction, and onshore economic activities in ports, shipping activities, ship construction, repair and maintenance. Of all these, shipping stands out as the greatest boost to a nations economic growth and international status. This is because all other maritime activities revolve around shipping. The oil and gas sector, for instance depends on shipping, as it is the vehicle that drives it, enabling it to make all the difference in an economy. Due to the close link between shipping activities and economic development, most nations cannot afford to toy with the industry (Ndikom, 2011).

Shipping as one of the world's most international industries makes seaborne trade in a sense at the apex of world economic activity. As business has become more international, and newly industrialized countries have taken their place alongside the Organization for Economic Corporation and Development (OECD) countries, the maritime industry has provided the vehicle for an extraordinary growth of trade. This has also led to the progression from a world of isolated communities to an integrated global community (Stopford, 2003).

Shipping is a complex industry and the conditions which govern its operations in one sector do not necessarily apply to another. In terms of its main assets, the ships vary widely in size and type. They provide the whole range of service for a variety of goods, whether over shorter or longer distances. The shipping market is made of the liner shipping, tramp shipping, bulk shipping, the charter market etc. And because shipping is a service industry, ship demand depends on several factors including price, speed, reliability and security (Stopford, 2003).

Maritime transport is essential to the proper operation of any country's economy and a vital part of a nation's transport infrastructure. A minister of transport in the federal republic of Nigeria was once quoted to have said that transport is to the Nigerian economy what the artery is to the blood circulation (Igbokwe, 2011).

In Nigeria, there are shipping lines involved in the transportation of cargo like oil, bulk cargo and finished goods to and from Nigerian ports.

Coming to the area of study, Maersk line is a sub division of the AP Moller-Maersk group and is involved in terminal operations, supply services, drilling and oil tanker services to a number of users in Nigeria. Its headquarters is based in Copenhagen Denmark with subsidiaries and offices in more than 135 countries worldwide, which houses a worldwide container services, logistics and forwarding solutions and terminal activities under the brand names (Maerskline.com, 2012).

Maerskline is the largest operating unit in AP; Moller- Maerskline operates in over 550 vessels and has a capacity of 2.2 million TEU (Twenty foot Equivalent Units). It is currently the largest container shipping in the world (Maerskline, 2012).

AP Mollers-Maersk's independent APM Terminals business unit with its separate headquarters in the Hague, Netherlands, Operates a Global Port, Terminal and Inland services Network with interests in 56 ports and container terminals in 36 countries on five continents.

A.P Moller-Maersk's independent A.P.M Terminals is the Terminal operator at Apapa container Terminal. Maerskline Nigeria commenced services in 1953, initially working under agents like John-Holt shipping Nigeria Limited, and registered its corporate entity in Nigeria on February 2nd 1988. Their main office locations include Lagos, Port-Harcourt and Kano (Maerskline.com, 2012).

Statement of the Problem

Over the years, the operations and services rendered to users within the confines of the operating environment have not been satisfactory due largely to lack of shipping policy and some government policy inconsistencies. Shipping operations and services have over the years been dominated by foreign shipping companies and vessels of which Maersk-line is inclusive.

Therefore, a critical analysis of the challenges and opportunities facing these shipping lines and services in Nigeria is very important. Also many factors like the management of bunker, activities of pirates, application of information and communication technology, safety practices and ship turn round time affect the growth and survival of a shipping line.

Some shipping lines know this fact. While some have taken the lead in innovating trends that would help them overcome these challenges, others sit with no attempt to innovate; still waiting for the changes to blow them away.

Objective Of The Study

Shipping stands out as the greatest boost to a nation's economic growth and international status. This is because almost all other maritime activities revolve around shipping due to the close links between shipping activities and economic development; most nations cannot afford to toy with this industry.

This study is intended therefore to:

- Explore the current trends in shipping line operations.
- Determine the factors that hinder effective and efficient shipping line operations in Nigeria.
- Analyse the challenges and opportunities of shipping line operations in Nigeria.

Research Questions

Shipping operations are vast and therefore, the need for it to be carried out efficiently and effectively; which brings us to asking the various questions.

In Nigeria, we once had the Nigerian National Shipping Line (NNSL) which went under in 1995. Based on this, a number of research questions follow:

- What is the future of shipping line operations in Nigeria?
- What are the shore-based initiatives that will influence ship operations?
- How do you leverage integrated Communications and Information technology to drive fleet performance?
- How do government policies affect shipping line operations and services?

Research Hypotheses

The research hypotheses are as follows:

- There is no significant relationship between government policies and shipping operations.
- Adequate cargo handling equipments do not lead to faster turnaround time of vessels.
- There is no significant relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines.

Significance of Study

The operations carried out by shipping lines are complicated as much they are technical. And as we know, the shipping industry drives national economic development. Also for any shipping line to remain on top in the industry, it needs to keep abreast with the current trends, the market and technological factors that drive efficiency.

A lot of factors affect the effectiveness and efficiency of a shipping line's operations, ranging from the port infrastructure, bunker management strategy, safety practices, government policies, ship replacement technique etc.

A critical investigation and analysis of these shipping operations will bring to the fore, more insight into the opportunities and challenges being faced by shipping lines in Nigeria, so as to help keep managers and students abreast of the survival techniques in the ever competitive shipping industry.

The business of shipping is a world encircling enterprise whose devotees must have a vast knowledge of matters great and small.

Method

Research Design: The cross-sectional survey research design, which involves the use of questionnaires and interviews were adopted in this study using simple randomly sampling technique; a total of one hundred respondents were drawn from Apapa and Tinian Island Ports, Lagos, Nigeria. This design was chosen because it provides appropriate methodology for opinion and perception of human behaviour and operations of the shipping lines services to her customers.

Instrumentation

A self developed close-ended 21 item questionnaire entitled, "A critical evaluation of the challenges and opportunities of shipping line services in Nigeria, was developed and used for data collection. This questionnaire was structured to generate information with respect to the research questions earlier stated. Content validity for the instrument was ascertained by technocrats, and professionals within the maritime industry. The reliability was ascertained using the test-retest method with an intervening interval of one week between the first and second administrations of the questionnaire. The reliability coefficient of 2.36 was obtained.

Method of Analysis

Obviously only 96 copies out of 100 questionnaires distributed which were properly completed were analysed for study. The data derived from the procedures were analysed using frequency counts, simple percentages and chi-square was used to test the hypothesis at 0.05 alpha levels.

Data Analysis (Testing of Hypothesis)

Analysis of Questionnaire

Table 4.1: Showing the gender distribution of Respondents

Sex	Number of respondents	Percentage
Male	71	79.78
Female	18	20.22
Total	89	100%

Source: Field survey (Ogbu, 2012)

DISCUSSION

As presented in table 4.1 above, 79.78% of the respondents were male, while the rest 20.22% of the respondents were female. This indicates that the majority of the workers in the company are male.

Table 4.2: Showing the different departments exposed to by respondents

Departments	Number of respondents	Percentage
Operations	20	22.47
Finance	13	14.61
Marine	18	20.22
Administration	11	12.36
Warehouse	11	12.36
Others	16	17.98
Total	89	100%

Source: Field survey (Ogbu, 2012)

Discussion

Table 4.2 above shows that 22.47% of the responds were from operations department, 14.61% from finance, 20.22% from marine, 12.36% from administration, 12.36% from warehouse while 17.98% from others. This implied that majority of Maersk and Ideke shipping staff comes from operations department.

Table 4.3: Showing the number of years worked in the company

No of years	Number of respondents	Percentage
1-2	20	22.47
3-5	18	20.22
6-10	11	12.36
11 and above	40	44.95
Total	89	100%

Source: Field survey (Ogbu, 2012)

Discussion

From the table above (4.3), 22.4% of the respondents were in the working year's range of 1-2, 20.22% were in the working year's range of 3-5, 12.36% were in the working year's range of 6-10 while 44.95% were in 11 and above. From this, it is showed that most of the company's workers have worked for 11 years and above in the company

Table 4.4: Showing how government policies affect shipping line operations and services

Alternative option	Number of respondents	Percentage
Positively	30	33.71
Not positively	53	59.55
Neither	6	6.74
Total	89	100%

Source: Field Survey (Ogbu, 2012)

Discussions

From the table above (4.4), it is observed that 33.71% of the respondents agreed that government policies have affected shipping operations positively, 59.55% agreed that it did not affect shipping operations and services

positively while 6.74% were undecided. From the analysis, it is accepted that Nigerian government have not affected shipping operations positively.

Table 4.5: Showing that the establishment of free port zones in Nigeria will boost maritime cargo traffic

Alternative option	Number of respondents	Percentage
Yes	69	77.53
No	15	16.85
Neither Yes nor no	5	5.62
Total	89	100%

Source; Field Survey (Ogbu, 2012)

Discussion

From the table above (4.5), it is observed that 77.53% of the respondents agreed that the establishment of free port zones in Nigeria will boost maritime cargo traffic, 16.85% agreed that it will not boost maritime cargo traffic while 5.62% neither agreed nor disagreed that it would boost cargo traffic. From this analysis, it is accepted that the establishment of free port zones will boost maritime cargo traffic.

Table 4.6: Showing whether integrated ICT could drive fleet performance

Alternative option	Number of respondents	Percentage
Yes	73	82.2
No	10	11.24
Neither Yes nor no	6	6.56
Total	89	100%

Source: Field Survey (Ogbu, 2012)

Discussion

From (4.6) above, 82.2% of the respondents affirmed that integrated ICT improves fleet performance, 11.24% negated the idea that integrated ICT improves fleet performance while 6.56% neither affirmed or negated the idea that integrated ICT improves fleet performance.

This answers our research question whether integrated ICT could improve fleet performance.

Table 4.7: Showing the percentage of respondents from Maersk and Ideke

Maersk	Ideke	Percentage	
43	46	48.31	51.69

Source: Field Survey (Ogbu, 2012)

From the above table, 48.31% of the respondents come from Maersk Nigeria limited while 51.69% come from Ideke shipping.

Table 4.8: Showing whether the dominance of foreign carriers over indigenous ones poses a threat to the Nigerian economy

Alternative option	Number of respondents	Percentage
Yes	66	74.16
No	10	11.24
Neither Yes nor no	13	14.6
Total	89	100%

Source: Field Survey (Ogbu, 2012)

Discussion

From table 4.7 above, 74.16% of the respondents agreed that the dominance of foreign carriers over indigenous ones poses a threat to our economy, 11.24% did not agree while 14.6% neither agreed nor disagreed. Hence from the percentage given above, it is agreed that the dominance of foreign carriers over indigenous ones poses a threat to our economy.

Testing of Research Hypotheses**Hypotheses 1:**

Ho: There is no significant relationship between government policies and shipping operations and services.

HA: There is a significant relationship between government policies and shipping operation and services.

Solution

From question 9 of the questionnaire, in which was asked whether government policies do affect shipping operations, from the respondents, we got

Alternative option	Maersk	Ideke	Percentage
Yes	27	15	42
No	13	26	39
Neither Yes nor No	3	5	8
Total	43	46	89%

Let α level of significance be 0.05. Since this is a 3x2 contingency table, the degree of freedom is $(3-1)(2-1) = 2$. Hence the critical value is $\chi^2_{0.05}(2) = 5.991$.

Expected frequency = $\frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$

$$C_{11} = \frac{42 \times 43}{89} = 20.3, C_{12} = \frac{42 \times 46}{89} = 21.7, C_{21} = \frac{39 \times 43}{89} = 18.8$$

$$C_{22} = \frac{39 \times 46}{89} = 20.2, C_{31} = \frac{8 \times 43}{89} = 3.9, C_{32} = \frac{8 \times 46}{89} = 4.1$$

Alternative option	Maersk	Ideke	Percentage
Yes	20.3	21.7	42
No	18.8	20.2	39
Neither Yes nor No	3.9	4.1	8
Total	43	46	89%

$$\chi^2 = n \sum \frac{(O_i - E_i)^2}{E_i} = \frac{(27 - 20.3)^2}{20.3} + \frac{(15 - 21.7)^2}{21.7} + \frac{(13 - 18.8)^2}{18.8} +$$

$$n=1$$

$$\frac{(26 - 20.2)^2}{20.2} + \frac{(3 - 3.9)^2}{3.9} + \frac{(5 - 4.1)^2}{4.1}$$

$$\chi^2 = 8.148$$

Comparing it with the table value $\chi^2_{0.05}(2) = 5.991$,

Since χ^2 is greater than $\chi^2_{0.05}(2)$, we reject the null hypotheses and conclude that there is a significant relationship between government policies and shipping operation and services.

Hypotheses 2:

H₀: Adequate cargo handling equipments do not lead to faster turn-round time of vessels.

H_A: Adequate cargo handling equipments lead to faster turn-round time of vessels.

Solution

From question 6 asked in the questionnaire, whether adequate cargo handling equipments lead to faster turn-round time of vessel, the following results were collected:

Alternative option	Maersk	Ideke	Percentage
Yes	30	21	51
No	3	16	19
Neither Yes nor No	10	9	19
Total	43	46	89%

Let α level of significance be 0.05. Since this is also a 3 x 2 contingency table, the degree of freedom is $(3 - 1)(2 - 1) = 2$. Hence the critical value is $\chi^2_{0.05}(2) = 5.991$

Using Row total x column total to calculate the expected frequency table
Grand Total

We have

Alternative option	Maersk	Ideke	Percentage
Yes	24.6	26.4	51
No	9.2	9.8	19
Neither Yes nor No	9.2	9.8	19
Total	43	46	89%

$$\chi^2 = n \sum \frac{(O_i - E_i)^2}{E_i} = \frac{(30 - 24.6)^2}{24.6} + \frac{(21 - 26.4)^2}{26.4} + \frac{(3 - 9.2)^2}{9.2} + \frac{(16 - 9.8)^2}{9.8}$$

$$n=1$$

$$+ \frac{(10 - 9.2)^2}{9.2} + \frac{(9 - 9.8)^2}{9.8}$$

$$= 1.19 + 1.11 + 4.18 + 3.9 + 0.07 + 0.07 = 10.52$$

Comparing it with the table value, since χ^2_c is greater than $\chi^2_{0.05}(2) = 5.991$, we reject the null hypotheses and conclude that adequate cargo handling machines lead to faster turn-round time of vessels.

Hypotheses 3: Using Spearman rank correlation

Ho: There is no significance relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines.

HA: There is significant relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines.

Solution

From question 7 of the questionnaire in which I asked if the activities of pirates in Nigerian waters affect the profitability of shipping lines.

COMPUTATION TABLE

S/N	DEPTS	YES	NO	RANK (X)	RANK (Y)	Difference (x-y)	D ² (x-y) ²
1	OPERATIONS	11	9	1	1	0	0
2	FINANCE	8	5	4	5	-1	1
3	MARINE	10	8	2	2	0	0
4	ADMIN	7	4	5	6	-1	1
5	WAREHOUSE	5	6	6	4	2	4
6	OTHERS	9	7	3	3	0	0
							$\sum d^2 = 6$

Using Spearman correlation formula,

$$Y_s = 1 - \frac{6 \sum d^2}{n(n^2 - 1)} = 1 - \frac{6 \times 6}{6(36 - 1)} = 1 - \frac{36}{6(35)} = 1 - 0.171 = 0.829$$

$$Y_s = 0.829$$

This shows a correlation between the variables. To examine the strength of this positive correlation;

$$t_c = Y_s \sqrt{\frac{n-2}{1-Y_s^2}} = 0.83 \times \sqrt{\frac{6-2}{1-(0.83)^2}} = 0.83 \times \sqrt{\frac{4}{0.31}} = 0.83 \times 3.592 = 2.981$$

Decision

Degree of freedom = $n-2 = 6-2 = 4$

The critical value of t for $\alpha = 0.005$ and degree of freedom which is 4 is 2.1318

Thus, $t_c = 2.981$ and $t_{0.05}(4) = 2.1318$

Since t_c (2.981) is greater than $t_{0.05}$ (2.1318), we reject the null hypotheses (H_0) and accept H_A ; and conclude that there is a significant relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines.

DISCUSSION OF FINDINGS

From the number of respondents I had, I found out that the numbers of male working in the shipping companies are far greater than the female.

I also found out that from people's opinion, that they believe that the establishment of free port zones in the country will boost maritime cargo traffic. This is because it provides incentives to shipping lines and shippers and also its attendant minimum bureaucracy will fast-track cargo movement.

From the analysis made, it was also discovered that the dominance of foreign carriers over indigenous ones poses a threat to the Nigerian economy. This is so because according to Indigenous Ship Owners Association of Nigeria (ISOAN), argued that Nigeria loses about \$300 million annually in capital flight to foreign shipping lines operating in Nigerian waters.

Fourthly, it was also found out that integrated ICT drives fleet performance as it saves a lot of time which is very important in shipping. It is applied in the areas of container loading and tracking, freight payment and general ship management.

From the first hypotheses tested, it was discovered that there is a significant relationship between government policies and shipping operations. This shows that the policies government make on the maritime sector really affects shipping operations. In Nigeria, due to the inconsistency or non-existent of a sound maritime policy, this has led the shipping industry to grow at a very slow pace.

From the second hypotheses tested, it was discovered that adequate cargo handling equipments lead to faster turn-round time vessels. This shows us that if modern handling equipments and facilities are available, ship turn-round time will be reduced. Ugwoke (2012) also buttressed this by saying that ship-owners from Europe and Asia shy away from our ports because of the high vessel turn-round time in our ports.

Finally from the third hypotheses tested, it was discovered that there is a significant relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines. This shows that if the activities of pirates are brought to the barest minimum, ship-owners operating in our waters would make higher profits.

CONCLUSION

From the findings, we have seen the factors that can be improved on in order to project the shipping industry to a higher level.

We have seen the challenges facing shipping operations and services which include inefficiency in Nigeria ports, security problems, and the dominance of foreign ship-owners. And also opportunities that abound especially in the area of indigenous lifting of crude oil and the integration of ICT fast-track fleet performance.

We have also established that there is a significant relationship between governments' policies and shipping operations.

That adequate handling equipments lead to faster turn-round time of vessels, and that there is a significant relationship between the activities of pirates in Nigerian waters and the profitability of shipping lines.

It is therefore important that the government should marshal policies that would improve the shipping industry.

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