

(RESEARCH ARTICLE)



Economic implications of maritime piracy related attacks on Nigeria's maritime industry

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Abstract

Due to the increasing rate of economic damages of insecurity to the Nigerian maritime industry with cases of loss of revenue to the federal government occasioned by; high freight charges for Nigeria bound cargoes, high insurance premium changeable on both ships and cargoes, coming to Nigerian and total boy-cut of the Nigerian ports by most shipping lines. The researchers were motivated to carry out a research on economic implications of maritime piracy related attacks on Nigeria's maritime industry. This research was set out to realize some specific objectives while research hypotheses were formulated in this regard to address the objective of this study. Related literatures were reviewed and the research adopted ex-post facto design. Isan E. et al (2004) pointed out that ex-post factor design in research is the type of research in which there is a systematic empirical inquiring in which the researcher does not have direct control of independent variables because their manifestations have already occurred. Data were sourced through secondary means while the hypotheses were tested at 5% level of significance. The result of the analyses indicated that there is no significant relationship between poor performance of maritime industries in Nigeria and piracy activities. It also revealed that there is significant relationship between Nigerian piracy and revenue generation in the oil and maritime sector, also that piracy has recorded significant success in Nigerian territorial waters and that there is significant relationship between Sea piracy and methods of curbing the menace in Nigeria. Based on the revelations of this study, the researchers recommended that radar surveillance of recommended anchorages seaward access to berth, increased random patrols by fast police or coastguard crafts or helicopters be organized, ensuring alignment terminal security staff and port security forces among many others.

Keywords: Sea Piracy; Performance; Maritime; Industry; Nigeria

1. Introduction

Security activities have existed since the birth of shipping and trade. Consequently, they are perceived as an interesting historical problem associated with killing, manning and most especially loss of goods and merchandizes. Insecurity and ports associated with insecurity are boycotted by shipping lines. International maritime piracy is a growing phenomenon, particularly in its disruption of the main trade route linking Europe and Asia. According to the International Chamber of Commerce (ICC), in 2011 Somali pirates hijacked 47 vessels, took 867 crewmembers hostage and carried out no less than 217 violent attacks on ships. All this took place after the United Nation Security Council (UNSC) passed a resolution authorizing the deployment of a sizeable naval force in the region to protect ships and their

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crews. From the economic point of view, piracy affects international trade through an increase in insecurity related to the prompt delivery of the goods transported.

Recent research has dealt with various sources of insecurity (corruption, piracy, terrorism) by modelling the long-term effect insecurity has on trade (Anderson 2008; Anderson and Bandiera 2006; Anderson and Marcouiller 2002, 2005).

In recent years, there is a substantial increase in the number of incidents of hijacking of ships and hostages or its crew members demanding for huge amount of ransom money especially along the Niger Delta region. According to IMB statistics 2006 a record as high as 25 incidents of hijacking was reported and recorded and 191 crew member were taken hostage in Nigerian waters. Also, information from the Onne port by Integrated logistics Services (INTELS) says that a total of 17 attacks at berth 2006. The attacks caused the death of 4 crew members on board and result in an extensive damage to the sea hull and serious oil pollution to the environment with about 90,000 barrels of the oil being released into the high sea (IMS 2006). The yearly estimated cost of insecurity activities (piracy) relative to Nigerian economy stood at 200 million USD in 1977, the subsequent years and did not fare better as the average loss to Nigeria economy stood at 200 million USD. Onne port is one of the busy ports in the Niger Delta region in Nigeria. A part from handling general cargoes, it also handles specialized traffics such as oil tools and equipment consequently, the port has its own share of the ugly experience of piracy activities in the region.

The problems led to this research work include;

- There is high level of economic damages of insecurity to the Nigerian maritime industry leading to loss of revenue from the federal government.
- As a result of the above, there is a high freight charge for Nigeria bound cargoes that led to diversion of cargoes to neighboring ports of cotonu, etc, high insurance premium changeable on both ships and cargoes, coming to Nigerian and total boy-cut of the Nigerian ports by most shipping lines for safer ports and the cargoes smuggled back to Nigerian ports with their concomitant bad reputation and economic waste.
- Total reduction of the performance of Nigerian Maritime Industries, hence reduction of oil revenues accruable to the federal government.
- Increase in the success rates of piracy activities in the recent time as militants have also vowed to return to the creeks as the new democratic government of President Mohamadu Buhari takes over. The activities of the militant youth always bear a disturbing trend to shipping activities in the port.

The need to curb this menace in other to increase the performance of the Nigerian Maritime sector as well as increase revenue to the government motivated the researcher to carry out this work. This brings to the fore the following questions; what is the extent of performance of maritime industries in Nigeria due to piracy activities and the effects of piracy on oil revenue in Nigeria? Also one would need to ask the extent pirates succeed in Nigerian territorial waters and what ways has could Sea piracy in Nigeria be curbed?

The aim of the study is the economic implications of maritime piracy related attacks on Nigeria's maritime industry. Specifically, the study determines the extent of poor performance of maritime industries in Nigeria due to piracy activities, the effects of piracy on oil revenue in Nigeria, rate of success recorded by pirates in their piracy activities in the Nigerian territorial waters as well as the methods by which Sea piracy in Nigeria could be curbed.

2. Literature review

1.1 Conceptual Framework

2.1.1 Conventions and Definitions

Natural attributes, marine under writes, international convention and international organization such as IMO and IMB defined "piracy" in different ways. Abhyankar (2001) stated that contemporary piracy was not a pressing problem until mid 1980's, the definition of piracy as per international conventions is out or found with present day scenario. Firstly, the conventions, incidents that are state sponsored or politically motivated are not deemed to be practical attacks. Presently, most attacks take place in territorial waters and relatively not many on the high sea. This can cause confusion when suppression needs to be considered under the relevant convention.

2.2 The reasons for Piracy

Abhyawkar (2012) suggested three principal factors that attribute to piracy and armed robbery against ships, and OCIMF suggested eight factors for the deteriorating piracy situation.

The economic factor is one of the most significant reasons for piracy. In many part of the world was thought to be an acceptable part of the local culture and in some parts of the south East Asia it was considered a normal but illegal means of making money. With violence in common place, these communist saw no normal repugnance in adopting piracy as a means of supplementing their income. Moreover, in some communities, piracy was the only means of survival as agrarian and economic conditions were never sufficient to sustain such communities knew they would starve but for the income the piracy provided.

2.3 Political Factors

The rapid political changes that have taking place in the country since independent both at national and state levels also had an unfortunate negative effect on piracy especially in the Niger Delta region in which the location Onne Seaport is not an exception where some areas claims to have been marginalized by others in political matters. Historically, piracy was suppressed by attacking the land bases of pirates.

2.4 Eight factors suggested by OCIMF

The OCIMF suggested eight (8) factors for the deteriorating piracy situation as follows;

- The decreasing policies of the high seas by the navies.
- The limited and reducing resources of many developing nations to detect and deter armed gangs.
- The low priority of allocating scarce national resources to protect foreign seafarers.
- The decreasing size of ship crew makes detention and resistance less likely.
- Political instability and an economic hardship in some parts of the nation.
- The increasing sophistication and boldness of armed gangs.
- The culture in part of the developing world where piracy is an accepted, if illegal, form of income.
- The growth of organized crime worldwide, much of which is drug related.

Another factor is that many attacks are not reported to the authorities. If the master reports a crime, he can expect the authorities to take witness statements and make investigations that may delay the ship by days. The relatively financial loss of personal effects is clarified by the loss of even a day's loss of charter hire. Given this scenario it is not surprising that some few attacks are officially reported to the authorities (Ndikom, 2003).

2.5 The ISPS Code

This is the international ship and port facility security code. It is an IMO policy initiative that ignited as a result of the devastating attack of the thermoses, it is a form of regulation that actually seem outline minimum security standards for ships and ports facilities, employed in maritime commerce. It was adopted at the 2002 SOLAS conference by IMO members, held in London under the new regulations set out in chapter X – 2 of SOLAS, 74' which significantly connotes specific measures to enhance maritime security and safety process at both the ports and ships, it took-off on 1st July, 2004 worldwide.

2.6 An overview of the ISPS code

The code applies the ship engaged in international voyage including passenger ships, cargo ships or 500 gross tonnages and above mobile offshore drilling units (MODU) and port facilities serving those ships. It does not apply to warships, naval auxiliary ships and government ships used for non commercial services.

2.7 Port Facility Security Plans Compliance

This indicates the level of security plan readiness by relevant authority in ensuring the successful implementation of the ISPS code, since its take-off date in Nigeria. The security, safety plans and compliance at the Onne port has are very high and recommendable.

2.8 Port Facility Security Plan

The PFSP is an equivalent plan developed to protect the port facility and its contents from the risk or security incidents. Similarly, it is prepared based on a ports security assessment (PFSA). Information must also be made available to CSO and SSO together with contract details of the relevant PFSO.

2.9 Ship Security Plans (SSP)

The ship security plans is a plan developed to protect the ship and its contents from the risk of a security incidents, it is prepared based on a ship security assessment (SSA) which will identify the features with the practical ship, potential threats and its vulnerabilities. The SSP is then drawn up to address this issue and provide details for security measures to be carried out in response to the identified security levels.

2.10 The Company, Ship and Port Facility Security Officer

The company security officer (ISO) is a person deputed by the company responsible for the ship security plan and liaises with the ship and port facility security officers. The ship security officer (SSO) is a person on board the ship designated by the company responsible for the implementation and maintenance of the port facility security plan and to liaise with the ship and company security officers.

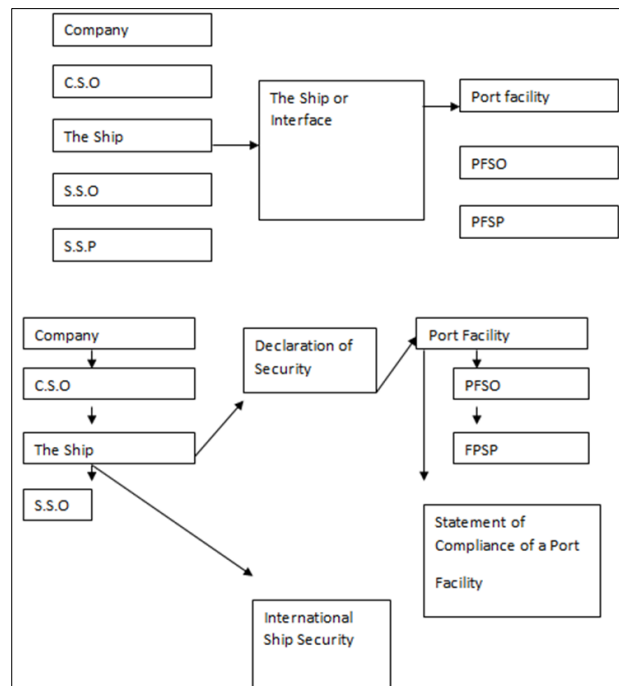


Figure 1 The relationship between the company, ship and port facility and the certificate in relation to the ISPS code

2.11 Nigerian piracy in 2013, by the numbers

The aggregate of piracy incidents collected by the IMB Piracy Reporting Center and the US Office of Naval Intelligence in 2013 indicates a resurgence of maritime piracy off the coast of Nigeria. In waters south of Brass, east of Port Harcourt and in the vicinity of the Lagos anchorage, there were a total of (36) reported pirate attacks last year, compared to (27) incidents in 2012 and (10) in 2011. The surge in attacks is the highest since 2008, when total of (40) incidents were reported. The attack success rate has fallen to 55%, due to vigilant mariners and effective countermeasures like evasive maneuvering and ship board security.

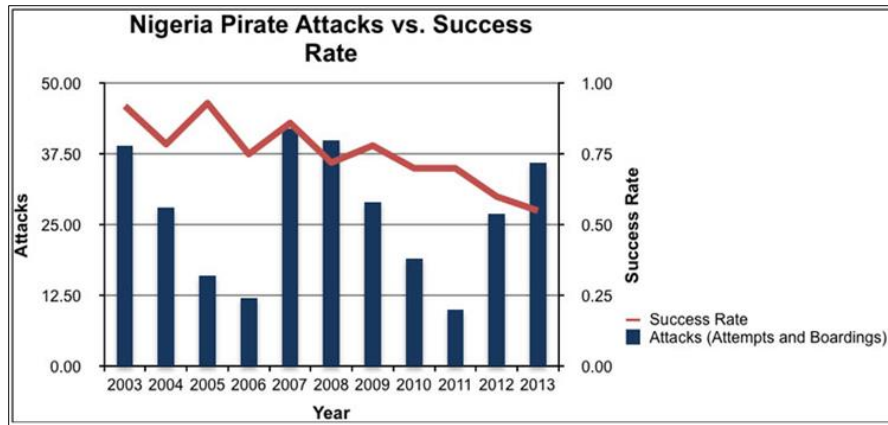


Figure 2 Nigerian pirate attack vs success rate

2.12 Targeting

Tankers continue to be the target of choice with (14) attacks in 2013, up from (10) in 2012 and (5) in 2011. The high volume of tankers in the region, their relative ease of accessibility, lack of shipboard security and high-payoff cargo and personnel make them the most consistently victimized vessels in West Africa. Supply ships and containers were also popular targets last year with (5) and (6) attacks respectively. However, Nigerian pirates were not exclusive in their target selection. Other targets of opportunity such as bulk carriers, tugs, cargo and even passenger and Nigerian security vessels fell victim to attack in the Gulf of Guinea and the Niger Delta’s inland waterways.

2.13 Location

2.13.1 Lagos

Attacks in Nigeria’s western waters remained steady. In the vicinity of Lagos, there were (5) reported attacks compared to (7) in both 2012 and 2011. All five reported attacks took place in close proximity to the Lagos anchorage and consisted of both robberies and abductions. Maritime piracy in Lagos remains largely unrelated to the Niger Delta insurgency and the faltering amnesty agreement. Lagos, however, continues to be plagued by similar socioeconomic problems that are conducive to pervasive criminality, such as youth unemployment, corruption and poor security.

The apparent inability of the Nigerian Navy and Coast Guard to secure the waters off of Lagos has emboldened pirates and oil thieves to extended operations west to waters near Conotou, Benin and Lome, Togo, where ships carrying petroleum products are also prime targets.



Figure 3 Piracy incidents in Nigerian Coast in 2013

2.14 Bayelsa State (Brass and the central Niger Delta)

Waters in the vicinity of Brass hosted (16) attacks last year, up from (12) in 2012 and only (2) in 2011. The (16) attacks off the coast of Bayelsa made waters off of Brass the Niger Delta’s most dangerous in 2013. Attack locations in the

Bayelsa region were evenly distributed, averaging 45NM offshore and ranging from inland waterways up to 96NM offshore.

2.15 Rivers and State (Port Harcourt and Bonny)

Nigeria's eastern waters south of Rivers State in the vicinity of Bonny and Port Harcourt experienced a surge in attacks in 2013. The region experienced (7) reported attacks, up from a total of (4) incidents in the region in 2012 and only (1) in 2011. Event locations were evenly distributed, ranging from the inland waterways of Rivers State to 174NM offshore.

2.16 Akwa Ibom (Bight of Bonny and the southeastern Niger Delta)

Nigeria's southeastern most region suffered a spike in pirate attacks beginning in June 2013. The (7) attacks ranged from the inland waterways of the Calabar River to the Bight of Bonny and 80NM south of Akwa Ibom. The attacks were the first reported piracy incidents in the region since 2010. The late 2013 surge in attacks is likely tied to residual militant groups that continue to rely on revenues from maritime piracy.

2.17 Theoretical Framework

2.17.1 The Resource Dependency Theory

Resource dependency theory has its origins in open system theory as such organizations have varying degrees of dependence on the external environment, particularly for the resources they require to operate. This therefore poses a problem of organization facing uncertainty in resource acquisition (Ulrich and Barney 1984) and raises the issue of firm's dependency on the environment for critical resources (Pfeffer and Salancik, 2003).

The maritime industry depends to a large extent on the natural resources of Oil and gas. The external environment therefore affects the activities of the maritime sector to a great extent. The political, environmental, social and technological factors on the external environment hence affect the activities and performance of the maritime industry as it is resource based.

Therefore the activity of the pirates which is a social factor affects the operation and performance of the maritime industry as poor performance will likely result during the period of high piracy activities.

2.18 Empirical Framework: Studies on piracy activities and the performance of the maritime industry

According to Taiwo (2015) in his work "Proliferation of Piracy on Nigerian Waters and its economic effects" "there is no doubt that piracy has been an economic sabotage on the Nigerian economy even its effect has taking a drastic effect on the country's stolen wealth-crude oil. He took a closer look at the proliferation of piracy on the Gulf of Guinea region and how it has affected the West African countries, particularly Nigeria".

The performance of maritime industry however will be affected as ship owners are going to have to start taking precautions such as employing security teams to deal with the security threat." The West African region is an extremely significant exporter of crude oil, with Nigeria, Angola, Equatorial Guinea and Gabon the key producers. Piracy on the Nigeria waters is so worrisome as most of the vessels with stolen petroleum products are always traced to the Nigerian market because the business is a hot cake within the Gulf of Guinea region. The crew on a ship going to Nigeria will be expected to be paid more because of the danger involved and thereby reducing the performance if he is not motivated as such as owners will be asking for higher freight rates too.

"Recently, the Federal Government of former President Goodluck Jonathan bought four patrol ships- NNS Centenary, NNS Prosperity, NNS Okpabana and NNS Sagbama, which were handed over to the Nigerian Navy to help combat piracy on the Nigerian waters. But in spite of the launched ships, the business of piracy is still thriving along the Nigerian waters. Specifically, the economic loss is so inimical as different government agencies including Nigerian Navy and Nigerian Maritime Administration and Safety Agency (NIMASA) have all came out with disturbing figures on the amount of crude oil the country was losing due to proliferation of piracy on her waters. For instance, the Flag Officer Commanding (FOC) Eastern Naval Command, Rear Admiral Charles Obiora- Medani, revealed that Nigeria now loses 800,000 barrels of crude oil monthly to thieves as against over two million barrels monthly at the early part of this year" Taiwo (2015). According to him, NIMASA's effort at countering piracy on the waterways has been an on-going event, adding that it would not rest on its achievements so far recorded on flushing out pirates and kidnappers from Nigerian maritime industry. "If I tell you in the last one month plus, the number of attacks we have foiled in Lagos area and the number of pirates in our custody, it will be alarming; none of them succeeded."Some of them, we have handed them over to the Navy to help us and working with them and civil defense for prosecution; and some of the vessels are in our

custody. "So just take this Lagos area, it will take you the grace of God to go and do an attack because before even the attack, we are going out, we have got information. "Besides the satellite, we have other systems of operations that we can use in getting people (Odeke, 1984, Lee22003). "If you kidnap, we will go after you. That is why we are saying people should not pay for hostages to be released. "We have to go after them, and crush them. Everybody must die one day, that is the truth about it. It is no doubt that piracy on the Gulf of Guinea region has been major problem to West African countries and there is urgent need to stem the frequent attacks on vessels with petroleum products. The areas have been identify to be red tape for tanker vessels plying the region. No doubt, pirate attacks on Nigerian coastal waters is a bad omen for country's image on the international scene and it's also hinder smooth trade facilitation.

2.19 Nigeria loses N21.6trn to piracy in three years

Ukeje (2014), "following the increased activities of the pirates in the nation's coastal and territorial waters, Nigeria lost a total of N21.6 trillion to the sea robberies in three years. Disclosing this at a maritime security and safety symposium in Lagos , Charles Ukeje of the International Relation Department of the Obafemi Awolowo University, said that the figure will continue to rise if urgent steps were not taken to check mate these criminals"

Ukeje, in his paper titled 'Economic Implications of Piracy and other Crimes to the Maritime Industry and the Nigerian Economy' noted that except for 2007 and 2013, the number of pirate attacks on African waters exceeded the global figures in all cases, by more than double. Drawing insights from the Contemporary Maritime Piracy Database (CMPD) between 2001-10, the University don further disclosed that a recent study on 'The Changing Nature of Contemporary Maritime Piracy' published in the British Journal of Criminology (2014) identified the location of piracy, time of attack, target vessel characteristics, motivation for piracy, and capacity to strike over long distances, as some of the emerging trends in pirate attack. He explained that the crime has become so lucrative such that what a pirate makes from one single attack could last him for 20 to 25 years if he lives minimally. Ukeje explained that piracy as product of insecurity and structural deficits cannot be resolved over night, adding that the governments at regional level must make concerted effort to either reduce the menace or eliminate it. He said "Although piracy has emerged as a market on its own right, those who reap the greater revenue are mostly unknown as they operate from underground, Osmin, 2002. "To address the first aspect, it is important to identify some of the key constituencies in the maritime industry and their characteristics". He opined that since pirate attacks are sea base but planned on the land, there is a need to empower the inhabitants of the littoral states cannot be over emphasized. He said that while the ports recorded 270 attacks in ten years, territorial water attacks stood at 173 as against 108 recorded against international water.

3. Methodology

The research design adopted for this study is ex-post facto design. The study population was stated to be Onne seaport Port-Harcourt, Rivers State. But due to the nature of this research work, comprehensive information regarding piracy activities as it relates to the international community were lacked at this port, hence the researcher sourced most of the statistical data from National and international Maritime Bauru, magazine from Onne ports and NPA, internet sources and wide sources of data sources. Regression Analysis was used for testing the hypotheses at 95% level of significance. The nul hypotheses include: There is no significant relationship between poor performances of Nigerian maritime industries and piracy activities. There is no significant relationship between Nigerian piracy and revenue generation in the oil and maritime sector. Piracy has not recorded any significant success in Nigerian territorial waters. There is no significant relationship between Sea piracy and methods of curbing its activities.

The simple regression analysis was used to model the relationship between the dependent and independent variables in the research hypothesis. Hypothesis one is on cost of ransom and the premium paid by the shipping company. Cost of ransom is a proxy for the activities of piracy and premium paid affects the revenue generated by the company, hence, the model for the relationship is

$$Y = B_0 + B_1X_1 + u$$

Where:

Y = Dependent variable (Performance of the maritime industry)

B₀ = Constant

X₁ = Independent variable (Piracy incident)

U= error term

Decision: Accept null hypothesis if the critical F-value is greater than the computed F-value otherwise reject the null hypothesis.

4.1 Data Presentation and analysis

Table 1 Piracy attacks in Nigeria from 2003 to 2012

Year	Piracy incidents	Abduction	Robbery	% success	Kidnap for ransom	Boarding	Failed attempts	Oil Revenue in US\$
2003	40	7	25	90	7	39	4	23
2004	30	1	17	80	1	23	6	28
2005	17	1	10	93	1	15	1	45
2006	12	6	6	75	6	9	4	50
2007	43	8	20	85	8	39	5	53
2008	40	3	15	72	3	25	11	62
2009	29	2	17	77	2	24	6	40
2010	19	3	10	70	2	15	6	55
2011	10	2	7	70	2	7	3	18
2012	27	8	8	60	9	26	11	23
2013	36	13	6	55	10	20	17	32

Y=Piracy; X1=Robbery; X2=%Success; X3=Kidnap for ransom; X4=Boarding; X5=Failed attempt; X6=Oil Revenue

4.2 Test of Hypotheses

Table 2 Regression output

Summary output								
<i>Regression Statistics</i>								
Multiple R	0.989961							
R Square	0.980023							
Adjusted R Square	0.950059							
Standard Error	2.608765							
Observations	11							
ANOVA								
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	6	1335.505	222.5841	32.70575	0.002331			
Residual	4	27.22263	6.805657					
Total	10	1362.727						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-28.5174	14.90472	-1.91332	0.128255	-69.8996	12.86471	-69.8996	12.86471

X1	0.681832	0.491516	1.387204	0.237669	-0.68283	2.046498	-0.68283	2.046498
X2	0.298331	0.197328	1.511854	0.205107	-0.24954	0.846201	-0.24954	0.846201
X3	0.063284	0.500568	0.126425	0.905496	-1.32651	1.453083	-1.32651	1.453083
X4	0.418917	0.32066	1.306421	0.261463	-0.47138	1.309211	-0.47138	1.309211
X5	1.890309	0.448515	4.2146	0.013536	0.645034	3.135585	0.645034	3.135585
X6	0.068405	0.06087	1.123787	0.323984	-0.1006	0.237406	-0.1006	0.237406

3.1.1 Interpretation

$$Y = X_1 + X_2 + X_3 + X_4 + X_5 + X_6$$

where Y (time) is the dependent variable and X1, X2,----- X6 are the independent variables

Degree of freedom is $10-6=4$

The R² of 0.9800 shows that 98% of the variations in X1=Robbery, X2=%Success, X3=Kidnap for ransom, X4=Boarding, X5=Failed attempt, X6=Oil Revenue, hence the model is a good fit since the remaining 2% is captured by the error sources.

3.1.2 Using the joint test to test hypothesis 1

H₀₁: There is no significant relationship between poor performance of maritime industries in Nigeria and piracy activities.

$$F_{0.05, 6, 4}=6.16$$

From the above analysis, since the F-cal (32.7) is greater than the F-table (6.16), X1=Robbery, X2=%Success, X3=Kidnap for ransom, X4=Boarding, X5=Failed attempt, X6=Oil Revenue are jointly influenced by piracy which is the independent variable. Hence the researcher rejects the null hypothesis and concludes that there is significant relationship between performance of maritime industries in Nigeria and piracy activities, using Individual test for significance in testing hypothesis 2-4.

3.1.3 Hypothesis Two

H₀₂: There is no significant relationship between Nigerian piracy and revenue generation in the oil and maritime sector

The computed t-test for X₆ (1.1237) is greater than the critical t-test (1.945), hence the null hypothesis is rejected and the researchers conclude that there is significant relationship between Nigerian piracy and revenue generation in the oil and maritime sector. This is in line with Berkeley (2005), who opined that only the most expensive or well-equipped shipping companies will find it economically feasible to bring imports into piracy-prone waters.

3.1.4 Hypothesis Three

H₀₃: Piracy has not recorded any significant success in Nigerian territorial waters.

The computed t-test for X₂ (1.5118) is less than the critical t-test (1.945), hence the null hypothesis is rejected and the researchers conclude that Piracy has recorded significant success in Nigerian territorial waters.

3.1.5 Hypothesis four

H₀₄: There is no significant relationship between Sea piracy and ways of curbing the pirate activities.

The computed t-test for X₅ (4.214) is less than the critical t-test of X₅ (1.945), hence the null hypothesis is accepted and the researchers conclude that there is no significant relationship between Sea piracy and methods of curbing pirate activities in Nigeria.

4. Results and Discussion

The result of hypothesis one showed that there is significant relationship between performance of maritime industries in Nigeria and piracy activities. This is in line with the work of Taiwo (2015) who asserts that countering piracy on the waterways is a process that will ensure better performance of the maritime industry in Nigeria.

The result of the second hypothesis showed that there is significant relationship between Nigerian piracy and revenue generation in the oil and maritime sector. This is in line with Berkeley (2005), who opined that only the most expensive or well-equipped shipping companies will find it economically feasible to bring imports into piracy-prone waters. The increase in the activities of the pirates will force the company and ship users to increase the cost of insurance of the cargoes and vessels. The result of hypothesis three indicated that Piracy has recorded significant success in Nigerian territorial waters. Taiwo (2015). According to him, NIMASA's effort at countering piracy on the waterways has been an on-going event, adding that it would not rest on its achievements so far recorded on flushing out pirates and kidnapers from Nigerian maritime industry.

The result of the hypothesis four shows that there is no significant relationship between Sea piracy and methods of curbing pirate activities in Nigeria. This could be attributed to the sophisticated weapons that the pirates are armed with compared to the Nigerian security agencies and the high level of collaboration of these pirates with other countries like Somalia and other highly technological countries. Also the poor response of the Nigerian crews and the poor information dissemination in the event of pirate incident could be another reason. Hence these seem to be yielding poor results in the events of curbing the menace and hence contribute to poor oil revenue and overall poor performance of the Nigerian maritime sector.

5. Conclusion

Piracy and armed robbery against ships are threatening not only the sea as its common marine resources, but also the safety and freedom of the sea as the common interest of the world. Without ensuring maximum security on the sea, we can hardly be expected for the development of the global community. The armed attacks on merchant vessels are increasing in their frequency diversity, audacity and ruthlessness. Not only are increasing number of innocent seafarers at risk of being injured or risk of serious pollution if their duties of avoiding tankers are frustrated in their duties of avoiding commission and grounding. Ship masters are already providing with advice on equipment and procedures to deter armed boarding's but realistically their only recourse after boarding's are passive resistance.

The proactive suppression of these armed attacks is not the responsibility of the international shipping industry out of the terminal operators, port authorities, and industry but of the terminal operator's ports authorities, coast guards and relevant local, regional and national government or coastal states. Such bodies face many problems not least the growing sophistication of organized criminals, but only by their commitment and co-operation can the growing problem of armed attacks on ship be contained.

Ship owners and various international shipping organizations such as IMB, IMO, OCIMF, ISF, and ICF etc. have suggested and published many preventive measures and guidelines for mariners in addressing the issue of piracy against ships. On IMB's recommendations, Abhyankar J. (2001) suggested that the most effective way to meet the problem is to prevent the pirates boarding the ship in the first instance. He stressed that the experience of masters, officers and crew is of great use and introduced the following points to address the issue; Look out, radio watch keeping, exhibiting a readiness to respond, not resisting boarders, conduct during an attack and pre-planning and post incident response.

The researchers conclude that Piracy has negatively affected Nigerian revenue generation in the oil and maritime sector and that Piracy has recorded significant success in Nigerian territorial waters. Also from this study, the researchers concluded that there is no significant relationship between Sea piracy and failed attempt of pirate activities in Nigeria.

Recommendations

Based on the objectives of this research work and the findings from the study, the following recommendations are made;

- To increase the performance of maritime industries in Nigeria, piracy activities must be curbed. Some of the ways that should be adopted in curbing Sea piracy in Nigeria include; Vessels should be instructed not to anchor in high risk areas.

- Military activities should be seen in oil facilities and radar surveillance of recommended anchorages seaward access to berth should be ensured.
- Organizing random patrols by fast police or coastguard crafts or helicopters. Ensure all crew members are fully briefed on the action to take in the event of an attack by armed robbers and pirates.
- To increase the oil revenue in Nigeria, successful response to the crime of armed attacks against ships in a particular area is likely to require close co-operation between many parties, including; Ships agent, Terminal authorities, Port authorities, Policies, Coast guard and military authorities and Other local, regional and national civil relevant authorities.
- There are number of ways to improve port security so that officials can prevent acts of armed robbery against ships at anchor or in port, to identify stated vessels and to insist in the apprehension of the criminals by collating and disseminating relevant information concerning piracy incident.
- To increase pressure on countries to investigate piracy incidents and persecute pirate.
- Security agencies should be properly armed to overcome the activities of pirates with international links.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest whatsoever in this research work.

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