

# **MARITIME PIRACY AND ITS EFFECT ON PHYSICAL DISTRIBUTION OF GOODS IN COASTAL COMMUNITIES IN DELTA STATE OF NIGERIA**

Okoro Oliver C.

Department of Marketing Akanu Ibiam Federal Polytechnic,  
Unwana, P.M.B.1007, Afikpo, Ebonyi State, Nigeria. GSM No: 08038410655  
Corresponding Author; Email: olivechikoro@yahoo.com

Asiagwu Catherine E.

PhD, Delta State School of Marine Technology, Burutu, PMB 1060,warri,  
Delta State, Nigeria. GSM No: 07061675648.  
Email: ekenenwaokolie@gmail.com

Ejiofor, Happiness U.

PhD., Department of Marketing Nnamdi Azikiwe University,  
Akwa, Anambra State. Nigeria. GSM: 08033844183  
Email:ulomakene@gmail.com

## **ABSTRACT:**

Maritime piracy and consequent armed robbery on the water ways are one of the major contemporary challenges of the river line communities in Nigeria particularly the Niger Delta Region. This phenomenon has a tremendous impact on physical distribution of goods and services and the security of the waterways. The study therefore investigated the effect of maritime piracy on physical distribution of goods in coastal communities in Delta State. Relevant literatures were reviewed. The study adopted survey research design. The inhabitants of Delta State who are involved in the movement of goods along the inland water ways constitute the population of the study. Hundred (100) respondents were purposively selected for the study. Structured questionnaire was employed to generate data from the respondents. Regression analysis was employed in analyzing the data. The study found that maritime piracy has significant negative effect on physical distribution of goods in coastal communities in Delta State. This

implies that the activities of pirate along the water ways in Delta state have hampered the free flow of goods in the area. The study contends that the long term solution to the problem of piracy is through the creation of economic opportunities so that the youth could be meaningfully employed. Also security activities should be increased on the water ways and at the sea port to curtail the criminal activities of the pirates.

**Keywords:** Maritime Security, maritime Piracy, Armed Robbery, Physical Distribution, Coastal Communities

## **1.0. INTRODUCTION:**

The security of the inland water way is paramount for the maritime sector and coastal communities. Inland water ways are not a platform for transportation of goods and services but they provide resources that support the livelihood to coastal communities. Unfortunately, the security of the maritime environment has been threatened by maritime piracy and armed robbery. Maritime piracy have thrived and regained its status as amongst

the number one threats and contemporary challenges of coastal in Niger-Delta region of Nigeria (Amirel, 2009). Their occurrence varies slightly from a state to another but their impacts are national, regional and global. At some stage, each and everyone bears the consequences of their outbreak in a close or remote manner if they are not prevented or combated.

The great number of incidents of piracy and armed robbery along the inland water ways has become an increasing concern not only for the maritime industry but also to Nigeria as a whole as it threatens internal trade and maritime economic activities. Maritime piracy is having a negative impact on the cost of shipping (for merchandise trade and oil) and shipping related activities (such as port and transshipment activities), tourism and fishing (Mejia, 2003). By hijacking vessels, seizing their cargoes, and delaying or preventing their delivery, piracy poses additional risks and costs to all. The implications entail increased military presence and operations in affected areas, the re-routing of ships, higher insurance premiums, and increased costs associated with hiring security personnel and the installation of deterrent equipment (McNicholas, 2008)..

Maritime economic opportunities in Africa are increasingly being threatened by the growing threat of maritime piracy. Until very recently, maritime piracy has been largely concentrated in Asia. However, in 2007, for the first time since statistics on pirate attacks have been kept, the number of pirate attacks in East Africa surpassed those in Asian waters. This continued into 2009, with attacks in Africa surpassing those in Asia by far. However, reported piracy attacks in East Africa slowed down in 2010 while South China Sea experienced a significant increase. Instances of piracy are monitored both by the International Maritime Organisation (IMO) and by the International Maritime Bureau (IMB), which

acts as a focal point in the fight against all types of maritime crime. The incidents of piracy and armed attacks against shipping increased at an unprecedented rate. Most of the incidents occurred in East Africa and South China Sea (International Maritime Bureau, 2012). Maritime pirate attacks in Africa are concentrated in Somalia and Nigeria. However, the attacks are not limited to these countries.

Incidents of maritime piracy in Nigeria are directly linked to oil production in the Niger Delta. Some pirates claim to be fighting for a fairer distribution of Nigeria's vast oil wealth, and as a protest to the damage caused by oil production in the Delta Region of Nigeria. The cost of maritime piracy to Nigerian society and the economy have been significant, not only to the oil industry, but to local fisheries and regional trade as well. The criminal activities of pirates have affected the effective movement distribution of goods along the waterway particularly the physical distribution of goods. Maritime activities have a big role to play in the economy of the country. Maritime trade or transport is one of the sectors on which relies the economy. Indeed, Nigeria imports in one hand lots of strategic goods such as oil, gas, food, and manufactured items. In other hand, exportation of agricultural products and some of the extracted minerals is done by sea transportation too. Thus, any disruption in maritime transport will strike on the health of the economy of the country. Fisheries and maritime tourism are also very important sectors and they are very fragile when it comes to lack of security at sea (Leeson, 2009).

Historically coinciding with the earliest records of trade, the physical distribution of goods and poor policing of the water ways has always offered an opportunity for pirates to predate on commerceroutes (Gosse, 2012). Maritime commerce routes are particularly susceptible because they offer unique

opportunities for ambush and escape. In addition, they often suffer from the lack of clear jurisdictions, which in turn complicates prosecution, or even capture in most cases. Therefore it is important to strengthen national capacity to prevent and address maritime piracy and armed robbery against ships to sustain the reduced occurrence or the eradication of these crimes. Based on the foregoing, the study investigated the effect of maritime piracy on physical distribution of goods in coastal communities in Delta State.

## **2.0. LITERATURE REVIEW:**

### **2.1. MARITIME PIRACY:**

The word “pirate” originated from the Greek word “peirātés” which means ‘attacker’ or ‘marauder’. Therefore, a pirate is etymologically a person who undertakes an attempt of attack or an actual attack on someone. The definition of the word “Piracy”, which is the acts committed by pirates, has evolved throughout the history depending on the occurrence of the act itself and the modus operandi of the perpetrator as well as the era. If for a long time the notion of piracy has only been related to the sea transportation and maritime activities, the usage of this word has extended to the air transportation sector, to the domain of intellectual property and other fields such as broadcasting. Indeed, nowadays, we talk a lot about air piracy, software piracy, pirate radios and televisions, etc. Hence, the word ‘piracy’ is generally used to refer to illegal acts and unauthorized activity.

Nevertheless, despite today’s random use of the word “piracy” in various fields, it has retained its original reference to the maritime arena depicting acts of hostility, depredation, robbery, or violence perpetrated at sea against a ship, property carried on-board, or persons travelling with the ship either they are crew member or passenger (Chalk, 2012). Maritime

piracy is defined as stated in the LOSC in its article 101 and consisting of the following acts;

- (a) Any illegal acts of violence or detention, or any acts of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:
  - (i) On the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft;
  - (ii) Against a ship, aircraft, persons or property in a place outside the jurisdiction of any state;
- (b) Any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;
- (c) Any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b) above.

Maritime piracy can be defined as the taking of property and persons with violence on or by thesea (Anderson 1995). Unlike its historical predecessors, however, modern piracy is fundamentally a problem of enforcement that could be traced to the poor definition of property rights, and duties, over maritime territory. This type of misalignment is especially acute in international scenarios, where the establishment and enforcement of anti-pirate regulations usually conflicts with sovereign rights. These institutional settings reduce the probability of pirates being prosecuted, or even apprehended, which in equilibrium encourages a continued predation of sea commerce.

### **3.0. IMPACT OF MARITIME PIRACY**

Maritime piracy has an impact on maritime economic activities such as oil production and cost of energy, insurance and shipping costs, tourism and fishing.

### **Oil Production and Cost of Energy:**

Threats to energy security from maritime piracy are a concern. In November 2008, the Sirius Star carrying two million barrels of crude oil from Saudi Arabia to the United States (worth approximately \$100 million) became the largest oil tanker to be seized by pirates (Akinsanmi, 2010). It was held for two months until being released upon payment of a ransom. The attack was of particular concern for two reasons: First, other than being the largest energy vessel ever hijacked, it was also the largest vessel of any kind ever taken hostage. Additionally, it was considerably farther offshore than the Somali pirates had ever operated; it is estimated that the pirates must have travelled three to four days out on sea to intercept the vessel. The attack showed that the pirates were able to operate in an area of over one million square miles, well beyond the reach of the international patrols in the Gulf of Aden.

Second, because of the nature of the cargo, there was concern that the hijacking might represent an escalation in the goals and ambitions of the pirates. An oil tanker of this size could cause significant environmental damage if run aground, sunk or set on fire. More than 10 percent of all seaborne oil passes through the Gulf of Aden to the Suez Canal (Akinsanmi 2010). The alternate route, traveling around the southern tip of Africa, is significantly longer and more expensive. Routing a single tanker from Saudi Arabia to the United States around the Cape of Good Hope adds approximately 2,700 miles to each voyage and about \$3.5 million in annual fuel costs. This could have an impact on shipping costs for imported raw materials and oil.

As world attention focused on the striking increase in piracy in the Gulf of Aden, and dramatic hijackings such as the Sirius Star, the piracy situation in Nigeria was relatively neglected. IMO reports show that

2009 began with the capture of an oil supply vessel and a subsequent attack on a Royal Dutch Shell tanker. Reports show that on 21 January, 2010 militants from the NigerDelta region attacked the MT Meredith, atanker carrying 4,000 tons of diesel fuel, and kidnapped a Romanian crew-member (released a day later). As a result of pirate attacks on vessels and other incidents, oil production in Nigeria is estimated to have dropped by 20 per cent since 2006 costing the Nigerian economy US\$202 million between 2006 and 2008 (Akinsanmi, 2010).

### **3.1. Tourism and Fishing:**

Maritime piracy also imposes significant costs on local fishing economies. According to IMO, pirates attacked tuna vessels at least three times in 2009 as they fished 650 to 800 kilometers beyond Somali territorial waters. One vessel was captured, leading to a ransom payment that exceeded US\$1 million. The threat of pirate attacks has prompted many vessels to avoid some of the richest fishing spots in the Indian Ocean. Dwindling catches have raised concern that the Seychelles and Mauritius could face severe economic problems. The Seychelles chain's economic survival depends not just on its enduring appeal to tourists but to a greater extent on the fishing industry. The Somali pirates are a direct threat to both. Seychelles has 1.4 million square kilometers of ocean as part of its EEZ and 115 islands. Tourism and fisheries account for 65 percent of the country's GDP, employs 36% of the country's workforce. Tuna and related industries, through reexport of fuel to vessels, port services, electricity and water for vessels account for up to 40 percent of foreign earnings. It has been estimated that the cost of piracy alone (not accounting other threats to maritime activities such as pollution, illegal trade, etc) stood at approximately 4 percent of GDP in Amirel, 2009.

The threat of piracy has also led to reduced cruise ships which contribute to tourism in the island countries of Mauritius and Seychelles. The Kenyan Cruise Ship industry has also suffered from the effects of piracy and fewer ships dock in Mombasa. Fishing is the second highest non-oil export industry in Nigeria, and pirate attacks on fishing trawlers have reached the point that many fishing boat captains refuse to sail. Nigeria stands to lose up to US\$600 million in export earnings due to piracy threats to its fisheries (Gabriel, Bivbere&Ugwuadu, (2008).

### **3.2. Cost of Shipping and Insurance:**

The dramatic rise of piracy in the Gulf of Aden is changing the insurance landscape. While piracy is not a new insured risk, the increase in pirate attacks along the Gulf has affected premiums and coverage. Ships which continue to pass through the Gulf of Aden and the Suez Canal have to purchase a war risk insurance coverage. According to a recent report by UNCTAD, insurance premiums for ships traveling through the Gulf have rose from between 0.05% and 0.175% of the value of their cargo, compared to between 0% and 0.05% in May 2008 (UNCTAD, 2009). Premiums for kidnap and ransom coverage have reportedly increased by as much as 1,000%. The additional costs due to piracy are passed on to consumers as shipping companies recoup most of their losses through their protection and indemnity clauses (Gabriel, Bivbere&Ugwuadu, 2008).

An increasing number of ships are now avoiding the Suez Canal route and taking the longer route around the Cape of Good Hope. Denmark's A.P. Moller-Maersk, one of the world's largest shipping lines, is routing some of its 50 oil tankers around the Cape of Good Hope instead of through the Suez Canal, and the Norwegian firm Frontline, a major carrier of Middle Eastern oil, may follow suit. Naturally,

taking themuch longer route around the Cape adds both time and expense to each shipment. Diverting from the canal to the Cape on a trip from the Middle East to refineries in the Mediterranean doubles typical transport time from 15 to 30 days. This naturally would lead to an increase in commodities transport fees to more than 30 percent and lower competitiveness of traders especially for perishables goods and time (fashion) sensitive goods such as clothing. It is estimated that an extra US\$7.5 billion would be triggered per year if one-third of the Far East-Europe cargoes were geographically re-routed via the Cape of Good Hope involving an extra 15 to 30 days to finish the service moving with the same knots (Nakamura, 2009).

Egypt benefits from its geographical position, and from the Suez Canal, which forms part of the world's busiest shipping route, connecting Europe and Asia. Re-routing via the Cape of Good Hope will likely affect the Egyptian authorities (loss of foreign currency earnings), the Suez Canal Authorities (loss of operating earnings and employment), Mediterranean port authorities and terminals (e.g. reduced vessel calls and trans-shipments), and also industry and consumers because of additional costs. Nigeria accounts for over 65 per cent of the total seaborne traffic for 16 countries in West Africa. As warnings to mariners in and near Nigerian waters become more common, increased shipping costs for Nigerian and Gulf of Guinea destinations are likely as shippers begin to factor higher insurance premiums into their pricing (Mbekeani&Mthuli, 2011).

### **4.0. PHYSICAL DISTRIBUTION:**

Physical distribution is a term employed in manufacturing and commerce to describe the broad range of activities concerned with efficient movement of finished products from the end of the production line to the beginning

of the production time (American Council of Physical Distribution Management cited in Ukwueze, 2007). These activities include foresight, transportation, warehousing, material handling, material handling, protective packaging, inventory control, plant and warehouse site section, order processing market forecasting and customer services (Ehikwe, 2002). Kotler and Armstrong (2001) sees physical distribution as the task involved in planning, implementing and controlling the physical flow of materials, final goods and related information from point of origin to points of consumption to meet customer requirements at a profit. Rushton, Croucher and Baker (2006) noted that physical distribution involves the handling and moving of raw materials and finished products from producer to consumers, often an intermediary. Its objective is to “put the product within an arm’s length of desire”. By administering its physical flow from the organization to the customers at the time and place where they want them at a reasonable cost. So, physical distribution management is “the process of strategically managing the movement and storage of materials, parts and finished inventory form suppliers, between enterprise facilities and to customers. Physical distribution objective as getting the right goods, to the right places, at the right time, for the least cost.

Uzel (2018) noted that physical distribution is the set of activities concerned with efficient movement of finished goods from the end of the production operation to the consumer. Physical distribution is part of business management and has six major functions: transportation, storage and deposit, assembling and processing, material handling, packaging and wrapping, and information. Physical distribution functions are annexed to physical distribution facilities, such as terminal, distribution center, warehouse, and so on the

other hand in the enterprise logistics is emphasized that it is centered in searching and achieving the best present and future satisfaction of the final costumer and includes the socio-environmental and ethic-legal aspects, the planning, execution and control of all related activities with the procurement, flow, warehousing and maintenance of materials, products and even services; from the raw material source, including costumer through inverse logistics, to the sale point of the finished product whether local or international, massive or enterprise, in the most effective and efficient manner, maximizing performance and the expected quality, while minimizing waste, time and cost using modern information technologies (Mbondo, Okibo&Mogwambo, 2015).

## **5.0. MARITIME PIRACY AND PHYSICAL DISTRIBUTION OF GOODS**

From a welfare perspective, Anderson (1995) suggests several types of losses associated with piracy. First, the direct capital losses to violence, which manifest either in the form of damages to the ship or cargo, or as the loss of life. Second, the indirect losses in the form of resources channeled toward evasion and protection that could have been used for other productive activities. For example, the additional bulk of fuel used to maintain evasive maneuvers, or the additional amount of capital required to sustain a steady flow of goods vis-a-vis the same exchanges in the absence of piracy. It follows that the magnitude of these responses can lead to both intensive and extensive margin adjustments, which in turn can cause dynamic losses in the form of diminished incentives for producers and merchants to continue with or expand production (Anderson 1995). As pirates rarely capture the entire value of their highjack, any of these effects leads to an effective loss in welfare (Blanc, 2013).

In practice, the realization of these losses has been shown to be harmful for the economy. Historical data suggest that responses to piracy have often been followed by extremely negative impacts to commerce channels and local economies. For example, during the seventeenth century, the "Turkish pirates" completely paralyzed several parts of west England (Gray 1989). During the same period, the predominance of pirate organizations in the Arabian sea also led to severe decreases in trade flow, with devastating consequences for all industries in the region). These two cases, however, are not unique. Similar links have been documented for other trade regions in the Caribbean, the Philippines (Warren, 2007). All of these examples illustrate how thriving economies suffer considerable negative effects due to piracy.

Modern piracy has had similar effects. In fact, piracy remains a problem worldwide. According to official reports, between 2011 and 2017, there were an estimated 2,000 pirate and anti-shipping encounters globally, with 351 taking place in 2017 alone. Most encounters, however, take place in a few hotspots; namely: the Gulf of Aden (known for the Somali pirates), the Gulf of Guinea (mostly within the Nigerian EEZ), the Malacca Straits (the shipping channel formed by Sumatra and the Malay peninsula) and the South China sea. Although sparse, there are several assessments regarding the economic impact of modern piracy. Past estimates suggest that the losses in trade volume due to pirate activities in Somalia accrue to about \$24 billion/year (Burlando, Cristea & Lee 2015). Other estimates are more conservative and suggest that the loss ranged between \$1 billion and \$16 billion, when accounting for the addition of 20 days per voyage due to re-routing around Africa, and increased insurance, charter rates, and inventory costs (O'Connell & Descovich, 2010).

## 6.0. METHODOLOGY:

The research work adopted descriptive survey method. The design was adopted because it scientifically describes phenomena and their relationships in the actual environment after a given time. The population of the study constitutes the inhabitants of Delta State who are involved in the movement of goods along the inland water ways. A sample size of 100 respondents was chosen through purposive sampling. Structured questionnaire was employed as the instrument of data collection. Regression analysis was employed in analyzing the data.

## 6.1. RESULTS:

The data generated were empirically tested using regression technique. The regression results are presented below.

### Regression Analysis:

Table 1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.128 <sup>a</sup>	.616	.568	1.654	1.955

a. Predictors: (Constant), Maritime Piracy

b. Dependent Variable: Physical Distribution of Goods

Sources: SPSS 21.0

Table 1 show that R<sup>2</sup> which measures the strength of the effect of independent variable on the dependent variable have the value of 0.616. This implies that 61.6% of the variation in physical distribution of goods is explained by variations in maritime piracy along coastal communities in Delta State. This was supported by adjusted R<sup>2</sup> of 56.8%. The Durbin-Watson statistics value of 1.955 shows that the variables in the model are not autocorrelated and that the model is reliable for predications

**Table 2: ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5.359	1	5.359	17.958	.004 <sup>b</sup>
Residual	322.966	118	2.737		
Total	328.325	119			

a. Dependent Variable: Physical Distribution of Goods

b. Predictors: (Constant), Maritime Piracy

Sources: SPSS 21.0

The f-statistics value of 17.958 in table 2 with f-statistics probability of 0.004 shows that the independent variables has significant effect on dependent variable. This shows that maritime piracy has significant effect on physical distribution of goods in coastal communities in Delta State.

**Table 3: Coefficient of the Estimates**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	15.263	1.909		7.996	.000
Maritime Piracy	-.148	.106	.128	-3.399	.004

a. Dependent Variable: Physical Distribution of Goods

Sources: SPSS 21.0

Based on the t-statistics of -3.399 and probability value of 0.004, the study concludes that maritime piracy has significant negative effect of physical distribution of goods in coastal communities in Delta State.

## 7.0. GENERAL DISCUSSIONS:

The study investigated the effect of maritime piracy on physical distribution of goods in coastal communities in Delta State. Data were sourced from the inhabitants of Delta State who are involved in the movement of goods along the inland water ways. The data generated through structured questionnaire were subjected to empirical analysis using regression analysis. The result indicates that maritime piracy has significant negative impact on physical distribution of goods in coastal communities in Delta State. This implies that the activities of pirate along the water ways in Delta state has hampered the free flow of goods in the area thereby constituting a huge cost to

both the coastal communities, traders and the country as a whole.

The increase in acts of piracy has led to enhanced cooperation at international and regional levels. Joint efforts are being made in various forums to find adequate solutionsto piracy.The study contends that integrated maritime strategy should be developed by African (as maritime piracy as a cross border criminal activity) to serve as a long-term multi-layered common vision to addressing seaborne challenges and sustain more wealth creation from the oceans and seas. The long term solution to the problem of piracy is through the creation of economic opportunities so that the youth could be meaningfullyemployed. Also security activities should be increased on the water ways and at the sea port to curtail the criminal activities of the pirates.

## 8.0. FINDINGS:

1. The study found that Maritime piracy has significant negative effect on physical distribution of goods in coastal communities in Delta State.
2. As a result of the above finding, this implies that the activities of pirates along the water ways in Delta State have hampered the free flow of goods in the area.

## 9.0. CONCLUSION:

The authors conclude that Maritime piracy has significant negative effect of physical distribution of goods in coastal river line communities in Delta State.

## 10.0. RECOMMENDATIONS:

1. In-view of the above findings and conclusion from the study, we recommends that the long term solution to problem of piracy lies on the creation of economic activities to enable youths of the Region to be meaningful engaged.



2. Security activities should be vigorously increased on the water ways and at the sea port of entry in order to curtail the criminal activities of the pirates.

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