

Crude Oil Pipeline Vandalism And Human Security In Rivers State: A Study Of The Port Harcourt Refining Company Limited Pipeline, 2011-2021

Wilcox, Gracethy Tamunoiyowunam^{1*}, Dr. Egobueze, Anthony², Dr. Ogele, Eziho Promise³

^{1*,2,3} Department of Political Science, Faculty of Social Sciences, Rivers State University, Nkpolu – Oroworukwo, Port Harcourt, Nigeria

¹Email: gracethywilcox17@gmail.com

²Email: anthony.egobueze@ust.edu.ng

³Email: eziho.ogele1@ust.edu.ng

*Corresponding Author:- Wilcox Gracethy Tamunoiyowunam

Abstract

This study investigated the impact of crude oil pipeline vandalism on human security in Rivers State with focus on oil pipelines of Port Harcourt Refining Company Limited from 2011-2021. The study adopted triangulation methods of data collection and analysis. The Frustration-Aggression Theory by John Dollard was adopted as the theoretical framework. Findings revealed among others that low revenue to government and the company, price hike, constant power failure, tendency to make money, government corruption, low productivity and weak administration were significant nexus between crude oil pipeline vandalism and human security in Rivers State. Based on the findings, the study among others recommended that the company should collaborate with the government security agencies to recruit and train local security to install camera chips on pipelines while they are buried deeper underground for easy monitoring. Also, the state should allow communities to establish local board to manage the 13% derivation to reduce poverty rate to enable them have a sense of inclusiveness.

Keywords: Crude, human security, oil, pipe – line, vandalism

I. INTRODUCTION

Crude Oil pipeline vandalization is an illegal activity of crudely obtaining crude oil or petroleum products irrespective of the prevailing negative consequences on the perpetrators, innocent dwellers, the immediate environment and the socio-economic potentials of Rivers State (Vidal, 2011). It has been observed that over the years, the State has suffered health challenge, environmental degradation, air pollution, low revenue, low yield from fishing and farming, incessant black soot, etc. It has also caused decline in both political and socio-economic wellbeing of the citizens because of the environmental degradation caused by the abuse of oil and gas exploration and exploitation (Onuoha, 2009). The state which is richly blessed with lots of natural resources such as rain forests, water bodies, mangroves, fertile soil, crude oil that flows beneath soil, socio-cultural heritage has been faced with the resultant effects of crude oil refining activities occasioned by government and its agencies or individuals. Okumagba (2020) claimed that the reason for this is due to many years of neglect, marginalization and monopolization of the proceeds of economic resources deriveable from the state. The huge economic implications was due to the increase rate in joblessness, negligence from

the oil companies and federal government of Nigeria, agitation for economic and political power, resource control etc (Sanusi, Onovo & Isa, 2016).

Omodanisi, Eludoyin & Salami (2013) identified change of the economic architecture and the huge profit inherent in the business of crude oil perhaps led the youth to criminal activities. The activity is regarded to be highly lucrative and more rewarding than any other endeavour. The citizens most time battle over control of crude oil dumps. Illegal bunkering which becomes a critical aspect or issue in pipeline vandalism in the Country and the State in particular has led to an increase or high rise in criminality, population displacement which has negative effect on the State economy. Pipeline vandalism is a recurring crime in communities in Rivers State in particular and Nigeria in general where the pipeline networks pass through. The devastating consequences that pipeline vandalism unleash on the social and economic life of the nation is enormous. Apart from human livelihoods that are affected, aquatic fauna, agricultural activities and transportation are negatively touched (Wilson, 2014). As a result of breaking and drilling pipelines, vandals constitute themselves as threat to the economy and security of the state (Asu, 2016;

Njoku, 2016). Studies have shown the public health cost of pipeline vandalism. (Boris, 2015) identified loss of vegetation and lives, threat to human security and fall in Oil revenue.

The Federal and State governments have adopted different approaches and strategies to curb the menace of crude oil pipeline vandalism so as to improve and protect human security. One of such approaches include enactment of environmental laws (which seems to be defective in application) and setting up of paramilitary bodies and law enforcement agencies to work collaboratively with Anti-Vandalism Task Force, Federal Task Force on crude oil theft, Nigeria Security and Civil Defence Corps (NSCDC), Nigeria Police (NP), Military Joint Task Force (JTF) which comprises the Army, Navy and Airforce, Operation Delta Safe (ODS), Community Task Force, Vigilante Group of Nigeria, NUPENG, and PENGASSAN task forces. The approaches adopted seem not to yield effective results as the business continues to increase unabatedly. Of course, there are reports of connivance between the task forces, and other government officials on one hand and the perpetrators on the other hand. The situation has become worrisome particularly when human life is at stake. Nevertheless, not effectively “criminalising” the acts of vandalism via the Petroleum Production (Anti-Sabotage) Act and other legislation appears to have deterred relevant powers. The constant silence of state and non-state actors has exacerbated the act of oil pipeline vandalism which this study seeks to address.

The aim of the study is to investigate crude oil pipeline vandalism and human security in Rivers State with a focus on crude oil pipelines of the Port Harcourt Refining Company (PHRC) limited from 2011 to 2021. Flowing from the aim, the objective is to investigate the relationship between crude oil pipeline vandalism and human security in Rivers State. Based on the above the researchers posed the question, thus: what extent is the relationship between oil pipeline vandalism and human security?

2. THEORETICAL FRAMEWORK

The study adopted the “Frustration-Aggression Theory (FAT)” propounded by John Dollard in 1939. It has been expanded by scholars like Berkowitz, Leonard and Yates, Aubry in 1962. Generally, the theory explains that violent behaviour is usually caused by the inability of the actor to fulfil his/her socio-economic needs. Those who pursue it use the psychological theories of behaviour and motivation to explain why people are

involved in violent acts in spite of the existence of an extant law to curb such act. The thrust of the theory is the identification of the difference(s) between what people feel and want, i.e., the want-got rationale, and the expected need satisfaction, i.e., actual need satisfaction.

According to Etekepe & Okolo (2010), where expectation does not meet actual need, the people are frustrated, and would confront those they perceive as responsible for their frustration. This is where the issue of oil pipelines vandalization in the Niger Delta comes in. The people of the region had had high expectations from the MNOCs when Oil and Natural Gas (ONG) was discovered at Oloibiri in the present Bayelsa State in 1956. They were expecting, among other amenities, regular electricity supply, coastal road networks, efficient health care delivery system, sustainable community development, and gainful employment, etc. They are aware that MNOCs usually provides such amenities for their host communities in Europe, and expected same in the Niger Delta. This did not happen, and they protested, especially from 1990s, and later went underground to vandalize oil pipelines as a way of expressing their frustration over the long years of neglect and underdevelopment. This means, the frustration is “induced” by MNOCs and the federal government. Thus, in applying the theory to the circumstances in the Niger Delta, we have to modify it to that, “induced-frustration-aggression theory (IFAT)”. This is where Gurr’s “relative deprivation” thesis comes in. According to Gurr, the greater the dependency, however marginal, between what is sought and what seem attainable, the greater will be the chances that anger and violence will result. The scholars emphasized that aggression is not just restricted to natural reaction or instinct as the realist and biological theorists assume, but more importantly, to a situation where legitimate desires of an individual or community (which in case of the Niger Delta, the oil producing communities) are denied. Such denials have led some people, especially the youths to form militant organizations to apply unconventional methods to express their anger at MNOCs they perceived or hold responsible for their deprivation.

It is obvious that related literatures have identified the issues of resource allocation and distribution as a major induced-frustration-aggression quadrant within the Nigeria State which cannot be over-emphasized. This is because, whereas the oil and gas producing communities in the Niger Delta are becoming poorer, the rest of the country is becoming richer. This paradox has induced people in the region to become restive since their personal

safety or economic interests are threatened. Historical antecedents show that from the era of slave trade in 1472 to legitimate monopolistic trade that resulted in the Akassa Raid of 1895, the British Colonial Government's economic interest sharply crude oil pipeline vandalised with that of the Niger Delta people. The discovery of crude oil and gas in Oloibiri in Bayelsa State on June 4, 1956 merely aggravated the crude oil pipeline vandalism and the post-independence Governments in Nigeria have carefully crafted obnoxious laws and ineffective interventionist agencies that have transformed the region to "war zone". It is, therefore, no longer news that the crisis in the Niger Delta has become perennial, especially from 1998. This has manifested in several ways, including oil pipelines vandalization that are discussed in the next section.

3. AN OVERVIEW OF CRUDE OIL PIPELINE VANDALISM

The incidence of pipeline vandalism has been on the rise in recent times in Rivers State which is affecting oil production thereby making the country's output projection of 2.2million bpd to now drop to less than 1.1million bpd (CBN, 2016). This has affected Gas supply for electricity generation and distribution in the country thereby crippling business activities and economic growth which calls for immediate action that will put a stop to the ugly situation so as to restore confidence into the power and energy sector which will pave way for business activities to thrive and subsequently, economic growth and development (Okere, 2013). Akpan (2013) opined that the Nigeria's pipeline infrastructure has been subjected to incessant attacks by militants and pipeline vandals across the country. The scholar noted that the frequency of such attacks has been very alarming because it engender pollution of the environment which is consequential to human health, and negatively impacted the economy. Indeed, pipeline vandalism has led to drift in investment domestically and internationally. According to Ugwuanyi (2013), poor policing and protection of pipeline infrastructure, political/militant agitation and endemic corruption are some of the challenges in crude oil pipeline vandalism in Nigeria. However, the fundamental issues are the attendant consequences of pipeline vandalism which generally affect human life, properties, create a decline in crude oil sales and reduce revenue projections, scarcity of Premium Motor Spirit and decline in electricity generation which all affects human security and economic growth and development.

Oil pipelines are operated at high pressure and any damages poses a great danger to human health and properties, environmental and ecological disaster, interruption of gas or premium motor spirit (PMS) supplies Olusola, (2013). Infact, the economic implications of vandalized pipelines in Nigeria in general and communities of Rivers State in particular are huge. While pipeline vandalism has caused a loss of over 3.6 billion naira in Rivers communities, the Stakeholder Democratic Network (SDN, 2014) emphasized that the Nigerian government, NNPC and oil companies incurred more than \$14 billion in 2014 through pipeline vandalism. Studies also reported that Nigeria lost over 300,000 barrels of crude oil per day to oil theft, pipeline vandalism and related oil crime vices in the country's oil sector (Odemwingie & Nda-Isaiah, 2013). Essentially, petroleum pipeline networks in Nigeria spread over 7,000 kilometers (Agbazie, 2004). The networks of pipelines in Eleme/Port Harcourt which refined products are transported from the Okrika jetty to the Nigeria National Petroleum Corporation (NNPC) regional depots in Aba Area in Abia State and onward to the different depots in the south eastern states and few states in the north. Hence, the Eleme/Port Harcourt pipelines are product pipelines that aid the transportation of refined petroleum products to regional depots where trucks can easily convey gasoline to local filling stations for public consumption. As a result of the critical role it plays in the zone, pipeline vandalism affects individuals, business concerns and government. The pipelines are linked to over 275 flow stations, transporting crude oil and natural gas from 600 oil and gas fields. Over 300 of the pipelines are located onshore, while approximately 240 are offshore, through a stretch of over 3,000km criss-crossing the length and breadth of Nigeria. Currently, the Nigerian National Petroleum Corporation (NNPC) has a pipeline network of over 8,000km for the efficient transportation of crude oil and natural gas products to various depots. The use of pipelines has the added advantage of reducing transportation risks when compared to transportation via rail, barges or trucks given that the pipelines are buried deep into the soil and, where on the surface, are sited in remote areas away from local communities to allay environmental concerns.

Onoja (2013) claimed that prior to the late 1990s, concerns over the protection of crude oil and natural gas pipelines were effectively non-existent in Nigeria, with the exception of ruptured pipelines and equipment failures. With the advent of environmental awareness, coupled with what has been described as "militancy" and struggles for

better living conditions/resource governance in Nigeria, pipelines for the transportation of crude oil and natural gas became targets for various groups, particularly in the Niger Delta, to make their case to the government of Nigeria. It has been claimed that the government has not invested sufficiently in the region, in spite of its significance to the country's economy, resulting in this being a cause of the actions of some of the groups. The effects have left untold hardship on the immediate area through the attendant consequences of spilling crude oil into the environment and economic losses in terms of revenue generation for Nigeria. Reports indicate that there have been over 16,083 cases of "pipeline tampering" and vandalism within the last 10 years, amounting to a loss of #174.57 billion (or approximately \$484 million) in 2006–2016. Further reports indicate that, between 2016 and 2017, a total of 992 cases of pipeline vandalism were recorded across pipelines and depot lines, amounting to a loss of #167 billion (approximately \$464 million). What is left behind after acts of vandalism has also created environmental concern, with both water bodies and farmlands of the ambient environment becoming victims of the activities.

According to Okoli & Orinya (2013), the Nigerian petroleum industry has been confronted by two sapping challenges over the years. The challenges relates to the prevalence of militancy and oil pipeline vandalism in the Niger Delta. While the former has significantly attenuated in the aftermath of the Amnesty deal in 2009 (Okoli & Orinya, 2013), the latter appears to have escalated both in incidence and impact. According to Ogbeni (2012), a total of 16,083 pipeline breaks were recorded within the last 10 years adding that while 398 pipeline breaks representing 2.4 percent were due to ruptures, the activities of unpatriotic vandals accounted for 15, 685 breaks which translated to about 97.5 percent of the total number of cases (Ogbeni, 2012, p.8).

Indeed, the incidence of crude oil pipeline vandalism of the Port Harcourt refinery has been on the rise in Eleme and the Ogoni axis. According to the 2013 annual report of the Nigerian Extractive Industry Transparency Initiative (NEITI), Nigeria lost a total of 10.9 billion US Dollars to oil theft between 2009 and 2011 due to pipeline vandalism (NEITI, 2013). This loss adumbrates the significance of pipeline vandalism as a veritable problem in the Nigerian oil industry. The mandate of the Port Harcourt Refining Company (PHRC) limited which is in business to process crude oil and offer petroleum products and services that shall always

meet the customs and other stakeholders' requirements and expectations have been hindered or cut-short by the unscrupulous and illicit business activities of pipeline vandals. The refinery now finds it difficult to refine even a barrel couple with the constant dilapidation and malfunctioning of the process plant. The implication of oil pipeline vandalism vis-a-vis human's security has been vividly demonstrated by its relationship with economic, environmental, and humanitarian losses and consequences (Onuoha, 2009). In effect, crude oil pipeline vandalism has been associated with consequences which hold negative implications for national issue particularly in aspect of human security and economic losses. In spite of its topical relevance, studies have attributed incessant pipeline vandalism to failure to prosecute arrested vandals and the involvement of influential Nigerians in the crime, little is known about the strategies of vandalism. However, studies have documented the highly sophisticated structure and organisation of vandalism (Boris, 2016 & Korstanje, 2011) that frustrates government efforts to checkmate the crime. It is against this background the study investigated the effect of crude oil pipeline vandalism on human security in Rivers State, 2011-2021.

The aim of the study is to investigate crude oil pipeline vandalism and human security in Rivers State with a focus on crude oil pipelines of the Port Harcourt Refining Company (PHRC) limited from 2011 to 2021. Flowing from the aim, the objective is to investigate the relationship between crude oil pipeline vandalism and human security in Rivers State. Based on the above aim and objective, the researcher then posed the question

4. METHODOLOGY

Methodologically, the paper adopted the triangulation of data sources which allows researchers to focus on the use of primary and secondary data to examine or investigate a particular phenomenon. This method allows thoroughness on the part of the researcher to collate information and analyze data from a sample or group in which their responses were used for the purpose of generalization.

Investigation revealed that due to the current state of moribund and rehabilitation exercise being carried out by foreign contractors in the refinery intensified the need to redeploy most of the staff to other NNPC subsidiaries. This has currently reduced the staff strength to 800. Meanwhile, the Port Harcourt Refining Company Limited directly receives crude oil through the flows of networks of pipelines lay through Bonny-Gokana-Tai-Eleme

where the refinery is situated. It is estimated according to the 2006 census result that Bonny has a population of 214,983, Gokana 228,828, Tai 117,797 and Eleme 190,884. Therefore, the total population of the study is 753,292.

The simple random sampling technique was adopted to select the population. This is because it gives each member of the department a known and equal chance of being selected. The emphasis here is on chance so as to ensure objectivity. Strictly speaking, it avoids all hints of bias.

The data collected for this study was 400 questionnaires, 10 interviews and textual documents. The nature of this study enables us to collect materials from both primary and secondary sources, structured and administered to respondents in the following arrangements:

- a. The relationship between crude oil pipeline vandalism and human security, factors responsible for, impact and challenges of crude oil pipeline vandalism on human security.
- c. Interviews were conducted on selected staff about pipeline vandalism.
- d. Textbooks, journals, newspapers, internet, etc were materials used in content analysis.

Table 1: Shows the number of questionnaires that were distributed to the various categories of respondents. Questionnaires were distributed based on the sample size of 400.

Questionnaires	PHRC	Bonny	Gokana	Tai	Eleme	Total
Allocated	80	80	80	80	80	400
Categories of respondents	4 Divisions	CDC	B. Dere K. Dere	Tua Tua Nonwa	Alesa Alode	
Distribution	20 each	80	40 each	40 each	40 each	400
Returned	65	70	50	55	60	300

Source: Field survey, 2022.

In order to analyse the data, the simple percentage statistical method was employed while respondents’ responses were arranged, grouped, tabulated and analysed using tables. By this method, it meant that the degree of percentage score of one response to another or others will determine the acceptability or rejection of a particular statement or hypothesis. Hypotheses were validated using Pearson Correlation, **SPSS 21.0**

Thus:

$$\frac{f}{N} \times \frac{100}{1} \text{ Where;}$$

f = frequency of response

N = number of respondents

5. DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

The study presented and analyzed the information obtained through the use of questionnaire from respondents on “*crude oil pipeline vandalism and human security in Rivers State, 2010-2021*.”

Out of a total number of 400 questionnaires that was distributed, the researcher was able to retrieve 300 questionnaires from the respondents while 260 questionnaires were properly filled which forms the basis of our analysis.

Table 2: Analyzing the relationship between crude oil pipeline vandalism and human security in Rivers State.

Question	Option	Frequency	Percentage
Crude oil pipeline vandalism stimulates decline in revenue in human security in Rivers State.	Strongly Agreed	200	76.9
	Agreed	40	15.4
	Strongly Disagreed	10	3.8
	Disagreed	10	3.8
	Total	260	100.0
Crude oil pipeline vandalism is responsible for low production of petroleum products in human security in Rivers State.	Strongly Agreed	80	30.7
	Agreed	100	38.5
	Strongly Disagreed	35	13.5
	Disagreed	45	17.3
	Total	260	100.0
Vandalism causes hike in the prices of hydrocarbon products in Rivers State	Strongly Agreed	70	27.0
	Agreed	95	36.5
	Strongly Disagreed	55	21.1
	Disagreed	40	15.4
	Total	260	100.0
Power failure in pipeline vandalism negatively affects human security in the state	Strongly Agreed	160	61.5
	Agreed	40	15.4
	Strongly Disagreed	35	13.5
	Disagreed	25	9.6
	Total	260	100.0
Weak institutions and high rate of corruption encourage oil pipeline vandalism in Rivers State.	Strongly Agreed	95	36.5
	Agreed	70	27.0
	Strongly Disagreed	40	15.4
	Disagreed	55	21.1
	Total	260	100.0

Source: Fieldwork 2022

The table above reveals that 200 respondents representing 76.9% “strongly agreed” with 40 representing 15.4% “agreed” that crude oil pipeline vandalism stimulates decline in revenue in human security in Rivers State while 10 respondents representing 3.8% “strongly disagreed” with 10 respondents representing 3.8% “disagreed” on the claims. This submits that crude oil pipeline vandalism stimulates decline in revenue in human security in Rivers State.

Stressing further, the table shows that 80 respondents representing 30.7% strongly agreed that crude oil pipeline vandalism is responsible for low production of petroleum products in human security in Rivers State, as 100 (38.5%) confirmed to it. While 35 respondents representing 13.5% strongly disagreed while 45 respondents representing 17.3% disagreed. This indicates that crude oil pipeline vandalism is responsible for low production of petroleum products in human security in Rivers State.

Furthermore, investigation reveals that 70 (27.0%) of the respondents strongly agreed that vandalism causes hike in the prices of hydrocarbon products in Rivers State, 95 (36.5%) of the respondents “agreed” while 55 (21.1%) “strongly disagreed” and 40 (15.4%) of the respondents “disagreed” that vandalism causes hike in the prices of hydrocarbon products in Rivers State. Of course, vandalism causes hike in the prices of hydrocarbon products in Rivers State.

Information gathered from the above table shows that 160 respondents representing 61.5% “strongly agreed” with 40 respondents representing 15.4% “agreed” that power failure in pipeline vandalism negatively affects human security in the state while 35 respondents representing 13.5% “strongly disagreed” and 25 respondents representing 9.6% “disagreed” respectively. This implies that power failure in pipeline vandalism negatively affects human security in the state.

The table above revealed that 95 respondents representing 36.5% “strongly agreed”, 70 representing 27.0% of the respondents “agreed” while 40 respondents with 15.4% “strongly disagreed” and 55 (21.1%) “disagreed” respectively that weak institutions and high rate of corruption encourage oil pipeline vandalism in Rivers State. This implies that weak institutions and high rate of corruption encourage oil pipeline vandalism in Rivers State.

Test of Hypotheses

Table 3: There is no significant relationship between crude oil pipeline vandalism and human security in Rivers State.

		Crude oil pipeline vandalism	Human security
Crude oil pipeline vandalism	Pearson Correlation	1	.964**
	Sig. (2-tailed)		.000
	N	143	143
Human security	Pearson Correlation	.964**	1
	Sig. (2-tailed)	.000	
	N	143	143

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS 21.0 data Output, 2022

Hypothesis one explains the relationship between crude oil pipeline vandalism and human security in Rivers State. The Pearson Product Moment Correlation coefficient is calculated using the SPSS 21.0 version to establish the relationship among the empirical referents of the predictor variable and the measures of the criterion variable. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while the value of +1.00 represents a perfect positive correlation. A value of 0.00 represents a lack of correlation.

In testing the hypothesis, the following rules were upheld in accepting or rejecting our alternate hypotheses: all the coefficient values that indicate levels of significance (* or **) as calculated using SPSS 21.0 version were accepted and therefore our alternate hypotheses rejected; when no significance is indicated in the coefficient r value, we reject our alternate hypotheses. Our confidence interval was set at the 0.05 (two tailed) level of significance to test the statistical significance of the data in this study.

From the result, it is shown that a very strong positive relationship exist between crude oil pipeline vandalism and human security. The *coefficient* value 0.964 indicates the magnitude and strength of this relationship. This relationship is also significant at $p\ 0.000 < 0.05$. Therefore, based on empirical findings the null hypothesis earlier stated is hereby rejected and alternate hypothesis accepted. Thus, there is a significant relationship between crude oil pipeline vandalism and human security in Rivers State.

The position of this hypothesis is further strengthened by 240 respondents representing 92.3% who revealed that pipeline vandalism stimulates decline in oil revenue. Vidal (2011) on his part claimed that vandalism is an action involving deliberate destruction of public or private property. Within the civic domain, vandalism denotes wilful destruction of public or government property in keeping with criminal or political intent. Oil pipeline vandalism

therefore implies deliberate breaking of oil pipelines with the intent to steal petroleum products or to sabotage the government. In Nigeria, oil pipeline vandalism has been perpetrated principally by criminal syndicates who are motivated by the desire to loot oil products for material aggrandizement. This organized crime is often aided and ablated by the state agents, which gives it a semblance of a franchise. Oil pipeline vandalism is also known in Nigeria as oil bunkering, which is the act of drilling into the pipelines with the intent to steal products.

Apart from decline in revenue, oil pipeline disasters have resulted in low production of petroleum products, hike in prices of product, power failure, corruption, destruction of family assets, and environmental degradation (Okoli & Orinya, 2013). This implies that oil pipeline vandalism is a veritable impediment to human security in Rivers State. Hence, oil pipeline explosions have been associated with dire ecological and humanitarian conditions whereby populations are displaced as a result of actual or impending disaster.

6. THE RELATIONSHIP BETWEEN CRUDE OIL PIPELINE VANDALISM AND HUMAN SECURITY

Crude oil exploration is a source of significant revenue in Africa via trade and investment since its discovery in the mid-19th Century Crude oil has bolstered the continent’s economy and improved the wellbeing of the citizenry. The scholars stressed that:

The state has suffered from conflicts due to uneven redistribution of crude oil revenue and severe environmental pollution. Advancements in geophysical survey techniques, such as magnetic and gravity methods, to seismic methods, have made the commercial exploration of crude oil possible for some other countries in Africa apart from Nigeria, Angola, Algeria, Libya, and Egypt (p.1).

In response to the above, interviewee 1 spoke strongly concerning the negative impact the activities of vandals have on human security in Rivers State. The interviewee argued that the current economic situation in the state is unhealthy. It has leads to decline in economic revenue in human security. This implies that unemployment is on the increase, channels of revenue generation are declining or have declined and this has affected the development policies of the state government. Interviewee 2, 3, 4, 5, 6, and 7 all agreed that crude oil pipeline vandalism has made the State a shadow of its former self owing to the security situation in the state. This invariably means that crude oil

pipeline vandalism activities in Rivers State have contributed in a large way to the current ugly economic condition of the State. The interviewees attributed the rate of unemployment in Rivers State to crude oil pipeline vandalism in the state.

A respondent observed that:

Vandals target oil pipelines and hydrocarbon products. Some vandals work in connivance with kidnapers who kidnap multinational workers and influential members of the society including government functionaries to harvest more monies into their private coffer. This has negative effect on socio-economic activities in the state (P. Ngawa, personal communication, May 19, 2022).

The findings are also in line with Akpan (2013) who commented that most people are victims of crude oil pipeline vandalism because of their social status in the community. He argued that this is so because vandals believed that prominent people of high social status and their family members hardly suffer the economic hardship where all forms of hard currencies are within their reach. He stressed that the only surviving business that can be ventured into to reduce the gap between the rich and the poor is syphoning of petroleum products through crude oil pipeline vandalism not minding the effects.

Also, the results from our primary and secondary data indicate that crude oil pipeline vandalism often times causes human security slur when the proceeds from this illicit business are not investigated. The result shows that poverty induced community has collaborated with vandals of crude oil pipeline so as to get some levels of financial inducements. This attitude has a significant relationship with the socio-economic wellbeing of the state. The result is consistent with the report of the respondent below:

The issue of poverty and unemployment of youths as well as social injustice and unfair distribution of the nations resources are potent causes of crude oil pipeline vandalism in state. These factors have caused the youths to engage in crude oil pipeline vandalism and criminal activities as a way of getting their share of the nation wealth. This notwithstanding has an adverse relationship with the human security (M. Boma, personal communication, May 28, 2022).

In agreement with the result of hypothesis one, Boris (2015), noted that this practise is responsible for low production of hydrocarbon and hike in the price of products in Nigeria. The adequate utilization of crude oil is an important indicator of the

country's wealth in national development. No meaningful development will take place when the human security is not guarantee in terms of economic survival. It is the government responsibility to invest into human security through its economic policies and programmes that would engender economic enhancement of individual. This could have reduced the spate of this illicit venture that tantamount human security. An interviewee revealed that:

The emergence and entrenchment of crude oil pipeline vandalism in Rivers State has its manifestation within various components. The activities of vandals have reduced public revenue to the benefit of few, responsible for poor production, and hike in prices of products (M. Tankuro, personal communication, May 30, 2022).

It is unfortunate that the result of the hypothesis also revealed that crude oil pipeline vandalism has been conceptualized not only as theoretical ideology but as a weapon for the furtherance of demotivating self-sufficiency in crude oil production to the detriment of human security. Human security can said to be achieved when a state or country can protect and feed their citizen that is when a state is concerned with the welfare and security of her citizens. However, when crude oil pipeline vandalism crops in, most of the processes leading to self-sufficiency in petroleum production were frustrated with the scourge of constant crude oil pipeline vandalism. The effect of this ugly crime/trend is that the human security of the state is at risk or danger. The hypothesis also confirmed the positions of other scholars who revealed that our economic institutions and security architectures are seen as rubberstamp agencies without adequate powers to combat this menace resulting to widespread corruption. The poor proceeds (low revenue) from the petroleum industry has handicapped the government in carrying out its statutory obligations or functions in the areas of national development. Due to the dangers inherent in the business, many families have become potential victims of the crime of crude oil pipeline vandalism in Rivers State. Human security is not guaranteed due to the illicit or nefarious crime of crude oil pipeline vandalism in the state.

It is in line with the above that most of the respondents believe that crude oil pipeline vandalism has a very strong connection with human security but does not impact positively on human security in the state between 2011 and 2021. Most respondents who contributed to the literature in the course of soliciting information with respect to the relationship between crude oil pipeline vandalism

and human security in Rivers State between the periods under review revealed that:

between the period of 2011-2021, crude oil pipeline vandalism in Rivers State was extremely high and has made companies to fold-up. It has reduced the revenue base of the state. It has also reduced unemployment in the state. The socio-economic life of the residents and the state is heading towards catastrophe. Human security during this period was a disaster where this business was carried out (B. Donbraye, personal communication, March 18, 2022).

It is based on this, most of respondents agreed that before the discovery of crude oil in Nigeria and Rivers State in particular, so many residents of the state were gainfully employed in the agricultural sector, but most of them are now jobless owing to environmental degradation and water pollution which has resulted to the death of crops and aquatic organisms in the state. Oil business and crude oil pipeline vandalism has become the alternative venture to enrich human survival. The study concludes that there existed a strong connection but significant negative relationship between crude oil pipeline vandalism and human security in Rivers State between 2011 and 2021.

Our objective which investigated the relationship between crude oil pipeline vandalism and human security in Rivers State unravelled that there is a relationship particularly in the areas of low revenue to government, low production of petroleum products, hike in prices, constant power failure, weak administration and corruption. Based on this, the study concludes that there is a significant nexus between pipeline vandalism and human security in Rivers State.

7. CONCLUDING REMARKS

The study revealed that the refinery which has about 24 networks of crude oil pipelines and travel about 55km distance to the refinery complex for processing have been punctured or destroyed by a network of actors involved in this illicit business in Rivers State. This has left the state with catastrophic consequences.

The findings of the study showed that there was a high level of corruption, inordinate ambition for wealth making, collaboration among the company staff, security agents and the vandals, power failure, low revenue scarcity of products were significant relationship between crude oil pipeline vandalism and human security in Rivers State. Poor policing, crime collaboration, wide spread poverty, sabotage, etc were identified causes of crude oil

pipeline vandalism. Environmental degradation, loss of human lives and property, economic stagnation, environmental pollution, conflict, fire outbreak/explosion, etc were considerable effects of crude oil pipeline vandalism. The study identified constant policing of pipelines, licences for the operation of modular refineries, sinking of pipelines beneath the ground were significant measures to be adopted to ameliorate or reduce oil pipeline vandalism in Rivers State.

Based on the fore – going, the study recommends that:

1. The State and Port Harcourt Refining Company should get rid of the manual method of monitoring crude oil pipelines by security personnel and adopt the computerised approach which involves the use of software drones in monitoring flow of crude oil in pipelines. This method enables the use of mobile application software/devices by security agents to track any incidence of pipeline vandalization in crude oil pipeline route within the state.
2. The State government and the company should liaise to design a platform for community-company relations/interaction to address issues of employment of local communities over security of crude oil pipelines. This would help to address and alleviate the pervasive poverty suffered by oil producing communities.
3. The most like option to stop the pipeline vandalization and to sustain human security is to integrate the communities into the oil economy, so that they will have proprietary interest in the protection of oil and gas installations. Artisanal should be recognized and regulated by the government and allocated them with certain barrel of crude oil while assisting the state/government and the company in monitoring crude oil pipeline flow and reporting any deviance in their various communities.
4. The State and the Port Harcourt Refining Company should work collaboratively with law makers to strengthen the Anti-Pipeline Prohibition and Sabotage Act which provided for 15 year jail terms for vandals. Culprits of pipeline vandalism should be prosecuted and sentence to life imprisonment. Crude oil pipeline vandalism is highly life-threatening which could consume the entire community when burst into flames. Strict adherence to the Act would go a long way to save lives and property.

REFERENCES

- [1]. Agbazie, K.N. (2004) Petroleum pipelines leakages in Nigeria Abuja: PPMC press.
- [2]. Akpan, U. (2013). Indigenous operators express worry as cost of oil theft hits N15.66n. *National Mirror*.
- [3]. Asu, F. (2016). Theft, vandalism leave fuel pipelines, depots idle. *Punch*, Thursday, April 28, p. 29.
- [4]. Boris, H.O. (2015). The upsurge of oil theft and illegal bunkering in the Niger Delta region of Nigeria: Is there a way out? Centre for Population and Environmental Development, Benin City, Edo State, Nigeria
- [5]. Boris, H.O. (2016). Oil theft and insecurity in post amnesty era in the Niger-Delta Region of Nigeria: Implications on national security. *Journal of Environmental Research and Management*, 7(1), 001-012
- [6]. CBN (2016). Nigeria loses 150,000 barrels of oil export daily. *New Telegraph*, Thursday, October 1, 2016, p 1.
- [7]. Etekpe, A. & Okolo, P.O. (2010). Oil pipeline vandalization and the socio-economic effects in Nigeria's Niger-Delta Region. www.researchgate.net
- [8]. Odemwingie, E, and Nda-Isaiah, J. (2013) Nigeria loses 400,000 barrels daily to crude oil theft-Sentate. *Leadership*, November 2013.
- [9]. Ogbeni, O. (2010). Sustainable infrastructural facilities as strategies for African development. *Journal of Contemporary Studies University of Ado-Ekiti, Nigeria*, 2(1), 79-90.
- [10]. Okere, R. (2013). Curtailing Oil Theft, Illegal Bunkering via Legislation. *The Guardian* August 21.
- [11]. Okoli, A.C. & Orinya, S (2013). Oil pipeline vandalism and Nigeria's national security. *Global Journal of Human Social Science Political Science*, 13 (5), 2249-460x
- [12]. Okumagba, E.O. (2020). Oil and gas pipeline vandalism in Nigeria: Analysing alternative options beyond the traditional legal approach. *International Energy Review*, 7 (7).
- [13]. Olusola, B. (2013). When will Nigeria stop the Crude Oil Theft business Day. October 17.
- [14]. Omodanisi, E.O. et al. (2013). A multi-perspective view of the effects of a pipeline explosion in Nigeria. *International Journal of Disaster Risk Reduction*, <http://dx.doi.org/10.1016/j.ijdr.2013.11.002i>.
- [15]. Onoja, T. (2013). How oil thieves wreak havoc on Niger Delta communities. *The Sun*. August 23.
- [16]. Onuoha, F.C. (2008). Oil pipeline sabotage in Nigeria: Dimensions, actors and implications for national security. *African Security Review*, 17(3).
- [17]. Onuoha, F.C. (2009). Why the poor pay with their lives: oil pipeline vandalisation, fires and human security in Nigeria. *Disasters*, 33(3), 369–389.
- [18]. Sanusi, A., Onovo, J.C., & Isa, H. (2016). The Environmental Impact of Pipeline Vandalism - A challenge to biodiversity in Port Harcourt Area of Rivers State, Nigeria. *Int'l Journal of Advances in Chemical Eng. & Biological Sciences (IJACEBS)*, 3, 1.
- [19]. Ugwuanyi, K. (2013). Does Nigerian government have the political will to combat oil theft. Retrieved August 28, 2014 from <http://www.aan.-network.org>.
- [20]. Vidal, J. (2011). €1bn a month: the spiralling cost of oil theft in Nigeria. *The Observer* October 6. Retrieved November 29, 2013 from www.observer.com.
- [21]. Wilson, J.A. (2014). Social Networks. Module 26 in Joseph B. Casagrande (ed.). *Ward Good enough, and Eugene Hammel*. Addison-Wesley, 1-29.