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MANAGING SECURITY RISK IN THE OIL & GAS INDUSTRY OF RIVERS STATE, NIGERIA

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Abstract

This Study examines the impact of Security Management Systems on Organizational Performance of Oil & Gas Industry Firms in Rivers State, Nigeria. The research design takes cognizance of Management theory, concepts and constructs such as: Company Security Policy; Internal Monitoring & Audit; as well as Management Reviews/Evaluation which are used in evaluating the predictor variable: Security Management Systems. Similarly, the research design utilizes Management tools such as: Financial and/or Non-Financial Performance and uses them to measure the criterion variable: Organizational Performance. The bulk of financial data analyzed is aggregate company financials and projections collected mainly from open sources; including various local and international journals and Nigerian government declaration of revenue and tax receipts from the Oil & Gas industry. This is so, as the Oil & Gas firms are private Organizations whose financials are not published publicly. The non-financial data analyzed is collected through the issue of questionnaires to respondents selected from amongst staffers of the various firms using random sampling technique. The representative sample population for the Study are 387 staffers randomly selected from six (6) Oil & Gas companies in Port-Harcourt City, Rivers State, Nigeria. These six firms mirror and represent the entire gamut of the industry to a large extent. The representative firms themselves cumulatively have a combined total staff population of some 12,258 persons, or about half the entire workforce of the entire Industry across the country. Spearman's Rank Order Correlation methodology is used in testing the validity of the seven hypotheses proposed. The Major Finding of the Study confirms a significant positive relationship between Security Policy; Internal Monitoring & Audit; and Management Reviews/Evaluation respectively and Financial and/or Non-Financial Performance of Oil & Gas Industry Firms in Rivers State, Nigeria. This Finding leads to a Conclusion that: setting up or embedding an effective security management system within the Organizational structure of an Oil & Gas firm in Rivers State, Nigeria indeed will have a positive moderating effect on the firm's Organizational Performance. The Study thus majorly recommends that: firms in the Oil & Gas Industry in Rivers State, Nigeria should make every effort to ensure they have, or setup a robust, cost-effective security risk management team; in order to have an efficient and effective Organizational structure. They are also to make sure that a cogent Security Policy is put in place for each such Organization. These two actions should then be backed up by frequent internal assessments & audits and periodic management reviews/evaluation of the security management system in place.

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Introduction

One important operational strategy that Oil & Gas firms in Rivers State, Nigeria tend to deploy in order to improve their Performance is by providing a platform for holistically managing 'the entire gamut of 'security risks' associated with their respective businesses by the deployment of Security Management Systems. This Study focuses on evaluating the robustness, relevance, impact and cost-effectiveness of Security Management Systems to successful operations by Oil & Gas firms within Rivers State, Nigeria. This follows from a situation of endemic and pervading security challenges in Nigeria; in which most firms operating within the country are routinely exposed to numerous security challenges. This is more so, particularly for companies operating in the Niger-Delta Region of the country which is known to be the hot-bed of security challenges in the country.

Statement of the Problem

One critical variable that has had significant impact on Performance in the Oil & Gas Industry is the management of the various 'Security Threats' that face Oil & Gas Exploration, Production, Expansion Projects, Refining, Marketing & Supply. This can also be looked at from the perspective of effectiveness of managing the various threats thrown up by the concept of 'Insecurity across the Niger-Delta Region of the country'.

Security (or insecurity) is one of the greatest threat factors to the global Oil & Gas industry. Thus, effective and efficient management of security risks is a very critical success factor for Oil & Gas business globally; and is very vital to Organizational Performance of such firms. Global best-practices in the Industry suggest (and this is very applicable to the Oil & Gas firms in Rivers State and Nigeria as a whole) that for optimal Organizational Performance, all identified security challenges to smooth and sustained operations need to be managed holistically and methodically. Hence, how these threats are managed by Oil & Gas firms in Rivers State, Nigeria is vital to improving their Organizational Performance. This is more so, in an industry that is clearly under-performing.

The Nigerian Oil & Gas Industry is termed under-performing, due to an extremely high rate of deferments' (leading to massive financial loss); asset vandalization; extensive environmental degradation; reputational damage for the Industry; and injury/fatalities to personnel engaged by the Industry. This plethora of ills is all ascribable to security incidents arising from Oil & Gas operations in the country.

The threat of terrorism and sabotage attacks pervade across the entire value chain of the Oil & Gas industry – from oil wells sabotage and tampering; to pipeline vandalization; to product adulteration while in transit; to illegal oil bunkering; to refineries/facility picketing; to the threat of piracy which primarily concerns the oil tanker industry, etc. Attacks like the maritime piracy of the Somali pirates might affect a single oil tanker and result in increased costs for oil transportation globally, which in turn results in higher end prices for the consumers. Any major terrorist attack or act of sabotage on production facilities like oil rigs, offshore platforms and refineries will result in loss, or complete stoppage of production, which might take months to restart. The entire supply chain from oil wells and offshore platforms to pipelines, tankers and refineries can be affected by the following security threats: piracy, terrorism, insurgency, organized crime, civil protest, inter-state hostilities, vandalism and

internal sabotage. Any of the above threats can cause severe economic and ecological damage that might negatively affect the international Oil & Gas markets.

The challenges itemized above and many more constitute the challenges currently facing the Oil & Gas industry in Nigeria. Despite several attempts by scholars to ensure consistently high Performance of the oil producing firms, the problem of fluctuating Performance persists. In this current Study, we look at management of Security Risks, which is one of the identified key impediments to successful Organizational Performance for Oil & Gas firms in Nigeria; by evaluating the impact of effective deployment of Security Management Systems as a predictor to Performance of the Oil & Gas companies. This involves looking into the procedures, policies and equipment deployed in the management of the key Oil & Gas NTR area of Security Management.

Conceptual Framework

This Study adopts 'Dimensions of Security Management Systems' as expounded by Perttu (2017) which are: Security Policy; Internal Monitoring and Audit; as well as management reviews/evaluation. Figure 1 below shows the conceptual framework for this Study, which represents the proposed links between the two primary latent variables (Security Management Systems and Organizational Performance).

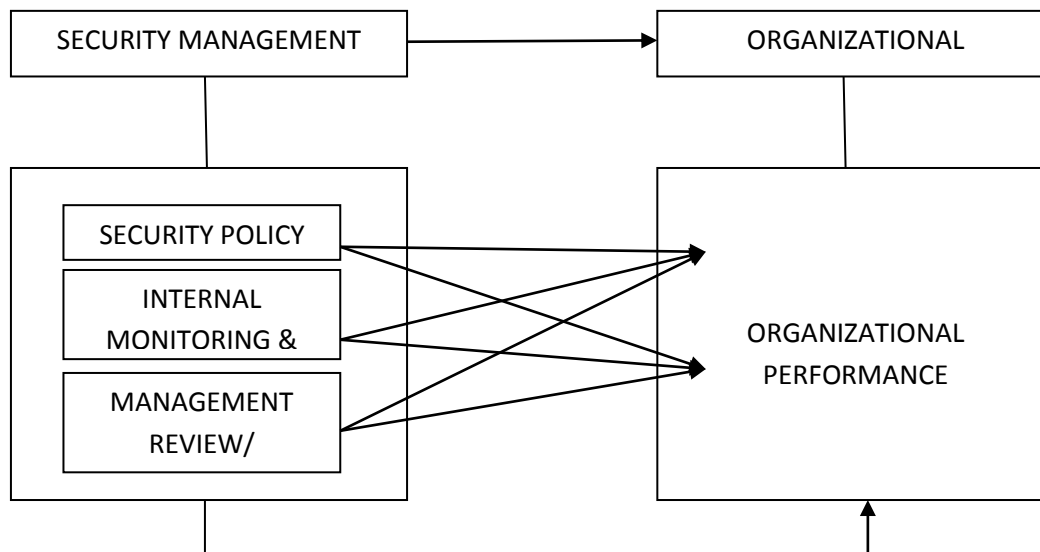


Figure 1: Conceptual Framework

Dimensions used in this Study were developed originally by: Perttu (2017)

Aim and Objectives of the Study

The aim of this Study is to empirically examine the extent to which Security Management Systems affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria. However, the specific objectives are;

1. Investigate the extent to which Security Policy affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria
2. Investigate the extent to which Internal Monitoring and Audit affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria

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3. Investigate the extent to which Management Review/Evaluation affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria

Research Questions

- a. How does Security Policy affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria?
- ii. How does Internal Monitoring and Audit affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria?
- iii. How does Management Review/Evaluation affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria?

Research Hypotheses

- H0₁:** Security Policy does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria
- H0₂:** Internal Monitoring and Audit does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria
- H0₃:** Management Review/Evaluation does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria

Based on the foregoing, this Study provides a conceptual framework which incorporates the methods the research problem will be dealt with (Liehr & Smith, 1999). According to Ravich & Carl (2016), a conceptual framework is an illustration with arrows that clearly define the linkages between the constructs under investigation, thereby revealing the proposed intent of the Study. Likewise, Fisher (2007) submits that a functional conceptual framework is complemented by a detailed description about the nexus between the Study constructs.

Significance of the Study

This Study has theoretical significance to various stakeholders; including researchers and academics in the field of Management and Security Risk Management, etc. On the practical side; the recommendations serve as guide for managers in the Oil & Gas industry on how to induce Organizational Performance.

Scope of the Study

The scope of this Study embraces theoretical content, geographical spread at the organizational level/unit of analysis:

Content scope:

This Study considers two theories (Systems Theory and Theory of Planned Behaviour) related to the variables under Study. Within the context of Security Management Systems, three dimensions are identified for examination. These are: Security Policy (& procedures); Internal Monitoring & Auditing (Assurance); as well as Management Reviews (Evaluation). For our criterion variable (Organizational Performance), two measures are considered which are: Financial Performance and Non-Financial Performance. The Study captures Organizational Structure in this context, as a moderator between the predictor and criterion variables.

Geographic scope:

The Study members will be restricted to regular staff of Oil & Gas firms in Rivers State, Nigeria.

Unit of Analysis:

This Study is being conducted at the macro level of analyses. The Unit of Analysis is the Organization. Data pertaining to the Nigerian Oil & Gas Industry as a whole and respective Oil & Gas firms in Rivers State is obtained from a variety of open sources for evaluating the specific Management Theorems being investigated as part of this Study. The types of data analyzed include: Annual Performance Reports (of the parent International Oil Companies) (IOC); and Tax or Royalty Remittances to the various arms of the Nigerian Government. Other data analyzed include Production Deferrals and Oil Spill Records. In addition, Questionnaires were designed and issued to some randomly selected staff of Oil & Gas firms in Rivers State, Nigeria with a view to obtaining additional supporting data for further analysis of the proposed theorems.

Limitations:

This Study focuses on the relationship between Security Management Systems and Organizational Performance of Oil & Gas Industry Firms in Rivers State, Nigeria. The Study was however limited by geographical scope as it concentrated only on oil firms with operational offices in Port-Harcourt, Rivers State, Nigeria; where the questionnaires were distributed, and responses received. Furthermore, the Study was also limited in its Economy-wide coverage, as it concentrated only on the Oil & Gas Industry; without considering other sectors of the Economy of such as: Small and Medium Enterprises (SME), Manufacturing, Banking and Telecommunications.

Methodologically, the Study opted for a Cross-Sectional research design. Thus, data were collected at a single point in time; from respondents across various Oil & Gas firms with offices in Port-Harcourt, Nigeria. Therefore, the Study did not consider any possible effect that Time-Interval might have on the relationship between Security Management Systems and Organizational Performance. Lastly, the Study relied almost exclusively on Open Source data for Financial Performance Analyses and quantitative data generated via a structured questionnaire for the Non-Financial Performance Analyses. Also, data was collected only from a selected (Sample) number of Oil & Gas firms in Rivers State, Nigeria.

Theoretical Framework

Systems Theory

Systems Theory aims to explain the dynamic relationships and inter-dependence between the various components of a system and similarly that between the various organs, departments, or functions within an Organization - i.e. 'Environment Relationships'. In general, Systems Theory focuses on three levels of observations, namely: the environment; the social Organization as a system; and human participants within the Organization (Hofkirchner, 2007). This multi-level focus can be traced back to the original pursuit of initiating dialogue among disciplines through Systems Theory. It does seem plausible that this pursuit can be accomplished through many ways. One of such ways is to find general phenomena that are observable across many disciplines. For instance, it is common to find in any social system some aggregations of individuals who interact with one another and with the environment and who develop inter-dependent relationships between themselves to form a unit.

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According to Systems Theory, components of each system are structured in a hierarchical ordering; while components are inter-dependent with one another within the system, to the extent that one component cannot function without the support of other components. Components of a system can be tightly coupled, where the components are closely interdependent; or loosely coupled, where the smaller subsets of tightly connected components are loosely connected to one another (Huber, 1984).

At the Organizational level, an Organization and other Organizations in the same environment are also inter-dependent on one another. Underlying this inter-dependence are the permeable boundaries, both within and among Organizations. Invariably, social Organizations must maintain permeable boundaries of a certain degree; in order to receive materials, or export products to survive.

In summary, Systems Theory espouses a dynamic view of social Organizations with permeable boundaries and stable state realized through inter-dependent relationships among its components. Although Systems Theory has been extensively applied in Organizational research, concerns or critiques are raised about its environmentally deterministic orientation. With Systems Theory, Organizations are treated like biological organisms which typically undergo the 'Life Cycle' of Growth, Maturity and Death; thus, chances for adaptations may be frowned upon, or ignored totally (Schneider & Somers, 2006). The Systems Theory finds its best fit in this current work. Because, just like with biological systems; an Oil & Gas firm (which is a system of its own) has several components, departments, functions and facilities such as the Production, Human Resource, Marketing, Operations, Finance and Security units. Systems Theory is of the opinion that these various components, or units, must be considered important as each one of them ultimately impacts the bottom-line of the firm. Conversely, Systems Theory suggests that the Security Unit is as important as every other unit in the Organization; particularly as Security Risks have as serious an impact on Oil & Gas operations as some TR. Hence, systems implemented to manage security risk are useful and critical components of the firm and could account for the effective or no so effective Performance of an Oil & Gas firm.

Theory of Planned Behaviour

The Theory of Planned Behaviour (Theory of Planned Behaviour) is one of the models most frequently used in Literature to explore pro-environmental behaviour; including recycling, travel-mode choice, energy consumption, water conservation, food choice, ethical investment, etc. The TBP assumes that the best prediction of behaviour is given by asking people if they are intending to behave in a certain way (Ajzen, 1988). It is an extension of the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) which was made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control.

Figure 2 below depicts the TBP in the form of a structural diagram. For ease of presentation, possible feedback effects of behaviour on the antecedent variables are not shown. As in the original TRA, a central factor in the Theory of Planned Behaviour is the individual's intention to perform a given task. Intentions are assumed to capture the motivational factors that influence behaviour.

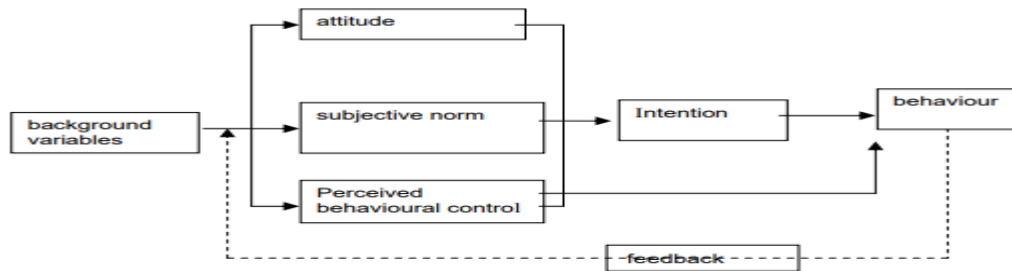


Figure 2: Theory of Planned Behaviour

In relation to this current Study, the Theory of Planned Behaviour can be applied to the act of setting up and managing a robust and effective Security Management Systems for an Oil & Gas firm. It is a human action that constitutes planned behaviour. Oil & Gas firms must have both the intention and the behavioural control in order to manage an effective Security Management Systems.

Concept of Security Management Systems

‘A Security Management System must be designed specifically with a particular Organization in mind; and it should incorporate specific elements relevant to that Organization. This enables the Organization to put in place specific measures to mitigate the peculiar risks that threaten its business operations’ (Agha 2012). Security Management Systems are management systems which ensure that a firm’s corporate objectives such as ensuring the security of its assets and/or production capacity; protecting its proprietary information assets; protecting its workers, etc. are all continually met, on time and within budget. A very essential part of a Security Management System is the establishment and maintenance of processes for security risk assessment. This is important in order to have capacity to identify, assess and manage security related threats and risks that are relevant to the operations and various other aspects of the Organization.

Security Policy

‘A Security Policy is basically a plan outlining what the Organization’s critical assets are and how they must be protected’ (Danchev, 2003). The Security Policy provides staff with information on the ‘acceptable use’ of any of the firm’s assets; with an explanation of what is allowable and what is not. A Security Policy includes a definition of what it means to be secure within a system, Organization, or an entity. For an Organization, it addresses the constraints on expected behaviour of its members; as well as constraints imposed on adversaries by mechanisms such as doors, locks keys and fences. For a system, a Security Policy addresses constraints on its constituent functions or units and information flow among these constituents; constraints on access into the system by external system elements and adversaries, including programs and access to data by people.

‘Some key roles of the top management of an Organization include decision-making; commitment of resources; and setting of targets and policies for the Organization’ (Kerko, 2001). Conversely, it could be said that: setting up suitable policies for the Organization is one of the key activities of the top management of a firm. One such policy that has severe

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consequences if not properly set up is a Security Policy. The consequences of there not being a Security Policy in place for an Oil & Gas firm are dire, in the least.

Internal Monitoring and Audit

Spencer (2003) asserts that 'in order to have reasonable assurance regarding achievement of Organizational objectives; a monitoring process should be performed to evaluate and assess the 'systems of internal control' that are in place towards ensuring that the necessary procedures for achieving these goals are consistently applied over an extended period of time'. Spencer (2003) further believes that 'an internal audit is an effective internal control system'. Consequently, he advises that managers should promptly evaluate the findings from audits and other reviews carried out (particularly those showing deficiencies) and any other recommendations by external auditors and other evaluation agency's operations; with a view to determine the proper actions in response to findings and recommendations from audits and reviews.

Jones (2008) refers to monitoring as 'the process of assessing the quality of a system's Performance over time'. On an on-going basis, staff should evaluate the various systems of internal control and updates/modifies/enhances where needed. Any discovered deficiencies should be addressed immediately and added to the overall system of internal control. Likewise COSO (2013) defines 'the monitoring component as on-going evaluations; separate evaluations; or some combination of the two is used to ascertain whether each of the five components of internal control (including controls to effect the principles within each component) is present and functioning'. On-going evaluations built into business processes at different levels of the entity provide timely information.

Monitoring and audit activities are the policies and procedures that assist in ensuring that management directives are successfully implemented. They provide the means to address the various risks that may hinder the achievement of the Organization's objectives. Control activities are established in response to perceived risks. In addition, control activities occur throughout the Organization at all levels and in all functions; and include at least the following: approvals, authorizations, verifications, reconciliations, reviews of operating Performance, security of assets and segregation of duties. Monitoring and audit activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. These activities are performed at all levels of the entity, at various stages within business processes and over the technology environment. They may be preventive, or detective in nature; and may encompass a range of manual and automated activities such as: authorizations and approvals, verifications, reconciliations, and business Performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities (COSO, 2013).

Internal Monitoring objectives are desired goals or conditions for a specific event cycle; which, if achieved, minimize the potential that waste, loss, unauthorized use or misappropriation will occur. They are conditions which the system of internal control must satisfy. For a control objective to be effective, compliance with it must be measurable and observable.

The objectives of an internal control/monitoring system vary from company to company. Because Organizations use different frameworks for internal control systems, the process and objectives linked to them differ as well. Alan (1999) stated that “the basic objectives of internal control are as follows:

- i. To control operations by establishing various levels of authority
- ii. To provide approval for transaction and an adequate reporting system
- iii. To enable those carrying out the approvals to be advised of the results from those approvals
- iv. To safeguard the business’s asset from loss or damage as a result of waste, inefficiency, error, theft or fraud; and
- v. To provide adequate information that is timely and reliable and supports the control structures so that individual management responsibilities can be identified.

A well-designed process with appropriate Internal Monitoring and Audit should meet most, if not all the above control objectives”.

Management Reviews/Evaluation

Management reviews are routine evaluation of whether management systems are performing as intended and producing the desired results as efficiently as possible. It is the ongoing ‘due diligence’ review by management; that fills the gap between day-to-day work activities and periodic formal audits. ‘Management reviews are like a doctor giving a routine physical examination – even when no overt signs of illness are present; as life-threatening conditions may be developing covertly that are best addressed proactively’ (Gabriel, 2013). They require a similar system of scheduling, staffing and effective evaluation of all Risk-Based Performance Standard (RBPS) elements; and a system should be in place for implementing any resulting plans for improvement, or corrective action and verifying their effectiveness. Routinely reviewing the Organization’s process safety systems with a view to spur continuous improvement is one of the four elements in the RBPS pillar-of-learning-from-experience. ‘Management reviews should be conducted wherever RBPS elements are implemented. The depth and frequency of each management review should be governed by factors such as the current life-cycle stage of the facility; the maturity, or degree of implementation of the RBPS management system; the level of management performing the review; past experience (e.g., incident history, previous reviews, and audit results) and management’s view of the risk posed by the activities to be reviewed’ (Reddy, et al, 2009).

Most of the management review effort will be focused on operating facilities. While they can be scheduled on an as-needed basis; management reviews of a particular RBPS element are typically conducted at pre-determined intervals (frequency ranging from monthly to annually be common) and they may be scheduled in conjunction with other regularly scheduled meetings such as facility safety committee meetings.

Who Does the Management Review? Strictly speaking, every level of management – from the process supervisor; chief security officer; the facility manager; to the board of directors – should conduct periodic management reviews. Further discussion focuses on ‘program level reviews, which should be conducted by a manager who is one, or two levels above the person responsible for the day-to-day execution of a specific RBPS element. This is

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usually the manager ultimately responsible for the proper functioning of the facility's overall process safety management system. However, larger facilities may charter a Process Safety Committee to conduct the reviews under the leadership of a senior manager' (Predrag et al, 2012).

The management review is central to a continued-improvement process; because, only Top Management can authorize changes in the basic structure and operation of the company's overall policy. 'The idea behind the review process is to take a regular and systematic step back from the day-to-day running of an Organization and review the Performance of the various risk management systems to confirm their continuing suitability, adequacy and effectiveness' (Gupta, 2009). The importance of ensuring that systems remain focused on the objectives of the business, are improved to reflect changes that have occurred in the company's context and to take advantage of opportunities; whilst, fully addressing risky areas of the business. These must be continuously reviewed under the management review process.

Performance in the Oil & Gas Industry of Nigeria

The Performance (Organizational Performance) of Oil & Gas firms and that of the entire Oil & Gas Industry in Nigeria in general, is critical and pivotal to the success of the Nigerian Government and ultimately the economy of the Federal Republic of Nigeria (Odularu, 2008; Azaiki & Shagari, 2007). The criticality of these firms to the Nigerian Government and Economy as averred above, has warranted this empirical Study. This is premised on the basis that a deep and thorough understanding of the subject matter, complimented by careful management of the various aspects and dimensions of Organizational Performance (which can be achieved through effective moderation of the various elements of the Security Management Systems put in place by these firms) will ultimately bring about the desired Organizational Effectiveness required from an industrial sector as central to the nation's economic interests as the Oil & Gas Industry.

The Nigerian Government can be rightly described as being mono export-commodity reliant for its funding. This is because it depends almost entirely for its funding on the royalties and taxes obtained from the production, export and sale of hydrocarbon products by the Oil & Gas Industry. This fact places a very heavy premium and burden on the Oil & Gas firms and Industry to ensure the achieve optimal Organizational Performance and effectiveness. The '2020 Annual Report' by the International Monetary Fund (IMF) and the World Bank also further asserts that the 'Oil & Gas' sector of the Nigerian Economy clearly makes the highest singular contribution (10%) to the economic and social development of Nigeria's bustling economy which is currently rated as the largest economy on the African continent with approximately \$446.543 Billion in 2020. These figures and rating are based on GDP figures; calculated using re-based comparative metrics adopted by the Nigerian Government authorities in 2014.

Consequently, the Organizational Performance and resultant effectiveness and growth of Oil & Gas firms and the entire Oil & Gas Sector; has a direct impact and ultimately affects the economic condition and financial standing of Nigeria. This importance of the Oil & Gas Sector to the development and well-being of Nigeria as a nation, is further alluded to in the following hyperbole construct, where it is referred to as: 'the symbolic goose that lays the golden eggs' for the nation's economy; as well as 'supreme foreign exchange earner' for

the country. From the early 1960's when commercial oil exploration, production and export commenced in Nigeria; revenues obtained by the government from Oil & Gas proceeds have helped in funding the fiscal development of Nigeria's critical national infrastructure and many other industries important to the national economy (Anya, 2002; Chukwu, 2002). Thus, Oil & Gas production can be said to be 'as important to the Nigerian economy as oxygen is to human life'.

Nigeria is currently the leading Oil & Gas producer and exported in Africa (NNPC, 2004). The country is also ranked 13th largest oil producer in the world and 6th largest oil producer among the Organization of Petroleum Exporting Countries (OPEC). Nigeria currently ranks 5th in the world with proven gas reserves; which makes the country more of a gas-producing, rather than an oil-producing country (CBN, 2002). Indeed, Nigeria is often described as a gas zone with some oil in it (Assael, 2000; Ekpu, 2004). Currently, Nigeria's crude oil production is about 2.3 million barrels per day; and it is expected to rise to 2.5 million soon (NNPC, 2004). The major international Oil & Gas firms operating in Nigeria include: Shell, Exxon-Mobil, Chevron, Total and Agip. Some others like Texaco have sold their assets and locked up shop. Some visibly smaller indigenous Oil & Gas firms have emerged, and these include: Seplat, Aiteo, Addax, Pan Ocean, etc. There are numerous other firms operating in Nigeria that provide support, supplementary and/or complimentary products or services to the Oil & Gas firms itemized above. These firms are classified as 'Oil-Service' companies. Some firms in this classification include: Schlumberger, Halliburton's, NestOil, Setraco, Daewoo, etc. Due to the close working relationships 'oil-service' firms have with Oil & Gas firms and the fact that their own personnel oftentimes typically work/reside within/off the premises of the Oil & Gas firms; these 'support' firms typically face and manage similar risks, as the core Oil & Gas firms and are thus generally also classified as part of the larger Oil & Gas industry in Nigeria.

Production and export of Oil & Gas products in Nigeria is dependent on the efficient and effective management of numerous risk factors. These risk factors may succinctly be categorized under the two broad groupings: 'Technical' and 'Non-Technical' risks. The Technical Risks (TR) facing the industry are categorized as those risks arising from the techniques, processes and procedures involved in the use of technology for drilling, or production of hydrocarbons and several other similar risks specifically associated with the variabilities of the earth's sub-surface composition of hydrocarbon reservoirs beneath the crusts of the earth. The Non-Technical Risks (NTR) on the other hand, are typically risks arising from Health, Safety, Security & Environmental (HSSE) challenges and other similar risks arising from Social-Performance (SP) issues associated with the host, nearby, or other communities impacted in one form or the other by the extractive mineral mining activities carried out by the Oil & Gas firms.

Security related NTRs are numerous and typically arise from one, or a combination of the following threat agents: criminality, organized crime, activism, civil/community unrest, armed conflict, terrorism, militancy, etc. Many other security NTRs like the 'the likelihood of Oil & Gas workers being kidnapped for ransom' have arisen from peculiar challenges which have developed over time within the areas where the mineral resources are located and have become prevalent within the area where these hydrocarbons are usually prospected for in Nigeria; known as the Niger-Delta area of the South-South geographical region. Some other

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security NTR such as petty stealing and other minor criminality challenges typically arise from socio-economic problems which cut across the entire country and the entire globe.

The Niger-Delta corridor has for many decades now, been beset with a myriad of socio-economic and political issues; ranging from the destruction of its aqua-infrastructure and environment by pollution from oil spills, perceived marginalization of its citizens in terms of employment and participation in oil-mining activities, human capital losses arising from agitation for resource-control and under-development of the entire region, etc. Another very common set of NTRs are those that arose because of security challenges which are peculiar to our modern society; like: burglaries, robberies, kidnappings, sabotage, etc. These security threats have however been exacerbated in the Niger-Delta region of Nigeria due to the prevailing peculiarities of the region.

Other NTRs arise simply from the nature of human beings. Man is a social animal that collectively lives in communities. Every human community or activity has fundamental challenges that are usually tackled collectively. One of such challenges is the need to protect lives and properties in the community, due to security challenges which leave these assets at risk. In fact, philosophers like John Locke and Thomas Hobbes drew attention to the need for security in human society and argued that it was the insecurity in the 'state of nature' that necessitates the emergence of the 'State' because life in the 'state of nature' was short, nasty and brutish. More so, security is multi-faceted and all-encompassing; which can be viewed from the point of view of the individual, group, country or globally. No one human being can experience perfect security; because individuals, or states, are not perfectly secure, or completely insecure; but, experience varying degrees of security, or insecurity, at various times. At the state level, security has so much to do; both with the perceptions that members of the community have about their environment and the actual state of security, or insecurity, in the community (Nkoli, 2016). Indeed, the issue of insecurity has become a recurring global challenge that is not restricted by boundaries, economies, or legal jurisdiction.

Methodology

The population of this Study consists of personnel selected from six (6) Oil & Gas firms in Rivers State, Nigeria (as indicated in Chapter One). These firms are: Shell Petroleum Development Company (SPDC), Rivers State, Nigerian Agip Oil Company (NAOC), Saipem Nig. Ltd, Elf/Total, Chevron and Nigeria Liquefied Natural Gas (NLNG).

This Study empirically diagnosed the extent to which Security Management Systems can bring about the much-needed Performance in the Oil & Gas industry. The Study adopted Spearman's Rank Order Correlation as a statistical tool for testing the stated null hypotheses to see the level of association. This was because the data generated through our research instrument were ordinal in nature. Another significant justification for the use of a non-parametric tool for testing the hypotheses is the fact that each of the statement items were negatively skewed. This will be achieved by converting the ordinal data to intervals in order to enable parametric tests such as regression. Partial correlation will also be used to analyze the effect of the moderating variable.

Data Analyses and Findings

Table 1 Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Shell	91	27.5	27.5	27.5
	Agip	63	19.0	19.0	46.5
	Saipem	34	10.3	10.3	56.8
	Elf'/Total	41	12.4	12.4	69.2
	Chevron	65	19.6	19.6	88.8
	NLNG	37	11.2	11.2	100.0
Total		331	100.0	100.0	

Table 1 above reveals the distribution of valid research instrument used for our analyses. It shows that 91 respondents work for SPDC. Which represents 27.5% of total respondents; 63 respondents work with Agip, which represents 19% of total respondents; 34 respondents work with Saipem, which represents 10% to total respondents; while Elf /Total, Chevron and NLNG have 41, 65 and 37 respondents respectively. These represent 12.4%, 19.6% and 11.2% respectively.

System of Analysis

Table 2: Correlation Matrix for Test of Hypotheses 1-3

			Correlations				
			SECURITY_P OLICY	INTERNAL_M ONIT_AND_A UD	MGT_REVIEW	FIN_PERFOR MANCE	NON_FIN_PE RFORMANCE
Spearman's rho	SECURITY_POLICY	Correlation Coefficient	1.000	.427**	.216**	.277**	.293**
		Sig. (2-tailed)		.000	.000	.000	.000
		N	331	331	331	331	331
	INTERNAL_MONIT_AND_ AUD	Correlation Coefficient	.427**	1.000	.664**	.580**	.626**
		Sig. (2-tailed)	.000		.000	.000	.000
		N	331	331	331	331	331
	MGT_REVIEW	Correlation Coefficient	.216**	.664**	1.000	.702**	.607**
		Sig. (2-tailed)	.000	.000		.000	.000
		N	331	331	331	331	331
	FIN_PERFORMANCE	Correlation Coefficient	.277**	.580**	.702**	1.000	.470**
		Sig. (2-tailed)	.000	.000	.000		.000
		N	331	331	331	331	331
	NON_FIN_PERFORMAN CE	Correlation Coefficient	.293**	.626**	.607**	.470**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	
		N	331	331	331	331	331

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

From the correlation matrix in Table 2, we realize that a significant relationship exists amongst all the dimensions to the measures of our criterion variable. This led to the rejection of all the stated hypotheses. They are further explained below.

H0₁: Security Policy does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria

H0₂: Internal Monitoring and Audit does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria

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H0₃: Management Review does not affect the Organizational Performance of Oil & Gas firms in Rivers State, Nigeria

Discussion of Findings

The Findings below arise after testing each proposed Hypotheses in order to satisfy the following Objectives:

- i. Investigate the extent to which Security Policy affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria

Testing to verify our Objectives 1 which states as above led to the following Findings:

From the test of relationship between Security Policy and Performance, the Study revealed that Security Policy has a relationship with both Financial Performance and Non-Financial Performance. This signifies that without an adequate Security Policy in place, Organizations may be affected by activities of those who do not mean well for the Organization such as kidnappers and cyber criminals. These actions could affect the expected Performance of such Organization.

- ii. Investigate the extent to which Internal Monitoring and Audit affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria

Testing to verify our Objectives 2 which states as above led to the following Findings:

The test of relationship between Internal Monitoring and Audit also reveals a significant relationship. This was evident in the correlation coefficient and the associated p-values. This implies that when effective monitoring of Organizational activities is in place and when there is strict audit when it comes to technical and non-technical activities; the Organization would always experience effective Financial and Non-Financial Performance.

- iii. Investigate the extent to which Management Review/Evaluation affects Organizational Performance in Oil & Gas firms in Rivers State, Nigeria

Testing to verify our Objectives 3 which states as above led to the following Findings:

The third group of tests were between Management Review/Evaluation and Performance. Again, this test result reveals that a significant relationship exists with positive correlation coefficients and p-values less than 0.05. This means that the role of Management as a decision-making body in Organizations can never be underestimated. The attention of Management must be drawn to every activity within the Organization and any activity that is unfavorable should be discontinued or disallowed. Again, this can bring about effective Financial and Non-Financial Performance.

Summary, Conclusion and Recommendations

The Study examined the relationship between Security Management Systems and the Organizational Performance of Oil & Gas Industry firms in Rivers State, Nigeria. Management theory, concepts and constructs; such as: Security Policy; Internal Monitoring & Audit; as well as Management Reviews/Evaluation were used as 'dimensions' in evaluating the predictor variable (Security Management Systems).

Spearman's Rank Order Correlation methodology was used in testing the validity of the three respective hypotheses proposed. The data used for analyses was obtained using random

sampling technique. The representative sample population for the Study were 387 staffers who were randomly selected from six (6) Oil & Gas companies based in Port-Harcourt City, Rivers State, Nigeria. The responses obtained from staffers of these six firms are taken to mirror and represent the opinion of the entire industry. The Oil & Gas Industry in Rivers State, cum Nigeria itself has an estimated combined total staff of 12,258 persons.

Major Findings

The major findings from the Study are:

- a. Security Policy has a significant relationship with both the Financial and/or Non-Financial Performance of the Oil & Gas Industry firms in Rivers State, Nigeria. This means having a Security Policy is essential to achieve Organizational Performance for an Oil & Gas firm in Rivers State, Nigeria.
- b. Internal Monitoring and Audit also has a significant relationship with both the Financial and/or Non-Financial Performance of the Oil & Gas Industry firms in Rivers State, Nigeria. This means continuous audit and monitoring of security plans, processes and operations is essential to achieve Organizational Performance for an Oil & Gas firm in Rivers State, Nigeria.
- c. Management Reviews/Evaluation have a significant relationship with both the Financial and/or Non-Financial Performance of the Oil & Gas Industry firms in Rivers State, Nigeria. This means instituting a periodic Management Review of security operations is key to achieving Organizational Performance in an Oil & Gas firm in Rivers State.

Summary of Findings

The product of our findings is testimonials that security management systems are very relevant to the achievement of Financial and/or Non-Financial Performance in the Oil & Gas sector of the Rivers State, Nigerian economy. It revealed the fact that with a combination of Security Policy, Internal Monitoring and Audit and management review, Oil & Gas can achieve the much needed financial and/or Non-Financial Performance. The findings further revealed that all the tested hypotheses were significant, and all the p-values were less than an alpha of 0.05. This implies that all things being equal, security management systems would always be a catalyst in achieving the much needed financial and/or Non-Financial Performance within the Oil & Gas industry in Rivers State, Nigeria.

The Study also projects that all things being equal; the structure of the Organization also has a significant moderating effect on Organizational Performance. This also implies that the way of life of staffers of each of these Oil & Gas firms should also be considered when considering the type of security management system to put in place. It determines to a large extent the sustainability of such systems and how much it could bring about effective financial and/or Non-Financial Performance within the industry.

Conclusions

The findings from this Study generally confirm that the presence of an effective Security Management System that includes a robust Security Policy complimented with regular Internal Monitoring and Audit processes reinforced by periodic Management Reviews/Evaluation will help guarantee Organizational Performance of Oil & Gas Industry Firms in River State, Nigeria.

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It also helps clarify that such Organizations need to have an Organizational structure that has a security management system embedded inherently within the Organization. It is believed that with such a system in place and aided with other functional systems within the firm; Oil & Gas firms in Rivers State, Nigeria can achieve the much desired Financial and/or Non-Financial Performance. This achievement would be of benefit to the Organization, its employees, host communities and the entire country. Hence, Oil & Gas Industry firms in Rivers State, Nigeria should as a matter of fact ensure that they have an accommodating Organizational structure that can aid the actualization of the desired financial and/or Non-Financial Performance of the firm.

Recommendations

- i. The Management of all Oil & Gas firms in Rivers State, Nigeria should as soon as possible institute a Security Policy for their Organization. The Security Policy should be reviewed annually, or any time there is a significant change in the security threat rating of the firm.
- ii. The Management of all Oil & Gas firms in Rivers State, Nigeria should as soon as possible inaugurate and set-up a Security Monitoring & Audit Committee; with the committee having the specific function of identifying any activity with mis-alignment with Organizational objectives with a view to correcting any such actions or intending actions appropriately.
- iii. The Management of all Oil & Gas firms in Rivers State, Nigeria should as soon as possible institute policy that mandates the reviews of security plans, procedures and policies every 2 years.

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