Control Systems, Fraud Minimization and Organisational Compliance in the Downstream Sector of Nigerian Oil and Gas Industry

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Abstract: The study examines the effect of control systems on fraud minimization and organizational compliance in the downstream sector of the Nigerian oil and gas industry. The study adopts the descriptive survey design. 103 respondents were randomly selected from 1,027 employees of Oando Plc in Lagos, Nigeria. Questionnaire was the main instrument for data collection measured on a 6-point Likert scale. Regression and Correlation statistical techniques were used to analyze the data. The results revealed that control systems significantly affect fraud minimization ($r^2 = 0.254$, $F(1, 76) = 25.903$) and also enhance organizational compliance ($r = 0.513$, $p< 0.05$) in the downstream sector of the Nigerian oil and gas industry. The study recommends that more employees be trained on risk and fraud detection and management strategies to enhance ethical and professional standard practice and also encourage usage of modern security equipments to protect sensitive data.

Keywords: Control Systems; Fraud Minimization; Organisational Compliance.

1.0 Introduction

Fraud, which seems to be the major reason for setting up of control systems, is a deliberate intention to achieve a personal goal or desire through deceit and has become a great pain in the neck of many Nigerian oil and gas companies (Aigbedion and Iyayi, 2007).

Control systems can be seen as a set of policies and procedures adopted by an entity in ensuring that an organization’s transactions are processed in the appropriate manner to avoid waste, theft and misuse of organization resources. Internal control is most effective when controls are built into the entity’s infrastructure and are a part of the essence of the enterprise. Internal control ensures reliable financial reporting and enterprise complies with laws and regulations, avoiding damage to its reputation and other consequences.

Fraud includes dishonesty in the form of an intentional deception or a willful misrepresentation of a material fact, lying, the willful telling of an untruth, and cheating, the gaining of an unfair or unjust advantage over another. Fraud involves coercing people to act against their own best interest and complicated financial transactions conducted by business professionals (accountants, lawyers and bankers) with specialized knowledge and criminal intent. Nigeria has witnessed fraud in all facets of her polity and economy which includes the oil and gas sector. Social values are fast eroding and quest for material wealth is dominant and so staff members inculcate schemes to outsmart existing internal controls in Nigerian oil and gas companies. Organizations are experiencing business failures most of which are through fraudulent practices and ethical misconduct. The world has in recent past witnessed all sorts of frauds despite many rules and regulations put in place by various regulatory agencies and governments of independent nations (Ibiyemi and Igbotayo, 2004). The disclosures of material weaknesses in internal controls as required by Sarbanes-Oxley Act of 2002 (SOX) provide the stock market with the information to identify firms having poor internal controls such as deficient revenue-recognition policies, lack of segregation of duties, deficiencies in the period-end reporting, and inappropriate account reconciliation. Therefore, the question being asked is whether the control systems are sure that fraud can be discovered with reasonable promptness, and whether the control procedures as prescribed and applied in practice are successful in minimizing the incidence of frauds in the accounting system.

1.1 Statement of the Problem

The oil and gas industry constitutes the major source of energy and income and shapes the political, socio-cultural, technological and
economic destiny of the country. As a source of power in international politics, oil and gas (petroleum) influences the extent of recognition usually accorded to Nigeria as a nation. Nigeria has been described as the 13th largest oil producer in the world and 6th largest oil producer among the Organisation of Petroleum Exporting Countries (OPEC). The petroleum sector is often singled out in Nigeria because of the very substantial economic rents and revenues oil and gas are capable of generating. An emphasis on petroleum is justified in Nigeria because it accounts for over 70 percent of revenues at all levels of government, 40 percent of GDP, and more than 85 percent of foreign exchange earnings and helps the development of Nigeria’s infrastructures and other industries.

In the oil and gas sector, it has been argued that companies cook figures and manipulate financial statements; tax avoidance is the norm of the day while persistent earnings management is left unchecked by the authorities because of weak and ineffective internal control systems (Ibiyemi and Igbatayo, 2004). Nigeria as a country that seems to be replete with high rate of fraud in its oil and gas industry desperately needs an effective internal control procedures to prevent or minimize fraudulent practices and ethical misconducts. The downstream sector is characterized by supply uncertainty, fueled by the mismanagement of the nation’s refineries endemic corruption, lack of transparency, direct government interference and bureaucratic processes. Despite the nation’s huge endowment of crude oil and gas, and the extensive infrastructures available in the sector for distribution and marketing of petroleum products, the downstream sector has been hit by increase instability, hallmarked by a scarcity of product to supply and fraud. Particularly, this problem became noticeable in the late ten years. This has led to massive importation of petroleum products by government and major oil marketers in Nigeria. As such, the downstream sector has fall victim of fraudulent practices that seems to have led to the winding up of major oil marketers like African Petroleum, Agip, Texaco, etc., in Nigeria and this fraud syndrome can be traced to weak internal controls in operation.

The damage which this peril called fraud has done to the oil and gas industry is countless and needs urgent attention. Successful oil and gas companies, which is the main focus of this study. Against this background therefore, the study examines the effect of control systems in fraud minimization and organizational compliance in the downstream sector of the Nigerian oil and gas industry.

1.2 Objectives of the study
(i) To examine the relationship between control systems and fraud minimization in the downstream sector of Nigerian oil and gas industry.
(ii) To examine relationship between control systems and organizational compliance in the downstream sector of Nigerian oil and gas industry.

1.3 Research Questions
(i) To what extent do control systems affect fraud minimization in the downstream sector of Nigerian oil and gas industry.
(ii) How do control systems influence organizational compliance in the downstream sector of Nigerian oil and gas industry.

1.4 Research Hypotheses
(i) Control systems do not significantly affect fraud minimization in the downstream sector of Nigerian oil and gas industry.
(ii) Control systems do not significantly enhance organizational compliance in the downstream sector of Nigerian oil and gas industry.

1.5 Significance of the study
This study is significant as it seeks to add to the literature on how effective control systems can serve as a means of minimizing incidences of fraud in oil and gas companies in Nigeria, especially in the downstream sector. The work will also be of immense importance and assistance to management and all the stakeholders in the oil and gas industry in Nigeria, as well as other developing countries around the world and also serve as a reference material to scholars, as they seek to proffer solutions to fraudulent practices in the oil and gas industry.

1.6 Scope of the study
The study concentrates on the downstream sector of the oil and gas industry covering the period of operations between 2010 - 2014 in Oando Marketing Plc in Lagos State, Nigeria, who is a major stakeholder in the industry.

2.0 Literature Review
According to Duffield and Grabosky (2001), a major cause of fraud is absence of social sanctions or misplaced social values. In most cases, people could not report fraud when they discover it because they are not protected. Most a times the personnel and junior officers under them are insecure to report to the authorities. The cost of inconveniences of (Come today. Come tomorrow) in police investigations act as a strong inhibition against reporting or attempting to arrest or restrain criminals.

The Petroleum Equalization Fund (PEF) Decree is a parastatal of the Ministry of Petroleum Resources established by Decree No.9 of 1975 (as amended by Decree No. 32 of 1989), mainly to administer uniform prices of petroleum products throughout the country. This is by reimbursing a marketer’s transportation differentials for petroleum products movement from depots to their sales outlets (filling station), in order to ensure that products are sold at uniform pump price throughout the country.

According to Igbatayo (2004), Petroleum Products Pricing Regulatory Agency (Establishment) Act is an Act that establish the Petroleum Products Pricing Regulatory Agency (PPPRA) and for related matters. Anyanwu (1997) asserted that the Act empowered the PPPRA to determine the pricing policy of petroleum products; regulate the supply and distribution of petroleum products; establish an information and data bank through liaison with all relevant agencies to facilitate the making of informed and realistic decisions on pricing policies; moderate volatility in petroleum products prices, while ensuring reasonable returns to operators; oversee the implementation of the relevant recommendations and programs of the Federal Government as contained in the White Paper on the report of the Special Committee on the review of Petroleum Products Supply and Distribution specified in the Second Schedule to this Act as they relate to its functions, taking cognizance of the phasing of specific proposals; establish parameters and codes of conduct for all operators in the downstream petroleum sector; maintain constant surveillance over all key indices relevant to pricing policy and periodically approve benchmark prices for all petroleum products; identify macro-economic factors with relationship to prices of petroleum products and advise the Federal Government on appropriate strategies for dealing with them; establish firm linkages with key segments of the Nigerian society, and ensure that its decisions enjoy the widest possible understanding and support; prevent of collusion and restrictive trade practices harmful in the sector; exercise a mediatory role as necessary for all stakeholders in the sector; other functions, which the National Assembly may confer on the Agency from time to time; and carry out such other activities as appear to it necessary or expedient for the full and efficient discharge of its functions under this Act.

In discussing fraud management in the oil and gas industry, Magara (2013) opined that well-governed companies are distinguished by their reputations for integrity; stand to gain a competitive advantage in the market when others falter. However, developing an approach to fraud management that will stand up to the challenges of a rough-and-tumble business environment is no easy task. This is especially true in global industries, such as oil and gas, where the risks can be as diverse as the business itself.

According to Palfi and Muresan (2009), oil and gas exploration, for example, often takes companies to corners of the world where bribery and corruption represent business as usual. In addition, getting products and services to market can bring in other types of risk, such as improper price fixing, market allocation, or bid rigging.

In Ginger and Scott (2008), experience has shown that managing fraud and protecting oil and gas companies from their potential fraud requires an effective internal control. In the author’s opinion, internal control should focus on three key objectives which are Prevention, Detection and Response. Ginger and Scott (2008) opined that the best way to manage fraud is to prevent them from occurring in the first place. Doing so requires addressing fraud root causes and fraud root can often be traced to unrealistic business targets coupled with overly aggressive incentives to achieve them. The authors admitted that one method companies can use to manage or minimize fraud is to provide employees with multiple channels for reporting concerns about fraud. The authors also put forward that how a company responds to fraud can determine the organization’s very survival.

Furthermore, Palfi and Muresan (2009) suggest that to help ensure employees take the right action; companies should consider implementing a
response approach that includes three steps. Firstly, investigation - if information about actual or potential fraud and misconduct surfaces, management should react quickly to conduct a comprehensive and objective internal investigation. Conducting effective internal investigations will help an organization’s management address potentially troublesome situations and give them the opportunity to avert potentially intrusive government investigations. Secondly, enforcement and accountability - a consistent and credible disciplinary system can be an effective internal control in deterring fraud. This is also an important requirement for complying with leading regulatory frameworks. Thirdly, corrective action - once fraud has occurred, management should consider taking action that will address any harm that was done.

In discussing the Oil and Gas (Petroleum) Industry, Igbatayo (2004) opined that the growth of petroleum industry in Nigeria appears to have brought dramatic changes in the structure of the economy since 1970. In less than a decade, agricultures share of Gross Domestic Product (GDP) declined from roughly one-half to less than 30% and its erstwhile preeminence as generators of state revenue and foreign exchange all but vanished.

According to Aigbedion (2004), the downstream sector of Nigeria’s petroleum industry is at once volatile but laden with economic opportunities. The sector is characterized by supply uncertainty, fueled by the mismanagement of the nation’s refineries endemic fraud, lack of transparency, direct government interference and bureaucratic processes. Despite the nation’s huge endowment of crude oil and gas, and the extensive infrastructures available in the sector for distribution and marketing of petroleum products, the downstream sector has been hit by increase instability, hallmarked by a dearth of product to supply and had led to massive importation of petroleum products by government and major oil marketers in Nigeria. Anyawu (1997) put forward that the incessant instability of the downstream sector inspired a radical policy shift on the part of the Federal Government. Consequently, in 2003 the PPRA announced a programme of deregulation for the sector. This programme aimed at stimulating adequate supply of petroleum products, fostering appropriate pricing mechanisms and eliminating sharp practices in the industry.

In discussing management responsibility on internal control, Ewa and Udoayang (2012) stated that the establishment and maintenance of a functional system of control system is the sole responsibility of the management of the organization who design and operate such system as required by the needs and circumstances of the organization.

According to Etuk (2011), management must also monitor the system and augment it with written policies, guidelines, careful selection and training of qualified personnel and a strong programme of internal audit. Nyakundi et al (2014) affirmed that the continual survey or monitoring is essential in ascertaining that prescribed policies are being interpreted and carried out accordingly, that the system grows with changes in operating condition and that effective creative measures are rapidly introduced, where breakdowns and shortcomings in the system are discovered. According to Mugo (2013), to heighten management’s assurance of the adequacy and effectiveness of the internal control system, the internal audit department which is an integral part of an organization’s system of internal control is usually instituted in most companies having numerous plants and offices. The idea is for the department to perform the task of scrutinizing and confirming the accuracy of book keeping records, the fact that the records conform to standard accounting procedure of the company, and the prevention and minimization of irregularities and possible shortage.

Ibiyemi (2004) put forward that the Department of Petroleum Resources (DPR) has the statutory responsibility of ensuring compliance to petroleum laws, regulations and guidelines in the oil and gas industry. The discharge of these responsibilities involves monitoring of operations at drilling sites, producing wells, production platforms and flow-stations, crude oil export terminals, refineries, storage depots, pump stations, retail outlets, any other locations where petroleum is either stored or sold, and all pipeline carrying crude oil, natural gas and petroleum products, while carrying out the following functions, among others: supervising all petroleum industry operations being carried out under licenses and leases in the country; monitoring the petroleum industry operations to ensure that they are in line with material goals and aspirations including those relating to flare down and Domestic Gas Supply Obligations; ensuring that Health Safety & Environment regulations conforms with national and international best oil field practice; maintaining records on petroleum industry operations, particularly on matters relating to petroleum reserves, production/exports, licenses and leases; advising Government and relevant Government agencies on technical matters and public policies that have impact on the administration and petroleum activities; processing industry applications for leases, licenses and permits; ensure timely and accurate payment of Rents, Royalties and other revenues due to...
government; and maintain and administer the National Data Repository (NDR). According to Aigbedion (2004), the penalties for violation of the above mentioned Acts and Decree are severe. These include both fines and imprisonment of company officials. It is the responsibility of the management to decide on and establish an appropriate network of control in the organization. The existing internal control in the oil and gas companies must be able to produce reports that are in conformity with the requirements.

3.0 Methodology.

The target population for the study comprises 1,027 employees of Oando Plc, Headquarters in Victoria Island, Lagos. A sample of 103 respondents, mostly senior and junior employees, who are presumed to be abreast of the internal operations of the company were selected. A structured questionnaire, measured on a 6-point Likert scale (Strongly Agree - 6; Agree - 5; Fairly Agree - 4; Fairly Disagree - 3; Disagree - 2; Strongly Disagree – 1), was used to gather data and analyzed using Regression and Correlation statistical techniques with the aid of Statistical Package for Social Science (SPSS) software.

4.0 Results and Analysis

A simple linear regression model was fitted as follows: 

\[ Y = B_0 + B_1 X + \epsilon \]

where Y is denoting fraud minimization which is the dependent variable and X is denoting control systems which is the independent variable. B_0 is the intercept while B_1 is the slope of the regression line. The 'e' in the equation represents the error term which is the difference between the actual value of Y and the value of Y predicted by the model.

Table 1: Relationship between Control Systems and minimization of Fraud

| Regression results: Control systems on fraud minimization |
|---|---|
| **B**       | **t-test** |
| Constant    | 10.979     | t=9.123, p= .0005 |
| Control systems | .413       | t=5.090, p= .0005 |

Note: r² = .254, F (1, 76) = 25.903

The table shows that control systems explained 25.4 percent of the variation on fraud minimization; indicative that, it is an important determinant or predictor of fraud minimization: F (1, 76) = 25.903, p < .0005. It has a positive effect on fraud minimization: B₁ = .413, t (5.090), p < .0005. The implication is that, the more control systems are put in place, the better the minimization of fraud in the oil firm; therefore, we reject the null hypothesis and conclude that control systems has significant effect on fraud minimization.

Table 2: Control systems and level of organizational compliance

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>SA</th>
<th>A</th>
<th>FA</th>
<th>FD</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fm8 system</td>
<td>There is no in place to monitor compliance with policies and procedures.</td>
<td>12(14.8%)</td>
<td>10(12.3%)</td>
<td>10(12.3%)</td>
<td>12(14.8%)</td>
<td>24(29.6%)</td>
</tr>
<tr>
<td>Fm10 Auditors do not</td>
<td>12(14.8%)</td>
<td>13(16.0%)</td>
<td>4(4.9%)</td>
<td>8(9.9%)</td>
<td>18(22.2%)</td>
<td>26(32.1%)</td>
</tr>
</tbody>
</table>
From the above table, the first statement shows altogether the percentage of those who are on the agree position as 32 (39.4%) and those who are on the disagree position as 49 (60.4%). This implies that most respondents disagree to the fact that there is no system in place to monitor compliance with policies and procedures. The second statement shows altogether the percentage of those who are on the agree position as 29 (35.7%) and those who are on the disagree position as 52 (64.2%). This implies that most of the respondents disagree to the fact that auditors do not periodically assess the adequacy of control measures. The third statement shows altogether the percentage of those who are on the agree position as 25 (30.8%) and those who are on the disagree position as 56 (69.2%). This implies that most of the respondents disagree to the fact that internal control and compliance department does not exist. The fourth statement shows altogether the percentage of those who are on the agree position as 29 (35.8%) and those who are on the disagree position as 52 (64.2%). This implies that most of the respondents disagree to the fact that control systems do not occur to periodically test for compliance with codes of conduct. Having examined descriptively the opinion of respondents on control systems and organizational compliance, it was further analyzed using correlations analysis as shown below:

<table>
<thead>
<tr>
<th>Fm11</th>
<th>Fm12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal control and compliance department does not exist.</strong></td>
<td><strong>Control systems do not occur to periodically test for compliance with codes of conduct.</strong></td>
</tr>
<tr>
<td>9(11.1%)</td>
<td>6(7.4%)</td>
</tr>
<tr>
<td>7(8.6%)</td>
<td>16(19.8%)</td>
</tr>
<tr>
<td>9(11.1%)</td>
<td>7(8.6%)</td>
</tr>
<tr>
<td>5(6.2%)</td>
<td>5(6.2%)</td>
</tr>
<tr>
<td>26(32.1%)</td>
<td>21(25.9%)</td>
</tr>
<tr>
<td>25(30.9%)</td>
<td>26(32.1%)</td>
</tr>
</tbody>
</table>

**Table 3: Correlations**

<table>
<thead>
<tr>
<th>contro_system</th>
<th>Control system</th>
<th>Organization compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.513***</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>81</td>
<td>81</td>
</tr>
<tr>
<td>org_compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.513***</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>81</td>
<td>81</td>
</tr>
</tbody>
</table>

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

The table shows that $r = 0.513$, $p < 0.05$ which means there is a positive correlation between control systems and organizational compliance.

5.0 Discussion

Based on the analysis above, the research revealed that control systems have significant effect on management of fraud in Oando Plc. This position, however, is strengthened by Ginger and Scott (2008) that managing fraud and protecting oil and gas companies from their potential fraud requires effective control systems. In the authors’ opinion, control systems should focus on three key objectives which are Prevention, Detection and...
Response. The authors opined that the best way to manage fraud is to prevent them from occurring in the first place. Doing so requires addressing fraud root causes and fraud root can often be traced to unrealistic business targets coupled with overly aggressive incentives to achieve them. The authors admitted that one method companies can use to manage or minimize fraud is to provide employees with multiple channels for reporting concerns about fraud. The authors also put forward that how a company responds to fraud can determine the organization’s very survival.

Furthermore, Simiyu (2011) affirmed that the control systems help to ensure that organizations are not unnecessarily exposed to avoidable fraudulent practices and that financial information used within the businesses and for publication is reliable and contribute to the safeguarding of assets, including the minimization and detection of fraud and misuse of organizational resources. In the same vein, a study by Goodwin-Stewart and Kent (2006), using a sample of Australian-listed companies, shows that the existence of an internal control system is positively associated with firm size and commitment to risk management.

6.0 Conclusion

It is imperative on the management of oil and gas companies to introduce control measures and ethical practices that will minimize the risk of fraud because knowing how to interact with employees and fraud prevention strategies will determine the future of the organization.

The study however recommends, not only to the management of Oando Plc but other organizations in the downstream sector of the Nigerian oil and gas industry that more employees should be educated or trained about risk and fraud management, prevention and how to act in the case of fraud suspicion and detection. Often, fraud goes unnoticed because employees lack the training needed to detect its warning signs and to act properly. Fraud awareness training sessions will potentially save a lot of money and resources in the future.

References


