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Relationship Between Corporate Social Responsibility Expenditure, Pipeline Vandalism, and Revenue Losses

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This is to certify that the doctoral study by

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Walden University
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MSc, University of Nigeria, Nsukka, 2014

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

Approximately 65% of the oil spilled in the Niger Delta region of Nigeria has been attributed to sabotage activities in oil-producing communities, resulting in perceptions of revenue losses. For oil industry leaders and managers, understanding predictors of revenue losses are critical to sustainability. Grounded in stakeholder theory, the purpose of this quantitative correlational study was to examine the relationship between managers' perceptions of CSR expenditure, perceptions of pipeline vandalism, and perceptions of revenue losses for oil companies. Data were analyzed for 86 project managers of oil companies in Nigeria, who completed the Factors that Affect Company Revenue Questionnaire. Results of the multiple linear regression indicated the full model, was able to significantly predict managers' perception of revenue losses $F(2, 83) = 14.61$, $p < .001$, $R^2 = .260$. Both predictor variables, perceived CSR expenditures (*ß* = .320, $p = .002$) and perceived pipeline vandalism (*ß*= .318, $p = .002$) made a statistically significant contribution to the model. A key recommendation is for oil company managers to increase CSR funding. The implications for positive social change include the potential for oil industry managers to increase the employment of host communities', in turn reducing poverty.

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Dedication

All glory be to Almighty God, who made it possible for me to attain the degree of Doctor of Business Administration. Thank you, Father, for the guidance and favor throughout this doctoral journey. I dedicate this study to my wonderful boys Chikezie, Chidera, and Chukwuemeka. You are my joy and pride.

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Section 1: Foundation of the Study

Nigeria is a major oil-producing nation, with more than 80% of the country’s revenue generated from oil and gas production (Agbaeze, Udeh, & Onwuka, 2015). Multinational companies (MNCs) such as Shell, Chevron, and Mobil are actively engaged in oil exploration and production in the Niger Delta region of Nigeria, with these activities occurring mainly offshore. The impact of the oil companies’ operations has led to conflicts between the oil companies and stakeholders, especially host communities (Ajiye, 2015). In response to the conflict, project managers of oil companies engage in CSR activities to reduce the adverse effects of oil production operations on key stakeholders (Roger & Lee, 2017). According to Hashmi, Damanhouri, and Rana (2015), carbon emissions, illegal mining, and pollution associated with oil production operations have led to increased damage to the environment, thereby affecting socioeconomic conditions in the host communities.

Ejiba, Onya, and Adams (2016) stated that the activities of oil company executives in Nigeria have created economic challenges for host communities. Problems arising from activities of the industry include oil spills, air pollution, and destruction of crops and marine life, which affect the primary sources of livelihood of the people in these areas. Such trends have angered residents of the host communities, who have retaliated by destroying the oil companies’ facilities, resulting in disruption of operations and loss of revenue. Some managers of the oil companies have therefore embraced CSR to address industrial, societal, and cultural expectations. According to O’Connor (2013) and Ojo (2012), however, the CSR measures adopted by oil company executives have not yielded the desired results. Pipeline vandalism is rampant, resulting in disruptions in oil-producing activities and significant revenue losses. The purpose of this study was to examine the relationship between CSR expenditure, pipeline vandalism, and revenue losses for two oil companies in Nigeria.

Background of the Study

In the oil-rich Niger Delta region of Nigeria, oil company executives experience revenue losses due to the destruction of pipelines, disruption of operations, and shut-in of oil and gas wells, leading to production deferment and annual revenue losses related to crude oil spills and facility repairs (Ejiba et al., 2016). In 2014, approximately 65.13% of the oil spilled in the region was attributed to sabotage activities by angry unemployed youths of the oil-producing communities (Ejiba et al., 2016). According to Boris (2015), the Nigerian government and oil company executives lost more than 300,000 barrels of crude oil per day due to vandalism and illegal bunkering carried out by dissatisfied and aggrieved people of the host communities in the oil-producing regions of Nigeria.

Oil company executives appropriate a percentage of their annual budget to fund CSR projects such as the provision of social and physical infrastructure and scholarships to students in host communities. Despite oil company executives' strategies and CSR efforts, the incidence of youth unrest, rebellion, and confrontations in the host communities continues to grow. The residents of oil-producing communities have demanded more CSR projects and have complained that oil company executives should increase their CSR efforts and budgets to compensate for the negative impacts of oil-producing activities (Edoho, 2008). According to Lugard (2013), the environmental and social conditions of the host communities deteriorated despite CSR expenditure and sustainability efforts by the oil companies. Within host communities, residents' dissatisfaction and complaints of marginalization have resulted in hostilities and the disruption of oil companies' operations, leading to revenue losses. In this study, I examined the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The results of this study may enhance the knowledge and understanding of project managers of oil companies in Nigeria on value-creating CSR opportunities that could sustain relationships among stakeholders, and thereby promote a peaceful oil-production environment and minimize loss of revenue.

Problem Statement

The revenue losses of oil companies have significantly increased since 2012 in Nigeria (Ingwe, 2015). The Nigerian government estimated a loss of 400,000 barrels of crude oil per day that resulted in revenue losses of about $1 billion per month (Balogun, 2015). The general business problem is that revenue losses negatively impact business sustainability. The specific business problem is that some oil company managers do not understand the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of oil companies in Nigeria. The independent variables were CSR expenditure perception and pipeline vandalism perception. The dependent variable was perception of revenue losses. The targeted population consisted of project managers and supervisors responsible for CSR projects, maintenance of vandalized pipelines, and reporting of revenue losses for two oil companies located in the Niger Delta region of Nigeria. The possible implications for social change of this study include skill acquisition, employment opportunities, and the provision of social infrastructures for the economic empowerment of the host communities.

Nature of the Study

Researchers may choose from quantitative, qualitative, and mixed methods approaches in conducting a research study (Akimowicz, Vyn, Cummings, & Landman, 2018; Almalki, 2016; Zoellner & Harris, 2017). Quantitative researchers examine relationships between variables, test theory based on predetermined hypotheses, and infer results using statistical techniques to ensure generalizability (Almeida, 2018; Saunders, Lewis, & Thornhill, 2015). Such researchers use a range of mathematical, statistical, and graphical techniques to draw inferences from a sample of their target population (McLaughlin, Bush, & Zeeman 2016; Zoellner & Harris, 2017). I selected the quantitative method for my study and investigated the relationship between the CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of two oil companies in Nigeria. I collected data using survey questions and tested hypotheses to generate results.

In contrast to researchers using quantitative methodology, qualitative researchers seek to study participants’ meaning and derive themes (Yin, 2018). The qualitative method was not appropriate for this study because the study was not about understanding participants' meanings to formulate themes. Researchers using mixed methods integrate both quantitative and qualitative techniques to answer research questions and analyze data (Gerring & Cojocaru, 2016; Saunders et al., 2015). A mixed methods approach was also not suitable for this study because data integration was not the goal of the study and could have been time consuming.

Quantitative designs include correlation, experimental, and quasi-experimental designs (Bernard, 2017). Correlational design was suitable for this study because the objective was to predict a relationship between a set of predictor variables (CSR expenditure perception and pipeline vandalism perception) and a criterion variable, perception of revenue losses. Researchers using correlation design examine the relationship between variables without intervention (McCusker & Gunaydin, 2015). Researchers using experimental and quasi-experimental designs assess the degree of cause and effect between independent and dependent variables (Saunders et al., 2015). The experimental and quasi-experimental designs were not appropriate because I did not seek to examine cause and effect.

Research Question

Does a linear combination of CSR expenditure perceptions and pipeline vandalism perceptions significantly predict perceptions of revenue losses in a Nigerian oil company?

Hypotheses

Null hypothesis (H_0): The linear combination of CSR expenditure perception and pipeline vandalism perception will not significantly predict perception of revenue losses in a Nigerian oil company.

Alternative hypothesis (H_1): The linear combination of CSR expenditure perception and pipeline vandalism perception will significantly predict perception of revenue losses in a Nigerian oil company.

Theoretical Framework

Stakeholder theory was the theoretical framework that I selected for this study. Freeman proposed stakeholder theory in 1984. According to Freeman, a *stakeholder* is any individual or group that is influenced by or influences organizational activity. The key tenet of stakeholder theory is that every stakeholder plays a vital role in the growth and development of the business enterprise and has an interest in the success of the organization (Freeman, 1984). Furthermore, the theory indicates that business leaders must go beyond merely maximizing shareholders' value and understand the strategy for creating value for all stakeholders (Freeman, 1984). The satisfaction of all stakeholders such as financiers, employees, customers, communities, and suppliers who contribute to the firm's wealth-creating capacity may enhance the organization's chances of maximizing its financial performance (Cordeiro & Tewari, 2015).

The goal of a manager is to balance the interests of all stakeholders and prevent trade-offs among them (Freeman, 1984). Based on the review of the literature, stakeholder theory was an appropriate lens to view the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of oil companies in Nigeria in relation to the processes and issues relating to how business leaders manage crisis and conflicts emanating from host communities in the oil-producing Niger Delta region of Nigeria.

Operational Definitions

Bunkering: Bunkering is the theft of oil from production, pipeline, and storage systems using barges and small tankers to transfer oil into waiting offshore oil tankers for sales to refineries around the world that are willing to purchase cheaper uncertified oil (Ingwe, 2015).

Corporate social responsibility (CSR): Corporate social responsibility refers to the policy or initiatives of a company to provide nonprofit services to the local community in which it operates, primarily for ethical reasons (De Roeck, Marique, Stinglhamber, & Swaen, 2014).

Deferment: Deferment occurs when production is delayed due to equipment failure along the production chain or disruption from sabotage leading to stoppages of oil and gas operations (Hassan & Kouhy, 2015).

Force majeure: Force majeure is a legal term used in the oil industry to protect parties to a contract when the contract cannot be performed due to circumstances beyond the control of the parties, such as a natural disaster. Such circumstances have three elements: externality, unpredictability, and uncontrollability (Burke, 2017).

Joint operating agreement (JOA): A JOA enables joint exploration, appraisal, and development of acreage, according to the percentage interests of all parties. It also states the percentage interest as it relates to costs, risks, and benefits as agreed by parties in an oil company to mitigate risks (Junaidu, 2016).

Penance mechanism: The penance mechanism is a form of atonement to offset past corporate social irresponsibility (Kang, Germann, & Grewal, 2016).

Pipeline vandalism: Pipeline vandalism is the destruction of pipelines and delivery lines carrying crude oil from oil companies' facilities for export and domestic consumption causing oil spillage and environmental degradation (Omotoso & Omotoba, 2013).

Revenue losses: In this study, the term *revenue losses* refers to loss of revenue or income by oil companies as a direct result of acts of vandalism, including oil spillage and oil theft (Tukur, Ahmed, & Moh'd, 2017).

Slack resources: Slack resources relate to company managers' engagement in CSR because a company that has performed well financially may have excess resources to invest in CSR (Kang et al., 2016).

Shut-in: Shut-in occurs when an oil or gas well is stopped from producing to effect repairs along the production line or within the well (Al-Hajri, Al-Ajmi, & Mahmoud, 2018).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are distinct realities or facts declared by researchers when conducting research studies (Leedy & Ormrod, 2015). Assumptions are opinions held by researchers that are considered to be accurate but not verified during a research study

(Lips-Wiersma & Mills, 2014). Assumptions are settings that researchers use to ensure research validation (Foss & Hallberg, 2014). There were four assumptions in this study. First, I assumed that the statistical tool used for analysis was appropriate to determine the correlation between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses in oil companies in Nigeria. Second, I assumed that the findings of the study may improve CSR funding in the host communities, which could lead to sustainable development in the Niger Delta region. Third, I made the assumption that participants randomly selected for the sample in this study were representative of the population. Fourth, I assumed that participants provided truthful responses that genuinely reflected their opinions on each statement.

Limitations

Limitations in research are potential weaknesses inherent in a study (Yin, 2018). Limitations are circumstances that are unavoidable in a research study, which researchers cannot control (Horga, Kaur, & Peterson, 2014). The first limitation was that not all managers and supervisors of the two oil companies were selected for the study. Second, the study was conducted in the Niger Delta region of Nigeria and may not be generalized to other oil-producing regions in the world. Third, the use of structured survey questions might not have allowed for the collection of detailed information on the subject from participants.

Delimitations

Delimitations are factors under the control of the researcher that limit the scope and define the boundaries of a study (Anthonisz & Perry, 2015). Delimitations are challenges or barriers imposed by a researcher in a study (Delen, Kuzey, & Uyar, 2013). There were three principal delimitations in this study. First, due to time constraints, I used two oil companies for the study, which might not be an adequate representation of the oil companies in Nigeria. Second, I selected participants who were project managers and supervisors, excluding other categories of staff. Third, this quantitative study involved structured survey questions and hypothesis testing and did not allow for probing questions.

Significance of the Study

Contribution to Business Practice

CSR has become an integral part of business practice, and there is conflicting evidence on whether CSR strategies affect a firm's performance and to what extent (Alan, Rajesh, & Julie, 2014). I examined the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses in two oil companies in Nigeria. The results of this study may assist oil company executives in understanding whether CSR budgets have the positive impact that they ought to have on communities, as well as what improvements to make on the policies and implementation of CSR initiatives to improve the perceptions of members of oil-producing communities. A better understanding of the impact of CSR expenditure may significantly improve business leaders' approach to CSR administration, and, in turn, reduce incidents of pipeline vandalism and revenue losses.

Implications for Social Change

I investigated a linear relationship between the oil companies' CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The results of this study may encourage managers of oil companies to increase CSR funding, leading to an increase in CSR projects such as the provision of roads, potable water, electricity, cottage industries, schools, scholarship awards, and employment of some members of host communities to alleviate poverty. An increase in CSR expenditure could increase investment in sustainable development projects, improve community members' livelihood, and guarantee sustainable economic development for host communities.

A Review of the Professional and Academic Literature

The purpose of this quantitative correlational study was to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of two oil companies operating in the Niger Delta region of Nigeria. Concerns over exploration and production activities of the oil and gas companies, as expressed by some stakeholders, regulators, nongovernmental organizations (NGOs), consumers, shareholders, communities, and suppliers, have led to increased calls for environmental sustainability and CSR (O'Connor, 2013). The impact of the oil companies' operations has led to conflicts between the oil companies and stakeholders, especially host communities. The conflict between host communities and the oil companies has motivated many oil companies' managers to engage in CSR to reduce conflict (Roger & Lee, 2017). Despite the efforts of the oil companies' managers, conflicts between the oil companies' managers and host communities persist because of environmental sustainability issues.

Environmental pollution in the Niger Delta region has increased because of growth in oil production. According to Hashmi et al. (2015), continuous carbon emissions, illegal mining, and pollution have contributed to increased environmental damage. The operations of oil company managers in Nigeria have created economic challenges for host communities. Members of host communities have retaliated by destroying oil-producing facilities and disrupting operations, resulting in revenue losses (Ejiba et al., 2016). Some managers of oil companies have embraced CSR to address industrial, societal, and cultural expectations (O'Connor, 2013). However, managers' CSR strategies have not yielded the desired environmental sustainability results (Nwoke, 2016).

In my search for resources for this study, I reviewed 121 journal articles, 41 books, six doctoral dissertations, three annual reports of oil companies, two conference papers, three government documents, and several websites. Of the 168 references, 142 (89%) were published between 2014 and 2019, and 118 (85%) were peer reviewed and published within 5 years of my Chief Academic Officer (CAO) expected completion year of 2020. I used the following databases and sources to conduct the literature review: Walden University Library and Google Scholar, ProQuest, Business Source Complete, Emerald Management Journals, SAGE, ABI/INFORM, and Science Direct. I used the following keywords in my search for literature: *corporate social responsibility, pipeline* *vandalism*, *revenue losses of oil companies in Nigeria*, *stakeholders,* and *insecurity in the oil-producing regions of the Niger Delta of Nigeria.*

Stakeholder Theory

In 1984, Freeman proposed stakeholder theory. Freeman stated that the primary objective of a business is to create value for stakeholders. According to Freeman, a stakeholder is any individual or group that is influenced or influences organizational activity. The fundamental tenet of stakeholder theory is that every stakeholder plays a vital role in the growth and development of the business enterprise and has an interest in the success of the organization (Freeman, 1984). Stakeholders of a firm include investors, employees, creditors, suppliers, customers, public interest groups, and government agencies (Wang, Tong, Takeuchi, & George, 2016). Another tenet of stakeholder theory is that business leaders should care for stakeholders whom the company depends upon to provide human and capital resources to gain competitive advantage (Busch & Hoffmann, 2011). Managers use stakeholder theory to account for the role of each stakeholder in increasing the financial performance of a firm (Wang et al., 2016). Firm managers can potentially affect their stakeholders in positive or negative ways. Positive effects include the provision of goods and services, employment, payment of taxes, and the discharge of CSR. Adverse effects take the form of space occupancy, environmental noise, resource depletion, and ecological degradation (Hassan & Kouhy, 2015). Understanding the tenets of stakeholder theory could help managers establish policies to improve stakeholders' engagement.

Having adequate policies in place to improve stakeholders' involvement in the firm's activities could enhance the cordial relationship between a company and its stakeholders, especially within host communities. According to Alexis (2007), most managers have CSR policies in place, but the roles and involvement of stakeholders in CSR processes within organizations have not been well explored. Corporate culture, operational history, and institutional context limit stakeholders' participation, and stakeholders of a firm may have unique and conflicting objectives (Mason & Simmons, 2014). Investors tend to focus on profitability, customers expect the correct products and services, and host communities expect sustainable development projects such as roads, hospitals, and electricity (Eweje, 2007; Lindgreen, Xu, Maon, & Wilcock, 2012).

Company managers are challenged to meet stakeholders' expectations. Mason and Simmons (2014) posited that business leaders should embrace effective management of stakeholders' multifaceted expectations, which can make a significant contribution to business continuity, efficiency, and sustainability. Business leaders require a stakeholder approach to address both internal and external stakeholders' needs to minimize the negative effect of decisions of business leaders on stakeholders (Yusof & Ismail, 2015).

Proponents of stakeholder theory argue that the essence of business primarily lies in building relationships and creating value for all stakeholders. Though the composition of stakeholders may differ depending on the company, industry, and business model, all stakeholders are equally crucial to a company's success. Managers should avoid trade-offs among stakeholders (Freeman & Dmytriyev, 2017). Freeman (1984) classified the development of the stakeholder concept into three categories: (a) corporate planning, (b) business policy model, and (c) the CSR model. Company leaders aim to improve the company's competitive advantage by making strategic decisions that focus on business planning and the business policy model. Freeman developed the CSR model of stakeholder analysis using the business planning and business policy model to include internal and external stakeholders who may have conflicting positions and interests in the firm. According to Gazzola and Colombo (2014), company managers should develop a model for the integration of ethics and CSR into company strategy as a source of competitive advantage. Organizational leaders plan CSR as part of a corporate strategy to ensure that profits and increasing shareholder value do not overshadow the need to behave ethically toward other stakeholders (Gazzola & Colombo, 2014).

Freeman and Dmytriyev (2017) posited that one of the roles of a business leader is to evaluate the needs of all stakeholders and strive to meet their expectations. The evaluation of needs could motivate stakeholders to support the leaders in achieving the strategic objectives of the firm. Researchers have used stakeholder theory to highlight that CSR generates positive associations among stakeholders, which can enhance profitability (Mishra & Modi, 2016). Customers adopt a stakeholder framework as a measure of rating the overall performance of a firm (Harrison & Wicks, 2013). Positive interaction and engagement with all of a firm’s stakeholders are the keys to a firm’s success, in that profit measures alone are incomplete (Freeman, 1984). Increasing value for all stakeholders should be of paramount importance to a manager. The primary goal of the manager is to make a profit for the shareholders. However, the ability of the manager to increase value for all stakeholders can reduce the wealth maximization mindset of the manager (Freeman, Harrison, Wicks, Parmar, & Colle, 2010). The stakeholder perspective is a paradigm shift from neoclassical theory, under which researchers focused on profit making only for business owners.

Corporate Social Responsibility (CSR)

There are several literature resources on CSR and the influence of CSR on the business performance of a company. According to Galant (2017), CSR definitions vary with context, and there is little or no consensus on what constitutes CSR. One of the most widely accepted explanations suggests that there are four types of social responsibility: *economic*, *legal*, *ethical*, and *philanthropic* (Carroll, 1991). Internal CSR relates to the welfare of employees, whereas external CSR refers to communities, suppliers, customers, and other stakeholders. Stakeholders perceive CSR activities as an indication of organizational managers' level of engagement in the community. The level of engagement represents the advancement of social good, relationship building, and sustainable development to improve quality of life for stakeholders (Bylok, 2016). According to Heath and Waymer (2017), CSR plays a normative and derivative role in organizations' success. Heath and Waymer further posited that stakeholders use CSR standards to evaluate whether, when, and how to grant tangible and intangible resources to organizations. There have been significant debates about the scale, scope, and ongoing role of CSR in a firm. Some researchers in the academic literature have shown that CSR has a decisive role in enhancing a firm's value, both tangibly and intangibly (Bocquet, Mothe, Le Bas, & Poussing, 2015).

Advocates for CSR rely on the stakeholder theory developed by Freeman in 1984. Freeman proposed that firm managers must go beyond merely maximizing stockholders' value and address the interests of other stakeholders to achieve long-term economic success. Freeman argued that all stakeholders' interests are vital because all of the stakeholders contribute to the firm's wealth-creating capacity and are potential beneficiaries and bearers of risk. The organization manager's ability to satisfy the legitimate legal and moral expectations of all stakeholders may enhance the organization's chances to maximize its total wealth (Cordeiro & Tewari, 2015).

Amaeshi, Adegbite, and Rajwani (2016) described CSR as a global phenomenon. Amaeshi et al. described how CSR has continued to permeate and influence discourses, policies, and practices. As a global phenomenon, defining the role of CSR has significant implications for firms in both developed and developing economies. Razalan, Bickle, Park, and Brosdahl (2017) stated that CSR embodies the idea of a company's economic, legal, ethical, and philanthropic obligations outside of its primary goal of profitability. According to Razalan et al., the Committee for Economic Development (CED) described CSR as three concentric rings. The inner circle includes clear-cut primary responsibilities for the efficient execution of the economic function, such as products, jobs, and economic growth. The intermediate circle encompasses responsibility to exercise the economic function with a sensitive awareness of changing social values and priorities. The outer circle outlines newly emerging and still-amorphous responsibilities in which a business should assume that it will become more broadly involved toward improving the social environment.

Razalan et al. (2017) explained that in 2010, the International Organization for Standardization (IOS) dropped the word *corporate* from the term *corporate social responsibility*, suggesting that social responsibility applies to all sizes and levels of business. Shabana, Bucholtz, and Carroll (2016) suggested that managers of both MNCs and small and medium-sized enterprises (SMEs) embraced CSR to address industrial, societal, and cultural expectations. Small business managers practicing social responsibility are primarily concerned with the impact, ramifications, and outcomes that these efforts have on local communities (Razalan et al., 2017). According to Razalan et al., the focus of CSR discourse has shifted from attempts to define the concept and its meaning, to an effort to understand the role of stakeholders and the effect of stakeholders on the organization. Prutina and Sehic (2016) agreed that managers should find the best way to integrate CSR into their existing business model or even create a new management model to address stakeholders’ expectations. According to Shuili and Edward (2012), oil company managers need to abandon CSR as a public relations mentality and adopt a long-term approach to CSR. Managers should implement a long-term strategy that goes beyond simple financial donations to communities and instead proactively minimize the negative externalities of their business operations on society.

Kang et al. (2016) identified four mechanisms in the relationship between CSR and corporate social irresponsibility (CSI) and a firm’s performance: slack resources, proper management, penance, and insurance. Slack resources relate to company managers’ engagement in CSR because a company that has performed well financially may have excess resources to invest in CSR (Kang et al., 2016). When there are proper management mechanisms, CSR can function as part of proper management and may thus improve financial performance. The penance mechanism is a form of atonement to offset past CSI. Managers use the insurance mechanism to build a reservoir of goodwill to attenuate adverse reactions when things go wrong between the company and stakeholders (Kang et al., 2016). According to Kang et al., empirical evidence supports the proper management and penance mechanisms but does not support the slack resources and insurance mechanisms because managers pursue CSR either as the right thing to do or to make amends for their past CSI.

Competing Views of Stakeholder Theory

One of the main opponents of the concept of CSR is Milton Friedman, winner of the Nobel Prize in economics. Friedman (1970) argued that CSR is essentially a wrong idea, in that it violates the rights of owners of businesses. Friedman argued that the primary aim of any corporation is to raise income and pursue only profit making for the owners of the business. Therefore, in using corporate resources to solve nonbusiness social problems, executives engaging in CSR are essentially stealing from shareholders. Friedman contended that firms exist to serve the interest of shareholders and to maximize shareholder value, thereby supporting the neoclassical theory that profit should be the only focus of business owners. Neoclassical economic theory evolved from the Smithsonian view of a corporation as a member of the broader economic system that is driven by self-interest (Carroll, 1991). According to Friedman, societal and environmental problems are matters for the state to handle, which presupposes that when managers use firm’s resources for societal and environmental purposes, the firm incurs additional costs that could erode the value of the firm. Allocating any part of profits earned by a company to social issues is against the principles of neoclassical theory, in that such activity entails a violation of property rights and the obligation to fulfill contracts. Therefore, from this perspective, social responsibility and business are incompatible (Friedman, 1970).

Proponents of the economic view of the corporation support agency theory. Jensen (2010) emphasized the economic view, stating that managers who indulge in the pursuit of private benefits to the detriment of the owners divert resources from the primary goal of making a profit for their owners. Proponents of agency theory are opposed to CSR, viewing CSR as merely the selfish behavior of the firm's management to enhance their public image at the expense of the firm's shareholders (Frank, Tao, & Dylan, 2016). Jensen and Meckling (1976) developed the agency theory known as the *theory of the firm*, which consists of three components: (a) managerial behavior, (b) agency costs, and (c) ownership structure. Jensen and Meckling used the theory to explain the relationship between the separation of ownership and control of the firm, based on the premise that agents, unless monitored effectively, tend to exploit owners or shareholders. Mishra and Modi (2016) opined that CSR represents an agency problem, in that managers divert scarce organizational resources toward social causes that do not have any link to the firm's performance and reduce shareholders' value. Supporters of agency theory are opposed to CSR and argue that agents tend to exploit owners using CSR projects as camouflage (Frank et al., 2016).

According to Friedman (1970), the government is responsible for societal and environmental problems. Managers who use the firm's resources for social or environmental purposes, incur auxiliary costs that could affect the financial performance of the firm negatively (Friedman, 1970). Managers are obliged by shareholders to generate a profit and the use of resources for social purposes other than maximizing shareholder returns appears to be a breach of the contract with shareholders (Friedman, 1970). According to Galant (2017), business operations should be separated from social issues, as CSR can contribute to demanding human attitudes because CSR is heterogeneous and difficult to measure. Galant listed the following critical issues against CSR as developed by Friedman and his followers: (a) the company manager is responsible for implementing the wishes of its owners by generating high returns on investments; (b) managers must comply with the rules of a free market in accordance with good business practice and avoid losses, rather than contribute to doing good; (c) a company is purely an economic institution and managers should not act on moral grounds, but focus on the practical goals of wealth multiplication for shareholders; (d) social responsibility initiatives distract managers from earning profits; and (e) allocating resources to social needs negates the level of competitiveness of a firm which may lead to an increase in the price of goods and services for consumers. Also, Friedman argued that shareholders who are concerned about social issues could donate some of their funds to charity.

Nwoke (2016) postulated that the oil companies in Nigeria operate under Friedman's theory. The damage caused to the environment by the oil companies due to operational activities far outweighs the claim of CSR investment. The oil company managers failed to care for the host communities and environment because of the shareholders' value model of their corporate governance (Nwoke, 2016). Harrison and Wicks (2013) raised questions about value creation for stakeholders from CSR, and how such value is measured. Stakeholder theory critics opined that the CSR concept is too generic and vague to address the issues of all stakeholders. Stakeholders face a multitude of diverse issues as their level of prosperity depends on the decisions made by the company managers (Galant, 2017).

There are conflicting opinions on value addition of CSR to a firm. According to Servaes and Tamayo (2013), there are contrasting views on value creation from CSR activities for the firm's shareholders. There is more support for the view that CSR activities are positively related to the profitability of the firm (Servaes & Tamayo, 2013). The divergent views have resulted in an immense body of knowledge regarding the value creating role of CSR, thereby making the concept and the scope of CSR difficult to define (Malik, 2015). According to Idemudia (2010), critics and proponents of CSR disagree about the nature and scope of CSR and also share different perceptions and understanding of the role and purpose of the corporation in society. Mishra and Modi (2016) argued that the simplest model of agency theory is defunct and there is a need to consider additional factors of principals' and agents' disclosure that goes beyond differentiating between shareholder's and stakeholder's accounting. Alan et al. (2014) stated that there are many convincing reasons why CSR evidence varies. The differences in opinions of scholars on

CSR depends on the context of the time, country, industry, and dimensions of CSR observed.

The Relationship Between CSR and Stakeholder Theory

CSR has both proponents and opponents around the world. Although the proponents of CSR use stakeholder theory to organize the idea of CSR, the dispute about the necessity of CSR has continued since the twentieth century (Galant, 2017). The concept of CSR and stakeholder theory has grown considerably during the 2010s. Company managers following the stakeholder theory perspective understand that they have a responsibility to operate in the interests of all their stakeholders (Freeman, 1984; Galant, 2017). Furthermore, stakeholders are interdependent, and creating value for one stakeholder creates value for the others. The proponents of the CSR and stakeholder theory concepts often look at the same business issues from different points of view.

Freeman and Dmytriyev (2017) viewed the stakeholder theory and CSR as distinct concepts with some overlap. Freeman and Dmytriyev understood that CSR is a part of corporate responsibility, and managers use both concepts in ethical business practices. However, the applicability of stakeholder theory and CSR is dependent on the company problem. Freeman and Dmytriyev further stated that the main similarity between stakeholder theory and CSR is the importance of incorporating societal interests into business operations. Businesses are always embedded in society and never separated as the proponents of neoclassical theory portray. Also, Galant (2017) posited that in some cases, it is not possible to separate business from social issues. Companies are an integral part of society and should, therefore, share responsibility for the community with the state.

Freeman and Dmytriyev (2017) further explained that the two concepts also differ. Managers who use stakeholder theory address the critical obligations of the business to all stakeholders, i.e., corporate responsibilities, although the composition of stakeholders and their interests may differ. Managers using CSR neither attempt to understand how the business operates nor try to stipulate the overall range of responsibilities. Instead, the managers focus on one stream of business responsibility, the local communities, and society at large (Freeman & Dmytriyev, 2017). CSR and corporate responsibility are interconnected concepts. Managers develop corporate responsibilities with CSR as a subset include common elements, purpose, value creation, and stakeholder interdependence (Freeman & Dmytriyev, 2017).

A manager's role in a company involves two things: generating income for the company and satisfying shareholders interest. Galant (2017) stated that a company manager must pursue two goals, generating revenue and taking care of the interests of all stakeholders. A company's manager must act consciously when apportioning company resources and ensure adequate compensation of any losses resulting from the firm's economic activity (Freeman, 1984). Harrison and Wicks (2013) found that CSR as a management philosophy complements and addresses the shortcomings of stakeholder theory when a firm's management adopts a CSR mindset and operationalizes CSR in the environment. Freeman and Dmytriyev (2017) concluded that although proponents of

CSR and stakeholder theory often look at the same issues from different perspectives, their application is dependent on a particular management problem.

CSR Expenditure

CSR projects of oil companies in Nigeria involve large expenditures to benefit the local communities in which they operate. Oil company managers in Nigeria have nonmandatory expenditure as an integral part of their CSR policy. Figure 1 illustrates the number of CSR projects and costs of the projects executed by fourteen oil companies in during 2016 in Nigeria.

ENTITY	NO OF PROJECTS	AMOUNT		BASE FIGURE
		NGN	USD	USD
AENR	1	298,176,799		1,148,336
AMNI	12	220,144,463		847,818
APDNL	41	8,417,736,103	1,455,367	33,873,668
APENL	9	8,425,000	32,000	64,446
BELEMAOIL	12	3,719,784,870	13,512,101	27,837,699
PLATFORM/ NEWCROSS	13	76,414,495		294,287
SAPETRO	1		256,929	256,929
SEPLAT	3	630,179,453		2,426,941
SHORELINE	7	604,330,000		2,327,390
SNEPCO	19	78,902,997	250,967	554,837
SPDC	80	4,141,426,588		15,949,421
STAR DEEP	20	1,112,532,000	3,287,000	7,571,572
TEPNG	7	5,282,937	2,212	22,558
TUPNI	30		19,138,504	19,138,504

Figure 1. Nonmandatory CSR expenditure of oil companies in Nigeria. Adapted from *2016 Oil and Gas Industry Audit Report* (pp. 105-106), by Nigeria Extractive Industries Transparency Initiative, 2018 (https://eiti.org/files/documents/neiti-oil-gas-report-2016-full-report-211218_1.pdf). ‘In the public domain’.

The ultimate goal of any firm manager is to enhance their firm’s value, and CSR, when carried out as part of the company manager's strategic objectives, has been widely found to fulfill that purpose (Gazzola & Colombo, 2014). As managers execute CSR programs in the immediate communities within the companies' operational areas, residents are likely to display goodwill towards the company (Matten & Moon, 2008). The structures and objective of CSR in an organization could serve as a valuable strategic tool to maximize shareholder value and enhance the profitability of the firm (Malik, 2015).

Servaes and Tamayo (2013) stated that the relationship between CSR activities and firm value is unclear because managers adopt different approaches to implementing CSR and there is a lack of understanding about how CSR affects firm profitability. Servaes and Tamayo (2013) also stated that firm managers engaging in and publicizing CSR activities could only add value if these activities and the reputation of the firm are aligned. Amir and Amir (2010), posited that regardless of how CSR is defined, it refers to actions taken by management at firms' concerning their employees, communities, and the environment that goes beyond the legal requirements, thereby enhancing the value of the firms. Servaes and Tamayo (2013) stated that the effect of CSR on firm value depends on the manager's ability to use CSR to influence stakeholders in the firm. Managers could use CSR to modify consumers behavior and affect firm value if the consumers are aware of the firm's CSR activities. Malik (2015), found that managers use CSR strategies to enhance firm value by promoting employee productivity, ensuring better operating performance, expanding the product market, improving capital market benefits, building a corporate reputation, and strengthening a firm's relationship with society, regulators and other stakeholders.

Kang et al. (2016) addressed the question about how CSR and corporate social irresponsibility (CSI) relates to a firm's performance. The authors revealed that firms' benefit financially from CSR because it leads to positive financial performance when the firm is not involved in CSI. Depending upon the structure and goals of the CSR programs, firm managers could realize different CSR benefits that ultimately improve the overall value of the firm (Malik, 2015). According to Malik, managers can benefit from CSR in various facets of firm performance, such as enhanced operating efficiency, product market gains, improved employee productivity, and increased earnings. Wei, Shen, Zhou, and Li (2017) argued that managers implementing environmental CSR indirectly influence the firm's performance through business and political legitimacy and the firm's reputation. Additional indirect effects include the relationship with external stakeholders', customer satisfaction, internal intangible resources, and consumer trust.

Guadamillas-Gomez, Donate-Manzanares, and Skerlavaj (2010) posited that managers use CSR to enhance firm value by promoting employee productivity, ensuring better operating performance, expanding the product market, improving capital market benefits, building a corporate reputation, and strengthening a firm's relationship with society, regulators, and other stakeholders. Conversely, Idemudia (2010) found that MNCs' managers CSR initiatives only marginally influenced corporate and community conflicts. MNC managers addressed some aspects of local grievances but were unable to foster economic empowerment and reduce conflict reduction in Nigerian host communities. Usman and Amran (2015) suggested that community involvement disclosure, products and customer disclosures, and human resource disclosures enhanced the financial performance of a firm. Usman and Amran further postulated there is additional evidence of a significant negative relationship between environmental disclosure and financial performance. In addition to managers use of CSR to improve the financial performance of a firm, environmental sustainability, and accountability could also enhance a firm's value and reputation (Hassan & Kouhy, 2015). Oil company managers in the Niger Delta region of Nigeria CSR expenditures could have a significant impact on pipeline vandalism and revenue losses.

Pipeline Vandalism and Repairs

The federal government of Nigeria owns the oil pipeline network in both the upstream and downstream sector of the oil and gas industry, one of the critical infrastructures of the country. According to Omodanisi, Eludoyin, and Salami (2015), the Nigerian government owned about 5120km of pipelines managed by the Nigerian National Petroleum Corporation (NNPC) in the downstream sector and other trunklines such as the Nembe Creek trunkline (NCTL) and the Trans Niger pipeline (TNP) in collaboration with its joint venture partners in the upstream sector of the oil industry. Most of the pipelines are old with poor integrity and are exposed to inadequate security, making it accessible and easy for vandalization by militants (Osaghae, 2015). Omodanisi et al. (2015) noted that crude oil is transported to the export terminal and refined products to depots along the pipelines. However, due to inadequate protection, militants vandalize the pipelines. Pipeline vandalism is a deliberate disruption of the pipeline; other destruction includes the tapping and siphoning of crude oil illegally (Okolo & Etekpe, 2010).

Okoli and Orinya (2013) stated that most of the pipeline network is not buried but runs above ground and can be easily accessed and vandalized, thus increasing the rate of vandalism. According to Omodanisi et al. (2015), pipeline vandalism has threatened the national security of Nigeria and led to a significant loss of revenue (Osaghae, 2015). Over 60% of pipeline vandalism is due to sabotage caused by the restive youths in the oil companies' host communities (Omodanisi et al., 2015). Osaghae (2015) found that a high unemployment rate, poor quality of life, and inadequate security of the pipelines are the major causes of pipeline vandalism. Pipeline vandalism occurs because oil company managers failed to provide employment opportunities for the youths and adequate compensations for pollution and other environmental degradation activities. Oteh and Eze (2012) found that pipeline vandalism was due to negligence and community under-development by the oil company managers. Oteh and Eze argued that the oil company workers all had good amenities at their disposal such as electricity, potable water, and a health care system, while the host communities' members have no access to such amenities. This lack of recognition and sharp contrast in the lifestyle between the oil worker and the members of the host communities has led to violence and conflict within the region (Oteh & Eze, 2012).

Yeeles and Akporiaye (2016) stated that oil company managers face the risk of pipeline sabotage because of a failure to make adequate provision for the host communities' members. The managers incur the high cost of pipeline repairs, which reduces the profitability of the company. According to Yeeles and Akporiaye (2016), between 2015 and 2016, the federal government reported the loss of over three million barrels of oil as a result of pipeline vandalism resulting in total revenue losses of over US$600 million excluding repairs of the pipeline. Akpomera (2015) identified one of the most affected pipelines in the Niger Delta region as the NCTL. The NCTL is approximately 115 km in length and transports an average of 200,000 barrels of oil per day (bopd) from five injectors to the Bonny crude oil terminal for processing and export. According to Akpomera (2015), in 2013, the NCTL had about 53 points of breakage resulting in lost crude of approximately US$1.23 billion and pipeline replacement costs of US$1.1 billion. Lekwot, Balasom, Dyaji, and Yakubu (2014), reported that pipeline vandalism resulted in the death of over 2,000 people from explosions and fire incidents and over $150 million in revenue losses. The cost of repairs for the vandalized pipeline in the Nigerian oil industry is a disturbing phenomenon. Figure 2 depicts years 2015 and 2016 comparative cost of repairs for vandalized pipelines. The pipeline repairs expenditures increased from 112.818 billion naira ($369.9 million) in 2015 to 126.554 billion naira ($414.9 million) in 2016 representing a 14% increase.

Description	2016		2015	
	N' Billion	%	N' Billion	%
Fund releases for salaries	20.605	16.28%	22.105	19.59%
Share of upfront	11.164	8.82%	13.272	11.76%
Operations	11.419	9.02%	3.275	2.90%
Employer Pension	3.073	2.43%	-	0.00%
Through/Marine	4.332	3.42%	10.547	9.35%
Security	10.122	8.00%	1.959	1.74%
NPA	2.824	2.23%	-	0.00%
Projects	0.154	0.12%	1.355	1.20%
ITF Contribution	-	0.00%	0.396	0.35%
PPPRA	0.354	0.28%	0.641	0.57%
Others	0.017	0.01%	0.614	0.54%
Crude movement	7.437	5.88%	24.215	21.46%
Facilities repairs	2.354	1.86%	4.124	3.66%
Pipeline repairs	2.595	2.05%	-	0.00%
Port Charges	1.424	1.13%	-	0.00%
Products distribution	16.937	13.38%	11.373	10.08%
Refineries	19.975	15.78%	3.057	2.71%
TUMA/OLOIBIRI	-	0.00%	0.215	0.19%
Demurrage	11.769	9.30%	15.670	13.89%
Total	**126.554**	**100.00%**	**112.818**	**100.00%**

Figure 2. Comparative summary analysis of expenses on pipeline repairs and maintenance. From *2016 Oil and Gas Industry Audit Report* (p. 64), by Nigeria Extractive Industries Transparency Initiative, 2018 (https://eiti.org/files/documents/neiti-oil-gas-report-2016-full-report-211218_1.pdf). 'In the public domain'.

Revenue Losses

Nigeria is the largest oil producer in Africa and ranks among the top 10 in the world (Aghedo, 2015). The Nigerian oil and gas sector accounts for over 90% of foreign exchange earnings and revenue, the majority of which comes from the Niger Delta region (UNEP, 2011). The region has contributed immensely to the growth of the Nigerian economy and significantly increased revenue for Nigeria. However, the region is considered one of the most turbulent and oil impacted regions in the world with a significant number of kidnapping cases, pipeline vandalism, illegal bunkering, and oil theft (Raji & Abejide, 2013). Poorly regulated oil activities, including gas flaring, industrial pollution, and oil spillage has led to the environmental degradation of the region (Apuke, 2017; Tukur et al., 2017). The federal government of Nigeria, as well as oil companies, suffer substantial revenue losses as a result of the unrest in the Niger Delta region of Nigeria. Figure 3 shows the revenue generated from oil and gas sales from 2012 to 2016. The decline in revenue is due to the unnecessary stoppages of oil and gas operations, shut-ins, oil theft, and pipeline vandalism (Raji & Abejide, 2013).

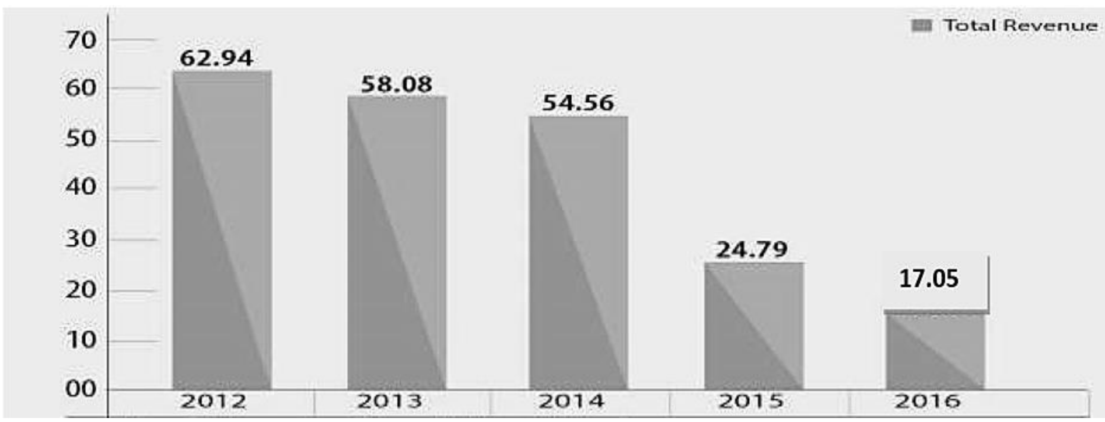

Figure 3. Pattern of revenue generation of oil companies in Nigeria. From *2016 Oil and Gas Industry Audit Report* (p. 26), by Nigeria Extractive Industries Transparency Initiative, 2018 (https://eiti.org/files/documents/neiti-oil-gas-report-2016-full-report-211218_1.pdf). ‘In the public domain’.

The bitter disagreements and conflicts between the host communities’ members and the oil companies, often lead to sabotage, kidnapping, and destruction of properties, because of environmental degradation and a lack of care and recognition of the host communities’ status as a key stakeholder in the business (Hassan & Kouhy, 2015). According to Aghedo (2015), Nigeria's economy depends on the oil and gas sector, which accounts for 95% of export revenues, 80–85% of government revenues, and about 32% of the gross domestic product (GDP). Aghedo (2015), posited that Nigerian crude oil production dropped from 2.4 million barrel per day (bpd) to about one million bpd at the peak of the Niger Delta conflict between 2012 to 2014, a revenue loss of approximately US$34.4 billion. Agbaeze et al. (2015) stated that oil companies in Nigeria lost about US$1.23 billion in 2013 due to host community distrust, violence, and shutdown of all oil-producing fields resulting in the oil companies declaring force majeure.

According to Aghedo (2015), the cost of doing business in the oil and gas sector in Nigeria has increased because foreign personnel relocated due to security reasons and those remaining demanded higher wages due to the insecurity of working in the region. Adusei (2015) found that between 2005 and 2009, oil production fell by 50% from 2.6 million barrels to 1.3 million barrels per day. The insurgent activities against the government and oil companies included the occupation of flow stations, pipeline vandalism, kidnapping, bunkering, piracy, and other criminal activities all of which crippled the oil and gas sector and caused severe oil and gas companies to shut down some of their oil and gas installations.

The Nigerian government spent about US$160 million for repairs of damaged facilities and experienced annual revenue losses of US$4.4 billion due to the destructive activities of the militants (Eke, 2016). Osaghae (2015) found that the loss of revenue forced the Nigerian government to initiate a peaceful reconciliation with the restive youths and militants, although the agreement has not solved the problems. Wheeler, Fabig, and Boele (2002) stated that Oil Mining Lease number eleven (OML 11) oil fields with a production capacity of about 750 million barrels had been shut down for over 20 years because of host community distrust and violence against oil companies. The shutdown of the oil-producing field led to significant government and oil company losses, and the field remains closed to date. Yeeles and Akporiaye (2016) agreed that the failure of oil company managers to achieve high production targets was due to sabotage, which also resulted in high repair and replacement costs.

Other significant causes of revenue losses in the oil and gas sector include high-security costs and the cost of oil spill clean-up and remediation activities. Obenade and Amangabara (2014) opined that the cost incurred from these activities further reduces revenue for the oil companies and government. To protect oil pipelines from vandalism, oil company managers spend a large portion of their revenues to pay security agents, which add significantly to overhead operational costs.

Security cost. Oil companies incur significant operational costs associated with workers compensation and facility repairs due to the insecurity in the Niger Delta region of Nigeria. Aghedo (2015) affirmed that kidnapping and destruction of lives and properties resulted in many businesses relocating out of the Niger Delta region. The instability in the Niger Delta has led the Nigerian government and oil companies to employ large numbers of security personnel to guard oil installation and oil workers (Oromareghake, Arisi, & Igho, 2013). The Nigerian government has spent billions of naira to deploy joint security personnel from the Military, Navy, Air force, and Police for peacekeeping and protection of oil workers and facilities (Oghoghomeh & Ironkwe, 2012). The cost of the joint security team has reduced the Nigerian GDP (Oghoghomeh & Ironkwe, 2012).

According to Aghedo and Osumah (2014), the Nigerian government incurred costs of about 400 billion naira (US$1.3 billion) in 2007 to secure oil installations and facilities, while the oil companies spent about US$3.7 billion on security. Ajiye (2015) noted that the emergence of the militant groups in the Niger Delta region threatens the oil companies and the principal source of revenue in the country. Ajiye observed that the insecurity and crisis in the region transformed the once peaceful region into a volatile and dangerous region, thereby increasing the cost of doing business there. To restore peace in the region, the Nigerian government embarked on an amnesty program between 2010 and 2012 for the militant groups and spent over 200 billion naira as compensation and settlements for the militants (Aghedo, 2015). The amnesty initiative brought about temporary peace in the Niger Delta region, but unfortunately, peace has remained elusive due to the resurgence of the militant activities in 2015 (Aghedo, 2015). Further, the dangerous environment in the Niger Delta region resulted in businesses closing and shutting down oil-producing facilities (Aghedo, 2015).

One of the strategies adopted by the Nigerian government in the post amnesty era was to contract with former militant leaders to secure the oil pipelines. According to Aaron (2015), the Nigerian government paid a protection fee of approximately 5.6 billion naira (US$18.3 million). Also, contracts worth millions of dollars were given to militant leaders for the procurement of vessels for the joint task force carrying out surveillance in the region (Aaron, 2015). Aaron further narrated that, using the ex-militants to secure the pipelines reduced the rate of militant attacks. However, the respite was short lived when the government terminated the contracts resulting in the resurgence of attacks. Oil company managers experience frequent security breaches leading to pipeline vandalism and oil spills with significant oil volume losses.

Oil spill clean-up and remediation. Oil spills negatively impact the coastal environment, as well as entire ecosystems in the Niger Delta region of Nigeria, and remain a source of several international litigations (Ifelebuegu, Ukpebor, Ahukannah, Nnadi, & Theophilus, 2017). According to Ifelebuegu et al., oil spills have the potential to adversely affect the coastal and marine habitats, wildlife, fisheries, and human activities as crude oil contains a toxic compound that can cause damage to the aquatic ecosystems. A United Nations Environment Programme (UNEP, 2011) reported that oil contamination is widespread in the Niger Delta areas and has severely impacted many components of the environment. The lack of documentation of the oil spills is a result of poor management practices and inadequate record-keeping within the region. Apuke (2017) reported that there is not a week that passes without an oil spill. The frequency of the spills has resulted in significant losses to both the oil companies and the government. Figure 4 depicts oil spill incidents and causes for 2017 from an oil company. The figure shows there were 429 oil spills, with 225 of these attributed to sabotage, resulting in 9,097 barrels of oil lost.

	Spill Incidents								Total number of Spills	Volume spilled(BBLs)
Month	Natural Accident[1]	Corrosion[2]	Equipment Failure[3]	Sabotage[4]	Human Error[5]	YTBD[6]	Mystery[6]	Erosion / Wave / Sand		
January		4	6	20	0	5	2	0	40	91.98425
February		2	7	20	0	6	2	3	40	177.96
March		1	7	23	1	13	1	1	48	229.3399
April		5	3	8	0	8	0	1	25	768.36289
May		1	5	14	1	7	2	2	33	699.5554
June		3	6	26	0	4	3	2	47	712.88651
July		3	1	29	0	3	5	1	43	2036.1519
August		1	2	17	0	4	4	0	29	300.57284
September		1	2	20	0	2	6	1	33	1511.36831
October		0	3	12	0	2	5	1	23	234.31556
November		1	1	33	0	4	9	0	48	2249.354
December		2	0	3	0	10	4	1	20	85.2009
Total		**24**	**43**	**225**	**2**	**68**	**43**	**13**	**429**	**9097.05239**

Figure 4. 2017 oil spill incidents report. From *2017 Oil and Gas Industry Annual Report*, by Department of Petroleum Resources, 2018 (https://www.dpr.gov.ng/oil-gas-industry-annual-reports-ogiar/). ‘In the public domain’.

According to Kadafa (2012), oil spillage is a global issue, and total spillage of petroleum into the oceans, seas, and rivers is estimated to be between 0.7 to 1.7 million tons per year. Oil spills are widespread in oil production areas. Spills occur as a result of many factors ranging from vandalism of pipes to oil theft, inadequate maintenance of the oil infrastructure, and corrosion of the oil pipes (Apuke, 2017). Nwilo and Badejo (2006) stated that one of the major causes of the oil spillages is inadequate maintenance of the pipelines and that the pipeline infrastructure is old and fatigued.

Oil company executives and the host communities’ members disagree about the primary cause of oil spillage (Apuke, 2017). Most of the oil company executives claim that oil spillages are primarily the result of sabotage or vandalism (as much as 90%) by community members (Ejiba et al., 2016). Community members dispute the accusation.

Instead, community members state that oil companies place the blame on the host communities in order to evade the responsibility for the damages (Apuke, 2017).

Conversely, the communities' members claimed that the pipelines are rusted and leaking poisonous crude into the environment due to poor maintenance. According to the communities' members the oil executives use the excuse of vandalism to avoid paying penalties as assessed by regulatory bodies such as the National Oil Spill Detection and Response Agency (NOSDRA); as well as providing compensation for the communities (McCaskill, 2013). Anifowose, Lawler, van der Horst, and Chapman (2012) affirmed that oil spills both crude oil and refined products occur due to operational errors, pipeline corrosion, aging facilities, and lack of maintenance of the pipelines. Oil spills also result from third-party interference where thieves and communities break the pipeline to siphon crude or refined products, sometimes resulting in explosions (Osuala, 2013).

Apuke reported a large number of oil spillages in the Niger Delta has resulted in significant land degradation, which has far-reaching effects on farming and ecosystems. Ejiba et al. (2016) concluded that oil spillage is the leading cause of environmental degradation in the Niger Delta, with an average of about 700 spills recorded annually. Despite the reports by oil company leaders that the majority of oil spills in the region are due to sabotage; neglect on the part of the oil companies and aging infrastructure have equally contributed to the high rates of oil spills experienced in the region. According to Ejiba et al., the Department of Petroleum Resources (DPR) annual statistical bulletin in 2014 summarized the oil spills incidence report as 65.13% of oil spilled was due to sabotage, 17.38% was yet to be determined causes; 14.35% was as a result of natural accidents, corrosion, equipment failure, and human error, while 3% was due to mysterious circumstances.

Ejiba et al. further narrated that in 2014, the oil companies recorded a total of 1,087 oil spills in the Niger Delta region with an average of 91 spill incidents per month. Between January 2010 and August 2015, the oil companies recorded about 6,333 oil spill incidents. Aroh et al. (2010) explained that the consequences of oil pipeline leaks and explosions could be devastating to the environment. On land, oil spills destroy crops and damage the quality and productivity of soil that communities use for farming; while in water, oil damages fisheries and contaminates potable water. In their analysis of spill incidents and pipeline vandalism that occurred in Nigeria between 1970 and 2006, Aroh, et al., concluded that approximately 1,000 reported spills and hundreds of thousands of oil barrels were lost to the environment yearly. Researchers estimated that from 1958 and 2008, between 9 million and 13 million barrels had been spilled in the Niger Delta (Ejiba et al., 2016).

Activists and NGOs believed that vandalism becomes inconsequential if oil executives pay rents to the communities in the Niger Delta (Enuoh & Inyang, 2014). Some of the vandals are sabotaging the pipeline as a way to express discontent with the government. Other individuals vandalize the pipelines, not to steal but to draw attention to the communities' unfavorable living conditions (Apuke, 2017). The oil company managers did not meet the expectations of the host communities and never treated the host communities' members as stakeholders (Enuoh & Inyang, 2014). There are many incidents where thieves vandalize pipelines to steal crude oil (Apuke, 2017). To reduce the rate of spillages and create sustainable development in the Niger Delta, the federal government of Nigeria established the Niger Delta Development Commission (NDDC). The NDDC is responsible for producing a master plan for the development of the Niger Delta, providing infrastructure, and creating industrialization and employment (Apuke, 2017).

Transition

The purpose of this study was to examine the relationship between CSR expenditure, pipeline vandalism, and revenue losses of an oil company in Nigeria. In Section 1 of this study, I discussed the foundation of the study, followed by the background of the problem, problem statement, purpose statement, and the theoretical framework. Also, in Section 1, I reviewed the literature. In Section 2, I presented the purpose statement, the role of the researcher, description of the research methodology and design, population and sampling, ethical research, data collection techniques, data analysis, and study validity. In section 3, I provided the research questions, hypotheses, and findings of the study. Furthermore, in Section 3, I presented the application to professional practice, implications for social change, recommendations for action, recommendations for further research, the researcher reflections, and conclusion.

Section 2: The Project

At the core of this study, I examined the CSR expenditure perception of two oil companies in Nigeria in relation to pipeline vandalism perception and perception of revenue losses. In Section 1, I provided narratives on the background of the problem, problem statement, purpose statement, and theoretical framework of the study, as well as an extensive review of the literature. In Section 2, I discuss my role as the researcher, the research method and design, ethical issues, data collection instruments, technique, and analysis, as well as issues relating to study validity.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The independent variables were CSR expenditure perception and pipeline vandalism perception, and the dependent variable was perception of revenue losses. The targeted population consisted of project managers and supervisors responsible for CSR projects, maintenance of vandalized pipelines, and reporting of revenue losses for two oil companies located in the Niger Delta region of Nigeria. The possible implications for social change of this study involve skill acquisition, employment opportunities, and the provision of social infrastructure for the economic empowerment of the host communities.

Role of the Researcher

The role of a researcher in a quantitative study encompasses the selection of an appropriate instrument for data collection, analysis of data, and presentation of results.

The researcher should engage in raw data collection (Yates & Leggett, 2016), carefully select participants, administer survey questions, collect data, and perform data analysis (McCusker & Gunaydin, 2015). According to Fusch and Ness (2015), the role of the researcher includes developing hypotheses, selecting a research strategy, carrying out activities relating to data interpretation, and report writing. My role as the researcher was to determine an appropriate method and design for this study in alignment with the purpose of the study. According to Hughes (2016), a researcher should justify the methodological choice and appropriate sample size from the population of a study. Akhtar, Shah, Rafiq, and Khan (2016) stated that a researcher is responsible for data collection, organization, statistical analyses, and interpretation, leading to the findings of the study. My role as the researcher included (a) identifying and selecting an appropriate instrument and participants, (b) collecting data to test the hypotheses, (c) analyzing data, and (d) presenting results of the study.

I have a background and experience in the upstream sector of the oil and gas industry in Nigeria, having worked in this sector for over 20 years. The business managers of oil companies are responsible for the proposal and execution of various projects such as drilling of oil and gas wells, construction of oil production platforms, laying and maintenance of oil pipelines, and CSR projects carried out in various host communities.

The Belmont Report produced in 1978 by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research contained summarized information on ethical principles and guidelines for protecting human subjects and an analytical framework to guide the resolution of ethical problems arising from research involving human subjects so as to protect participants from abuse (Adashi, Walters, & Menikoff, 2018). The three ethical principles outlined within the Belmont Report—(a) justice, (b) respect for persons, and (c) beneficence—continue to guide practices in the research ethics context (Adashi et al.). I obtained approval from the Walden Institutional Review Board (IRB) before I proceeded to collect data. I applied the ethical principles and guidelines set out by the IRB of Walden University to prevent any ethical issues that could occur during the study, including the protection of data in secured storage for 5 years and deletion of the files thereafter.

I collected data ethically and ensured that data collection, organization, interpretation, and analyses were free of personal bias. Greene (2014) and Wang et al. (2016) recommended that researchers carefully examine personal lenses and biases that may be introduced in a study and address ethical issues and challenges that may occur during their studies. Postholm and Skrøvset (2013) stated that although researchers might not have control over issues and challenges that may occur during their studies, they should be dynamic in response to any situation and present accurate findings free of bias, following ethical standards. I familiarized myself with and understood ethical issues in order to satisfy my obligation to protect the interests of participants before, during, and after data collection and analysis processes. I obtained National Institutes of Health (NIH) certification before collecting data from participants. I used coded terms such as P1, P2, and P3 to protect the identity of participants. The data collected will be saved using a password-protected file in my computer and will be destroyed after 5 years.

Participants

The population for this study consisted of project managers and supervisors responsible for CSR projects, maintenance of vandalized pipelines, and reporting of revenue losses for two oil companies located in the Niger Delta region of Nigeria. I had no relationship with the participants. I gained access to participants by sending letters to the organizations (see Appendix C) requesting potential participants' email addresses so that I could invite them to participate in the study voluntarily. Saunders et al. (2015) stated that researchers should establish contact with organizations that will provide participants and data.

I used a survey questionnaire (see Appendix A) to collect data from participants. For this study, I used SurveyMonkey software to enable participants to respond to survey questions online. Based on G* power analysis calculations, I randomly selected 86 participants for the study (see sampling section below). The project managers and supervisors at the selected oil companies were responsible for the implementation of CSR projects, managing issues related to pipeline vandalism, and revenue losses. I ensured the protection of participants by using codes such as P1, P2, and P3 for participants and referring to the organizations with the codes C1 and C2. I stored the data collected from participants using a password-protected computer system; I will destroy the data after 5 years.

Research Method and Design

Researchers may select from three research methods when conducting a study: quantitative, qualitative, and mixed; the choice of method is driven by the research question (Almeida, 2018; Leppink, 2017). I used a quantitative method for this study because I examined the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of two oil companies in the Niger Delta region of Nigeria.

Quantitative researchers examine relationships between variables, test theory based on predetermined hypotheses, and infer results using probability sampling techniques to ensure generalizability (Saunders et al., 2015; Zoellner & Harris, 2017). Quantitative researchers use variables that are measured and analyzed using a range of mathematical, statistical, and graphical techniques (Akimowicz et al., 2018; Leppink, 2017).

In contrast, qualitative researchers seek to study participants’ meaning and derive themes from the subjective answers of research participants (Yin, 2018). Qualitative researchers subjectively analyze participants’ responses to interview questions and provide in-depth analysis of the phenomenon (Leppink, 2017; Savela, 2018). The qualitative method was not appropriate for this study because I did not seek to provide an in-depth analysis of participants’ responses.

The mixed-methods approach is a combination of qualitative and quantitative methods (Molina-Azorin, 2016). Researchers use the mixed-methods approach to integrate both quantitative and qualitative techniques to answer research questions by collecting and analyzing data (Akimowicz et al., 2018; Almeida, 2018; Saunders et al., 2015). A mixed-method approach was not suitable for this study because I did not intend to use a combined procedure of integrating data and hypothesis testing, which could have been time consuming (Molina-Azorin, 2016).

Research Design

Quantitative researchers have the option of using any of the following designs for their studies: correlation, experimental, and quasi-experimental (Zoellner & Harris, 2017). A correlational design was suitable for this study because the objective was to predict a relationship between a set of predictor variables of CSR expenditure perception, pipeline vandalism perception (independent variables), and perception of revenue losses (dependent variable). A researcher may conduct a correlational data analysis between two variables, among three or more variables, or within and between sets of variables (Bleske-Rechek, Morrison, & Heidtke, 2015). Other statistical computations such as *t* tests, analysis of variance, and discriminant analysis were not appropriate for this study.

Researchers use experimental and quasi-experimental designs to assess the degree of cause and effect between independent and dependent variables; such designs involve an experimental group or groups, as well as a control group (Saunders et al., 2015). I did not examine cause and effect, connections between variables, or manipulation of variables, as would be characteristic of experimental and quasi-experimental designs (Barker & Milivojevich, 2016; Phan & Ngu, 2017). Therefore, experimental and quasi-experimental designs were not appropriate for this study.

Population and Sampling

The focus of this study was on two oil companies in Nigeria that had operated in Nigeria for over 30 years. Every year, oil company leaders make budget provisions for

CSR projects and execute some sustainable development projects annually for host communities in oil-producing areas (Nwagbara, 2013). Project managers and supervisors responsible for managing CSR projects, pipeline vandalism, and revenue losses were the population of the study. I drew the sample of the study from the population. I used a random sampling technique to select a sample of 86 managers for the study.

Population

The target population for this study was managers and supervisors from two oil companies operating in the Niger Delta region of Nigeria. The population aligned with the research question, which contained the variables of CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The managers and supervisors were responsible for supervising and managing the three variables in their respective companies. I excluded other categories of staff in the two selected companies that were not involved in managing CSR expenditure, pipeline vandalism, and revenue losses. However, I used probability or random sampling to ensure maximum representation of the target population (van Hoeven, Janssen, Roes, & Koffijberg, 2015).

Sampling

Probability or random sampling is a sampling technique where each unit or case of analysis has a chance of being selected, though the possibility of being selected does not have to be equal (Acharya, Prakash, Saxena, & Nigam, 2013; Daniel, 2012). The advantage of probability sampling is the increased likelihood of selecting a sample representative of the population from which it is drawn to provide an adequate representation of the population (Flick, 2017). A significant weakness of the probabilistic sampling technique is the inability of the researcher to select a specific entity of the population (Daniel, 2012).

I conducted a power analysis using G*Power 3.0 software. G*Power is a statistical software package used to conduct an a priori sample size analysis (Faul, Erdfelder, Buchner, & Lang, 2009). The appropriate sample size is statistically and economically feasible in a study and is contingent on the effect size, alpha value, and power level, which increases the reliability and validity of the study (Tabachnick & Fidell, 2013). Using the following multiple linear regression (R^2 deviation from zero) input parameters (a) medium effect size (f^2) = .15, (b) a = .05, (c) # predictors = 2, I conducted a power analysis that indicated a minimum sample size of 66 participants required to achieve power of .80. Increasing the sample size to 146 would increase power to .99. Therefore, I randomly selected between 66 and 146 project managers and supervisors for the study (Figure 5).

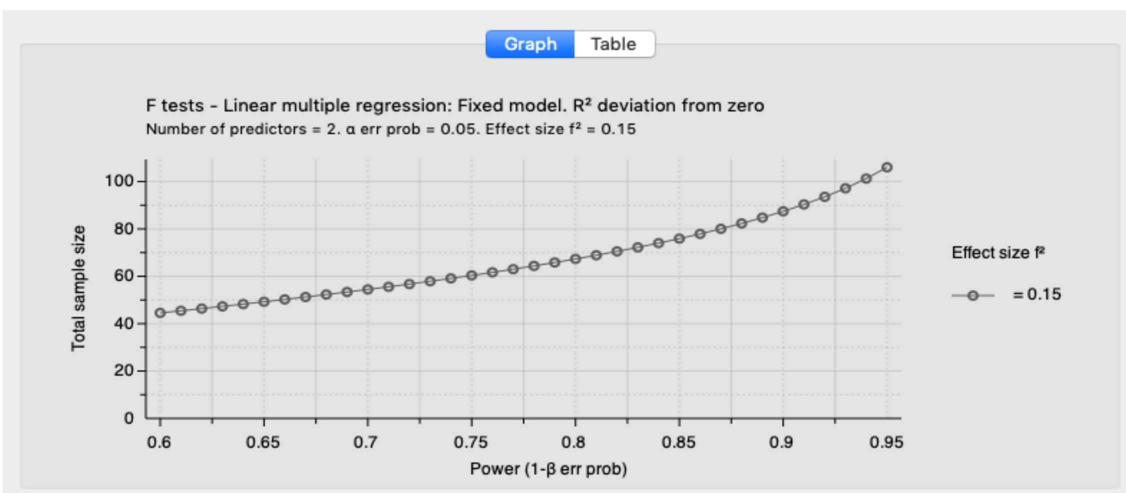

Figure 5. G*Power graphical depiction of the function between sample size and power.

Ethical Research

Researchers establish a working relationship with participants by building mutual respect and trust, primarily through seeking their consent using an informed consent form at the beginning of a research study (Tram et al., 2015). According to Lindsley (2019), informed consent refers to providing human subjects with vital information such as (a) the purpose of the research, (b) associated risks and benefits, (c) procedures, (d) compensation (if any), (e) the volunteer nature of participation, (f) the option to withdraw from the study, and (g) confidentiality. I used the informed consent form to establish a relationship with the participants at the start of the study. I sent letter of invitation through email (see Appendix B) to participants before the commencement of research after IRB approval. Researchers should pay attention to ethical issues that may affect participants while conducting a research study and ensure compliance with standard ethical practices to protect the rights and interests of participants (Jeanes, 2017; Johnson, 2014). I avoided activities that could violate the privacy and interests of respondents in research or discriminate unfairly against participants (Snowden, 2014). I followed standard ethical practices by providing all project managers and supervisors participating in the study with online copies of the informed consent form before the completion of the survey questionnaire online. I instructed participants not to sign the electronic copy of the consent form, which contained information on the purpose of the study and measures taken to protect their privacy.

Researchers are required to protect participants from any harmful activities and influence during research (Gomes & Duarte, 2018). According to Fawcett and

AbuFannouneh (2017), research involving human participants requires that the researcher seek and obtain approval from the IRB. I complied with the principles outlined in the Belmont Report of 1979, which included issues related to (a) respect for persons, (b) justice, and (c) beneficence. Furthermore, I sought and obtained approval from the Walden University IRB before contacting participants. By complying with the guidelines of the Belmont Report and obtaining IRB approval, I minimized the possibility of violating the rights and interests of the research participants. I obtained NIH certification before collecting data from participants.

In any study, participants can withdraw at any time (Harris & Atkinson, 2015). Participation in this research was voluntary (Gu et al., 2017). The informed consent form contained information stating clearly the voluntary nature of participation in the study, and steps that participants could take if they wished to withdraw at any time before the completion of the study. Participants could withdraw from the study by (a) not agreeing with the consent form, (b) declining to answer survey questions, and (c) exiting from the online survey. To maintain the anonymity of participants wishing to withdraw from the study, I used codes to protect participants' identities. By using an online survey, researchers ensure anonymity and protect participants (Tram et al., 2015). I used an online survey approach to collect data from participants and provided anonymity.

I stated in the consent form that participants would receive no incentives or compensation for participating in the study. Furthermore, I explained the benefits of participating in the study and how the findings might help provide solutions to problems identified in the problem statement. Researchers use pseudonyms to protect the identity of participants in a study (Roberts, 2015). To protect confidentiality, I used the codes C1 and C2 for the companies and assigned codes such as P1, P2, and P3 for participants. Sesartic and Towe (2016) stated that respect for the confidentiality of research participants is of utmost importance during the period of data storage. I will store the data in a password-protected file for 5 years, after which I will destroy the data.

Instrumentation

I searched for an appropriate data collection instrument for this study and found a suitable instrument developed and used by Nwachukwu (2017) titled Factors that Affect Company Revenue Questionnaire (FACRQ) that examined the relationship between oil theft, pipeline vandalism, and security costs with revenue losses. I adapted the instrument to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The survey instrument included two main sections. Section 1 was the demographic information segment, and Section 2 contained Likert-type scale questions on the variables of CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses.

Quantitative researchers use Likert-type scales questions to collect data and measure the subjective characteristics of participants (Bishop & Herron, 2015; Murray, 2013). The Likert-type scale is a psychometric scale using an ordinal scale of measurement, which quantitative researchers use to collect data (Sullivan & Artino, 2013). The survey instrument contains 5-point Likert-type questions with response options: Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). I used items 1 to 5 of the instrument to gather demographic information on the age of participants, work experience, involvement in managing pipeline vandalism and revenue losses activities in the oil companies. Items 6 to 10 were Likert-type scale questions on CSR expenditures, while I used items 11 to 15 to obtain data on pipeline vandalism. Participants were asked to respond to items 16 to 20 on revenue losses. Participants were requested to put a checkmark in the response options that best reflects their opinion for each statement. I used the SurveyMonkey system to distribute the survey instrument to participants online. Participants completed the online survey in approximately 20 minutes.

A researcher considers two important factors, validity and reliability, when using a survey instrument (Li, 2016). According to Taherdoost (2016), instrument validity in a research study is the ability of the researcher to use the instrument to measure the research variables, while instrument reliability is concerned with the consistency to which the researcher can use the instrument to interpret data in a different circumstance.

A quantitative researcher may use the following approaches to determine the validity and reliability of a survey instrument: (a) exhaustive literature review to extract relevant items, (b) validation by experts in the field, (c) conducting a pilot study, and (d) calculating Cronbach's alpha coefficient (Li, 2016; Taherdoost, 2016). A Cronbach's alpha coefficient of 0.70 is considered an acceptable criterion for internal consistency reliability of a survey instrument (Li, 2016; Taherdoost, 2016). Nwachukwu (2017) conducted a pilot study to ensure the validity of the FACRQ instrument which I adapted for my study. Therefore, a pilot study was not applicable to my research because the FACRQ instrument was already validated.

Data Collection Technique

Researchers use the online SurveyMonkey tool to distribute survey instrument questionnaires to participants (Nwachukwu, 2017; Orumwense, 2018). I administered the survey instrument online using the SurveyMonkey technique to deploy the FACRQ questionnaire. Participants received informed consent instructions through e-mail (see Appendix B) on how to access the SurveyMonkey link to respond to the survey questions. SurveyMonkey features a secured database used for tracking data and keeping records of participants' responses.

However, there are advantages and disadvantages of online data collection techniques. According to Mahon (2014), one benefit of using the SurveyMonkey system is that it protects all the participants' survey responses on a data server that has daily firewall protection. In general, online data collection techniques are less expensive and faster than face-to-face data collection techniques (McDonald & Adam, 2003). Another advantage using an online data collection technique is the ability to include participants who are challenged because of small numbers or geographic location (Cantrell & Lupinacci, 2007). Disadvantages of online data collection techniques include possible selection bias due to participants' lack of access to the internet, especially in developing countries, low response rates, and psychometric distortions. A participant could also treat an e-mail letter of invitation as spam mail (McPeake, Bateson, & O'Neill, 2014). According to Pursey, Burrows, Stanwell, and Collins (2014), survey fraud is a major disadvantage of online surveys; and furthermore, the absence of an interviewer makes an online survey unsuitable for surveys that require open-ended questions since there is no researcher present to ask follow-up questions. Some participants in an online survey might not take their participation seriously in the absence of a face-to-face interviewer. Regardless of the disadvantages of the online survey, I used the online survey because it was quicker to administer and reach as many participants as possible. I encouraged participants to complete the survey within 10 calendar days. To ensure timely collection of data, I sent e-mail reminder notices to participants on days 3, 6, and 9 during the 10 days of data collection.

Data Analysis

Data analysis is critical to a successful research outcome as the researcher has to consider appropriate tools and suitable techniques to achieve the objectives of the study. In analyzing data, the researcher should take into consideration the research question in the selection of a data analysis tool and technique (Bernard, 2017). The research question of this study was:

RQ: Does a linear combination of CSR expenditure perception and pipeline vandalism perception significantly predict perception of revenue losses?

The hypotheses are as follows:

Null hypothesis (Ho): The linear combination of CSR expenditure perception and pipeline vandalism perception will not significantly predict perception of revenue losses.

Alternate hypothesis (H1): The linear combination of CSR expenditure perception and pipeline vandalism perception will significantly predict perception of revenue losses.

Multiple linear regression is a standard tool researchers use to analyze data (Alhamide, Ibrahim, & Alodat, 2016). Researchers use multiple linear regression analysis techniques to determine the correlation between two or more independent variables and a dependent variable (Devore, 2015; Keith, 2014). I used descriptive correlational and multiple regression analysis to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of two oil companies in Nigeria. Nwachukwu (2017) used multiple linear regression analysis to examine the relationship between oil theft, pipeline vandalism, security costs, and revenue losses. ANOVA tests, discriminant analysis, factor analysis, and bivariate linear regression were not suitable to answer the research question for this study. Researchers use ANOVA tests to compare groups or variables for significant difference; researchers use discriminant analysis to predict membership in two or more groups that are mutually exclusive; researchers use factor analysis to identify the number of factors to explain major variance observed in variables and; researchers use bivariate linear regression to predict the effect of one variable on only one other variable (Field, 2013). The multiple linear regression analysis was suitable for this study because I used the tool to estimate the correlation between two predictor variables of CSR expenditure perception and pipeline vandalism perception, and a criterion variable perception of revenue losses.

Researchers clean data by examining the data collected to check for missing or invalid information and to take appropriate steps to remedy the situation before data analysis (Cai & Zhu, 2015). A crucial element of data cleaning is checking for potential outliers to minimize the effects by replacing or removing outliers (Tabachnick & Fidell, 2013). Researchers may use appropriate SPSS syntax file to screen for missing values and outliers (Field, 2013). I used the SPSS to conduct data cleaning and included relevant statistical measures which addressed the research hypotheses.

Online surveys, such as SurveyMonkey are prone to missing data occurrence (Bryman, 2015). I used SurveyMonkey to collect data from participants online. Missing data may affect the process of analytical modeling and statistical conclusions (Zliobaite, Hollmen, & Junninen, 2014), which could significantly affect data interpretation and execution (Van Ginkel, Kroonenberg, & Kiers, 2014). Researchers may use the process of regression imputation, which involves replacing missing data with substituted values, to address issues related to missing data (Kang, 2013). I used the SPSS "exclude cases pairwise" feature to mitigate missing data issues.

Assumptions associated with multiple regression analysis include normality, linearity, multicollinearity, and homoscedasticity (Lopez, Valenzuela, Nussbaum, & Tsai, 2015). Researchers define normality as residual data that fits a bell-shaped curve demonstrating a normal distribution about the visual inspection of data plots, kurtosis, and skew (Field, 2013). Linearity indicates a straight-line relationship between the predictor variables and the criterion variable (Harrell, 2015). Multicollinearity is the degree of relationship between the predictor variables (Field, 2013). Researchers assess the existence of multicollinearity by evaluating the variance inflation factor (Garcia, Garcia, Lopez-Martin, & Salmeron, 2015). Homoscedasticity indicates the equality between residual values and researchers test for homoscedasticity through a visual examination of the normal probability plot (Best & Wolf, 2014). I tested the assumptions for deviations from normality, linearity, multicollinearity, and homoscedasticity, which could potentially affect correlations between variables; I did not find any violations. Researchers use the bootstrapping technique to address violations to assumptions (Field, 2013; Li, 2016). Therefore, I did not need to use the bootstrapping technique.

Researchers can use the SPSS release package, which includes descriptive and inferential tools to analyze, manage, describe, and document data (Field, 2013). I used the SPSS statistical software version 25.0 to analyze descriptive data collected from participants on demographic information items 1 to 4 of the survey instrument. Descriptive statistics included the mean, frequency, and standard deviation of the age of participants, work experience, years company has been operating in the Niger Delta, and years of experience in managing CSR expenditure, pipeline vandalism, and revenue losses in their respective companies. The SPSS software is valuable for researchers in conducting inferential data analysis such as correlation, ANOVA, *t* test, and multiple regression (Devore, 2015). I used SPSS software to conduct inferential statistical analysis of data for Likert-type scales items 5 to 20 of the survey instrument on the predictor variables of CSR expenditure perception, pipeline vandalism perception, and the criterion variable perception of revenue losses. SPSS produced key output parameters to include R^2, F statistic, β, *SE*, Beta, t, Sig. (*p-value*), and 95% confidence intervals. Table 1 depicts the interpretation of these key parameters.

Table 1

Multiple Regression Output Parameters and Interpretations

SPSS Output Parameter	Interpretation
R^2	Effect size depicting the amount of variance in the dependent variable explained by the set of predictor variables (Pallant, 2007)
F statistic	Ratio of the variation between and variation within samples; must be significant (≤ .05) for the overall model to be significant (Field, 2013).
β	Unstandardized coefficient; slope used in the regression equation (Pallant, 2007)
SE	The average distance the observed values fall from the regression line (Pallant, 2007)
Beta	Standardized coefficient depicting the amount of contribution each predictor adds predictor; used to compare the contribution of each predictor (Field, 2013)
t	Test parameter that the slope is significantly different from zero; value ≤ .05 is significant (Pallant, 2007)
Sig. (*p* value)	Significance value; value ≤ .05 is significant (Pallant, 2007)
95% CI	Confidence intervals for the slope (β) of the regression line (Pallant, 2007)

Study Validity

Researchers have to determine the validity and reliability of the study they conduct. Validity refers to the degree to which an instrument accurately measures what it intends to measure, while reliability refers to the degree to which an instrument yields consistent results (Li, 2016; Taherdoost, 2016). Types of validity include: (a) content validity: the extent to which items in an instrument adequately measure or represent the content of the property or trait that the researcher wishes to measure; (b) construct validity: the extent to which an instrument measures accurately a construct; and (c) criterion validity: the extent to which the scores of an instrument correlate with an external criterion (Field, 2013; Li, 2016; Taherdoost, 2016). Researchers should be concerned about the threats of internal and external validity of a study (Ronau et al., 2014). To ensure the instrument used for data collection is valid, the researcher should establish the internal and external validity (Rubin & Babbie, 2016). External validity consists of the generalizability of the results of a study (Yin, 2018), and internal validity relates to the accuracy of an instrument in measuring the constructs of the study (Evans, Hartshorn, Cox, & De Jel, 2014; Field, 2013). Threats to external validity include (a) pretesting, (b) interaction effects of selection, and (c) testing reactivity, which could be mitigated by a researcher using a representative sample size for a study (Suen, Huang, & Lee, 2014). Researchers use SPSS software for data analysis to reduce the threat of external validity (Field, 2013). I used SPSS software to analyze data and minimize the threat of external validity.

Threats to internal validity relate to causal relationships (Keith, 2014). Internal validity refers to the credibility of the instrument used in a study, and the process of verifying if an instrument correctly measures the constructs of the study (Evans et al., 2014). Internal validity applies mainly to experimental studies. This study was based on correlational design and not experimental design and therefore has minimal threats to internal validity (Rubin & Babbie, 2016). Sampling strategy could pose a threat to study validity and generalizability. Using an appropriate sampling strategy could help a researcher minimize the threat to selection validity and promote generalizability (Faul et al., 2009). I selected a representative sample size from the study population by conducting an *a priori* power analysis using the G*Power 3.0 calculator to obtain a sample size of between 66 and 146 participants. I used a probability or random sampling technique to ensure that study results are generalizable to other related populations of Nigeria oil companies.

Researchers should address threats to statistical conclusion validity to ensure accuracy in the relationship between variables (Tabachnick & Fidell, 2013). According to Neall and Tuckey (2014), threats to statistical conclusion validity occur when researchers make incorrect inferences due to inadequate statistical power. The possible effect to a study of threats to statistical conclusion validity is that it could result in Type I and Type II errors and low accuracies of results (Heyvaert & Onghena, 2014; Keith, 2014). Type I errors occur when no difference or correlation exists, and the researcher incorrectly infers one exists; conversely a Type II error is when the researcher fails to identify a statistical difference when one exists (Kratochwill & Levin, 2014). According to Boesch, Schwaninger, Weber, and Scholz (2013), threats to statistical conclusions validity include low reliability of measures, random variety of cases, and low statistical power.

In this study, some of the envisaged threats to statistical conclusion validity included sample size, data assumptions, and reliability of the survey instrument I used for data collection. Proper sampling technique, the use of appropriate statistical tests, and correct measurement procedures are some of the ways researchers could minimize the threats of statistical conclusion validity (Carta, 2019). Furthermore, researchers may use a statistical power designation of 0.95 at an alpha level of 0.05 to reduce the probability of Type I Error to 5% and minimize threats to statistical conclusion validity (Farrokhyar, Reddy, Poolman, & Bhandari, 2013). I used random or probabilistic sample technique, Likert-type scale tests, and statistical power of 0.95 at an alpha level of 0.05 to minimize the threat to statistical conclusion validity.

Transition and Summary

The purpose of this study was to examine the relationship between corporate social responsibility (CRS) expenditure perception, pipeline vandalism perception, and perception of revenue losses in a Nigerian oil company. In Section 1, I discussed the background of the problem, problem and purpose statements, theoretical framework, and a review of the literature. I also provided the research question and hypotheses.

In Section 2, I provided the purpose statement, the role of the researcher, research method and design, ethical issues, narratives on the sampling of participants, data collection and analysis as well as reliability and validity issues. In Section 3, I presented data and discussed the test of hypotheses, results and findings. Furthermore, in Section 3, I discussed the applications to professional practice, recommendations for action, recommendation for further research, implications of the findings for positive social change, reflections, and conclusions.

Section 3: Application for Professional Practice and Implication for Social Change

Introduction

The purpose of this quantitative correlational study was to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of oil company leaders in Nigeria. The results of the multiple regression indicated that the model was able to significantly predict perception of revenue losses, $F(2, 83) = 14.61$, $p < .001$, $R^2 = .260$. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted; CSR expenditure perception and pipeline vandalism perception significantly predict the perception of revenue losses among oil companies' managers in Nigeria**.**

Presentation of the Findings

I used multiple linear regression to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses among oil company managers in Nigeria. The independent variables were CSR expenditure perception and pipeline vandalism perception. The dependent variable was perception of revenue losses. The null hypothesis was that the linear combination of CSR expenditure perception and pipeline vandalism perception would not significantly predict the perception of revenue losses in a Nigerian oil company. The alternative hypothesis was that the linear combination of CSR expenditure perception and pipeline vandalism perception would significantly predict the perception of revenue losses in a Nigerian oil company.

Results of the Data Analysis

I evaluated the assumptions of multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals. A correlation matrix indicated that multicollinearity did not exist between the two predictor variables, $r = .279$. I ran a normal probability plot (P-P) of the regression standardized residual (Figure 6) and a scatterplot of the standardized residuals (Figure 7) to evaluate outliers, normality, linearity, homoscedasticity, and independence of residuals. I assessed outliers, normality, linearity, and homoscedasticity simultaneously by reviewing the plots. Visual inspections of the normal probability plot (P-P) of the regression standardized residual (Figure 6) and the scatterplot of the standardized residuals (Figure 7) indicated that the assumptions of outliers, normality, linearity, homoscedasticity, and independence of residuals were met.

The tendency of the points to lie in a reasonably straight line (Figure 6), diagonal from the bottom left to the top right, provides supportive evidence that the assumption of normality has not been grossly violated, indicating that the assumption of normality is met (Li, 2016; Pallant, 2010). The lack of a clear or systematic pattern in the scatterplot of the standardized residuals (Figure 7) supports the tenability of the assumptions being met, as there was no curvilinear pattern or other definitive shapes; the residuals are evenly spread across the plot. The results of the multiple regression indicated that the model was able to significantly predict the perception of revenue losses $F(2, 83) = 14.61$, $p < .001$, $R^2 = .260$. I found that the independent variables significantly predicted revenue losses in oil companies in Nigeria.

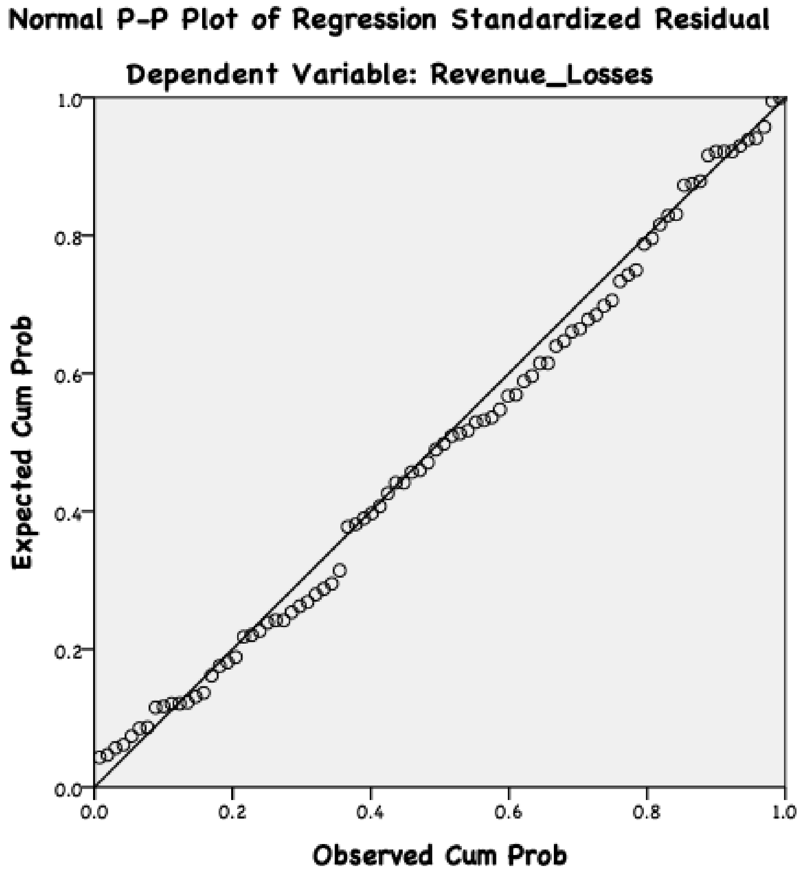

Figure 6. Normal probability plot (P-P) of the regression standardized residuals.

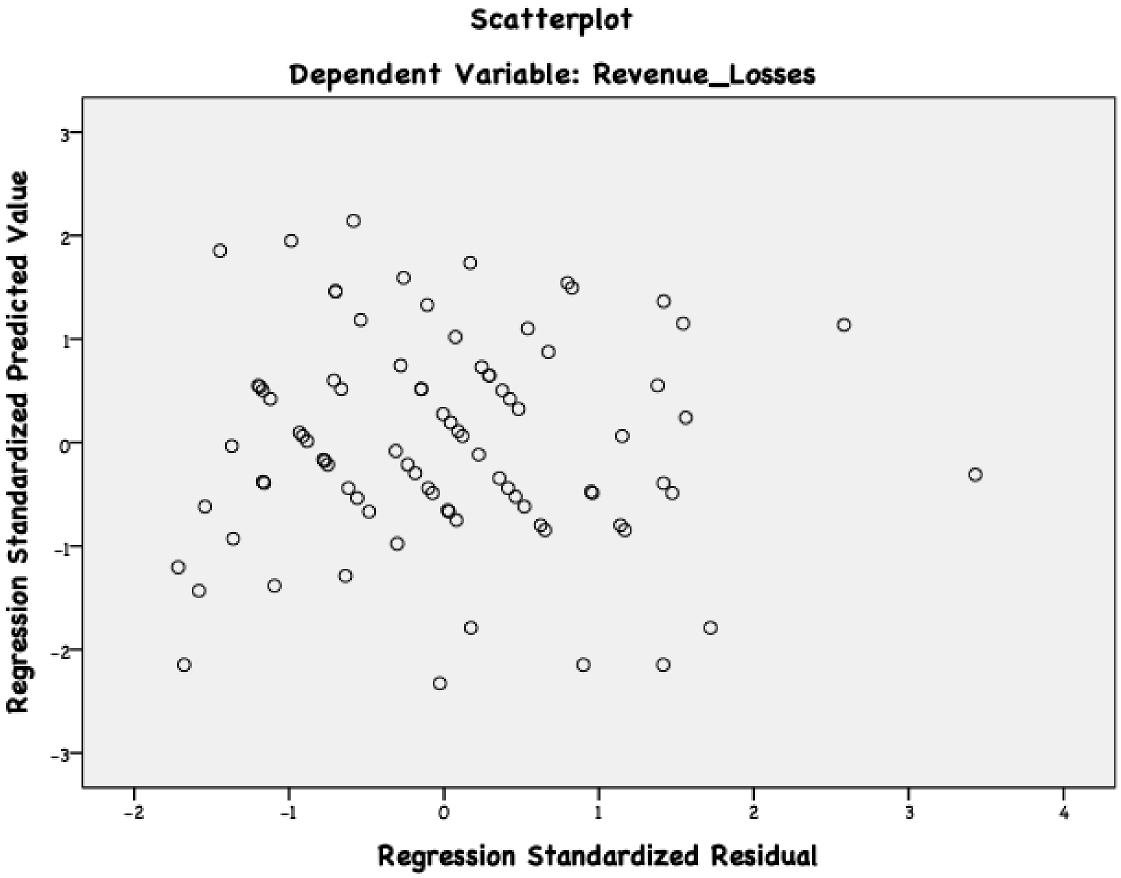

Figure 7. Scatterplot of the standardized residuals.

Descriptive Statistics

The participants were individuals working in the oil and gas sector of the Niger Delta region in Nigeria. The demographics revealed that a large number of participants were between 30 and 40 years of age (89.5%), three participants were between 18 and 29 years of age (3.5%), and six participants were over 50 years of age (7%). Table 2 consists of the descriptive statistics (*M* and *SD*) for the study variables. Table 3 shows the descriptive statistics (*n* and %) for the demographic variables.

Table 2

Means and Standard Deviations for Variables (N = 86)

Variable	*M*	*SD*
CSR expenditure perception	15.08	3.50
Pipeline vandalism perception	8.87	2.74
Revenue loss perception	10.70	2.23

Table 3

Descriptive Statistics (n and %) for Demographic Variables (N = 86)

	Category	Frequency	Percentage (%)
Age	18–29 years	3	3.488
	30–49 years	77	89.535
	> 50 years	6	6.977
How long company working in Niger Delta	1–5 years	13	15.116
	6–10 years	3	3.488
	11–15 years	0	0
	> 15 years	72	83.721
	1–5 years	3	3.488
Years of experience	6–10 years	7	8.140
	11–15 years	36	41.860
	> 15 years	40	46.512
Responsible for CSR projects, pipeline vandalism, or revenue losses	1–5 years	48	55.814
	6–10 years	32	37.209
	11–15 years	6	6.977
	> 15 years	0	0

The multiple regression model was able to significantly predict perception of revenue losses, $F(2, 83) = 14.61$, $p < .001$, $R^2 = .260$. The R^2 value (.260) indicated that 26% of the variation in perception of revenue losses is accounted for by the linear combination of the predictor variables (CSR expenditure perception, pipeline vandalism perception). In the final model, both predictors were statistically significant, with CSR expenditure perception (*ß* = .320, *p* = .002) accounting for a slightly higher contribution to the model than pipeline vandalism perception (*ß*= .318, *p* = .002). Table 4 depicts the regression summary. The final predictive equation was the following: Perception of revenue losses = 5.335 + .204 (CSR expenditure perception) + .258 (pipeline vandalism perception). I used a one-tailed test because my hypothesis is directional on how the predictor variables affect the criterion variable at the level of significance $\alpha = 0.05$.

Table 4

Regression Analysis Summary for Predictor Variables

Variable	*B*	*SE B*	*β*	*t*	*p*
CSR expenditure perception	.204	.063	.320	3.254	.002
Pipeline vandalism perception	.258	.080	.318	3.236	.002

CSR expenditure perception. The positive slope for CSR expenditure perception (.204) as a predictor of perception of revenue losses indicated that there was about a .204 increase in perception of revenue losses for each 1-point increase in CSR expenditure perception, controlling for pipeline vandalism perception. In other words, revenue loss perception tends to increase as CSR expenditure perception increases. The squared semipartial coefficient (sr^2) that estimated how much variance in revenue loss perception was uniquely predictable from CSR expenditure perception was .336, indicating that 33.6% of the variance in revenue loss perception is uniquely accounted for by CSR expenditure perception, when pipeline vandalism perception is controlled.

The result of my study was a paradox. The reason for the positive relationship between perceived CSR expenditure and perceived revenue losses was that oil companies' managers perceived that host communities were not satisfied with the CSR projects that the oil companies' leaders executed yearly. My findings were consistent with the statement of Nwozor, Audu, and Adama (2019) that the Niger Delta paradox has been possible for several reasons: (a) the injustice and insensitivity that characterize Nigeria's federal system, as exemplified by skewed revenue distribution framework; (b) the retrogressive laws that have denied the Niger Delta region a voice in oil production activities, such as the Petroleum Act of 1968 and 1991; and (c) the loss of income-earning opportunities for the host communities as a result of environmental degradation and pollution of land and rivers, as exemplified by nonadoption of international best practices in the oil companies' operations in Nigeria. The perceptions from the managers of the oil companies indicated that CSR projects such as the provision of electricity, roads, and hospitals no longer have a positive impact on the host communities. No amount of such CSR projects can satisfy the host communities, because whatever the oil companies provide will not be commensurate to the revenue and benefits generated by the oil companies, and that is why the more CSR projects are implemented, the more revenue losses occur due to oil theft.

Pipeline vandalism perception. The positive slope for pipeline vandalism perception (.258) as a predictor of revenue loss perception indicated that there was a .258 increase in revenue loss perception for each additional one-unit increase in pipeline vandalism perception, controlling for CSR expenditure perception. In other words, revenue loss perception tends to increase as pipeline vandalism perception increases. The squared semipartial coefficient (sr^2) that estimated how much variance in revenue loss perception was uniquely predictable from pipeline vandalism perception was .335, indicating that 33.5% of the variance in revenue loss perception is uniquely accounted for by pipeline vandalism perception, when CSR expenditure perception is controlled.

Analysis summary. The purpose of this quantitative correlational study was to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of oil companies in Nigeria. The results of the multiple regression indicated that the model was able to significantly predict the perception of revenue losses $F(2, 83) = 14.61$, $p < .001$, $R^2 = .260$. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted. The conclusion from my study was that CSR expenditure perception and pipeline vandalism perception significantly predicted perception of revenue losses among managers working in the oil companies in Nigeria.

Theoretical conversation on findings. In this study, I used stakeholder theory as the lens to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. I found that the independent variables significantly predicted revenue losses in oil companies in Nigeria. My findings were consistent with those of Nwachukwu (2017), who examined the relationship between oil theft, pipeline vandalism, and security costs on revenue losses of multinational oil companies operating in the oil and gas sector in the Niger Delta region of Nigeria and found a significant relationship between the predictor variables and criterion variable.

The results of my study support assertions from existing literature, such as Nwozor et al.'s (2019) finding that the cost of repairs of ruptured or vandalized pipelines and cost of oil spill clean-up contributed to the revenue losses of the oil companies. Odhiambo, Scott, and Gow (2018) found that oil companies incurred revenue losses because community members perceived the oil companies managers as being insincere in their CSR efforts, and also perceived the efforts to prevent incidents such as oil spills, pipeline vandalism, and gas flaring from occurring or giving prompt attention when these incidents occurred. The finding of Odhiambo et al. is consistent with the outcome of my study, in that managers and supervisors of oil and gas companies perceived that lack of community participation and trust in handling the CSR projects proved to be responsible for the perception of revenue losses, even with increased CSR projects in the host communities of the Niger Delta region of Nigeria.

Obamen, Omonona, Okenwa, and Eluka (2019) found that poor organizational image and environmental practices reduce productivity, increase cost, reduce profitability, and negatively affect relationships with stakeholders. Nwozor et al. (2019)

revealed that the oil companies had lost reputation and goodwill due to environmental degradation over the years from oil and gas exploration and production activities that had resulted in oil spills, gas flaring, and improper disposal of wastes from oil drilling operations, which also corroborates my findings. The perception of the participants of my study highlighted poor organizational image and insincerity of purpose concerning social, economic, and environmental development in the host communities, which affected the performance and sustainability of oil companies' operations and led to revenue losses.

The results of my study did not support the stakeholder theorists' position that business managers can increase a firm's performance by creating value for all stakeholders through corporate environmental management practices and sustainable development projects (Obamen et al., 2019). Oil companies' managers and supervisors perceived that the cost incurred in CSR projects implemented in Niger Delta communities such as the provision of electricity, roads, and hospitals no longer had any positive impact on the host communities, thereby affecting the performance and sustainability of oil companies' operations and increasing revenue losses.

Company managers who are proactive have a positive influence on stakeholders, leading to profitability. My finding was consistent with a similar observation made by Brulhart, Gherra, and Quelin (2019), who found a negative link between companies having a higher stakeholder orientation and profitability. Brulhart et al., however, found that environmental proactivity not only had a positive influence on profitability, but also assisted managers in building mutual relationships amongst stakeholders to ensure a conducive atmosphere for companies to operate and create value for all stakeholders.

Freudenreich, Lüdeke-Freund, and Schaltegger (2019), stated that stakeholder theorists propose that value creation is a collaborative effort in relationships, ideally benefitting the business and all its stakeholders. My findings aligned with Freudenreich et al., because the participants' perception of the positive correlation between CSR expenditure and revenue losses was due to past environmental negligence, such as oil spills and gas flaring affecting the host communities; bad reputation; and lack of trust, which eroded the value stakeholders ought to derive from CSR, and other sustainable development projects.

Conversely, Odetayo, Adeyemi, and Sajuyigbe (2019) found that there is a significant relationship between expenditure on CSR and profitability of Nigerian Banks. Odetayo et al., concluded that Nigerian banks recognized the importance of CSR for sustainable development and fulfilling their obligations to the society. The views of Odetayo et al., supported the stakeholder theory which stated that CSR and corporate environmental management practices add value for all stakeholders (Obamen et al., 2019).

Obamen et al. (2019) argued that business managers could improve organizational image and perception through relationship building and integrating other stakeholders' interests in the survival strategies of the company. Alcaniz, Aguado, and Retolaza (2020) stated that the stakeholder management approach is a valuable tool business manager could use to generate a broader positive value for all stakeholders. Identifying stakeholders enabled the firm's managers to consider the specific needs of the firm’s stakeholders, which are usually not limited to profit maximization. How, Lee, and

Brown (2019) posited that stakeholder value creation, such as better living conditions, a safer workplace, cleaner environment, and improved fairness, increases the firm's performance. Despite the heightened popularity, presumed importance of stakeholder theory, and meeting the expectations of multiple stakeholders, creating value for a firm's shareholders was still fundamental to a firm's survival.

Findings from my study revealed that an increase in CSR initiatives in the Niger Delta region does not have a significant relationship with the revenue generation of the oil companies. Stakeholder theory has been used by various scholars to understand the concept of CSR in value creation for the company. Though the findings of my study did not support the stakeholder theory because of the peculiar environmental and social issues in the Niger Delta region, business leaders should not view the result of this study as an indication that funding CSR projects adds no value to their stakeholders.

Applications to Professional Practice

In this quantitative correlational study, I examined the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses of oil companies in Nigeria. The findings from the study revealed that oil industry managers' perception of CSR expenditure and pipeline vandalism significantly predicted their perceived revenue losses. In other words, perceived revenue losses increase with perceived CSR expenditures and perceived pipeline vandalism—and the associated costs. Business managers operate in a competitive environment and are always under pressure to improve and sustain the revenue bases of their companies in an environmentally friendly manner (Kushwaha & Sharma, 2015). Operating in a conducive environment could assist business leaders to remain competitive, manage, and respond to challenges from other stakeholders to increase productivity. According to Kamboj, Goyal, and Rahman (2015), managers of companies should harness the intangible resources available in areas where the company operates and align the organization's interests to those of other stakeholders to create a competitive edge and increase revenue.

Applying the findings of this study to professional practice, leaders of oil companies in Nigeria could have a better understanding that the profitability of a company depends on factors such as unit cost of production, cost of capital, efforts towards human rights, and corporate governance. The incessant pipelines vandalism, cost of pipelines' repairs, security expenses, and cost of oil spill clean-ups increase unit cost of production and affect revenue generation and profit for the company (van der Linden & Freeman, 2017). The findings of this study could assist business managers to be aware of the importance of effective implementation of CSR projects, and its impact on sustainable development.

Business managers could use the findings to obtain information about how to measure the impact of CSR expenditures on host communities. Business managers could use this information to adjust their CSR initiatives, policies and implementation, to improve the perceptions of host communities' members. A better understanding of the impact of CSR expenditure may significantly improve the business manager's approach to CSR administration, and in turn, reduce incidences of pipeline vandalism and revenue losses. Oil companies' leaders in Nigeria should embrace the stakeholder management approach and harness intangible resources such as goodwill to create increased social performance and revenue (Theodoulidis, Diaz, Crotto, & Rancati, 2017).

Implications for Social Change

I investigated the linear relationship between the oil companies' CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses. The results of this study showed a positive correlation between CSR expenditure and revenue losses. The implication to social change is that an increase in green CSR projects could lead to environmental sustainability and harmonious co-existence between the host communities' members and the oil companies to promote a cleaner environment and alleviate poverty. An increase in CSR expenditure and investment in sustainable development projects could keep the youths of the host communities engaged, improve community members' livelihood, and guarantee a sustainable greener environment for the community members. Business leaders could capitalize on building a cordial relationship with the host communities' members and other firm stakeholders using stakeholder management strategies to enhance social performance, better living conditions, a safer workplace, cleaner environment, and increased profitability (Theodoulidis et al., 2017).

Recommendations for Action

The result of my study showed that the predictor variables (CSR expenditure and pipeline vandalism) have a significant impact on revenue losses from the perspective of managers in oil and gas companies in Nigeria. Business leaders could use the outcome of this study to improve strategies that could reduce the operational costs associated with pipeline vandalism and security in the oil and gas industry. Engagement in sustainable development projects in host communities and promoting small scale businesses by granting loans to individuals to start up small businesses that could keep the youths and members of the community engaged. Leaders of oil companies should increase their interactions with the host communities' members to create a conducive environment to operate. Leaders of oil companies should change the orientation of members of the communities from lack of trust to having a sense of belonging as a stakeholder in the business to foster better relationships amongst all stakeholders.

The Nigerian government could use the outcome of this study to ensure mandatory sustainable development CSR projects that go beyond the provision of roads, electricity, and water. CSR should no longer be voluntary in the oil and gas sector. The Nigerian government should regulate CSR and enforce penalties for non-compliance to environmental standards (Hasan & Habib, 2017). The Nigerian government should empower the institutions and agencies at all levels responsible for the enforcement of environmental laws (Obamen et al., 2019), to ensure ecological sustainability projects that will bring about a clean environment devoid of oil spills that affect the means of livelihood of the host communities' members and other stakeholders.

To satisfy the complex demands of stakeholders, business managers in oil companies in Nigeria could adopt a stakeholder management approach to promote cordial relationships and improve revenue for the companies. Stakeholder management is a strategic approach business managers use to identify various stakeholders' interests and expectations that needed to be considered and integrated into the firms' strategies to improve their performance (Pedrini & Ferri, 2019). Managers of oil companies should develop a blueprint for the integration of host communities as partners into the business, and CSR should no longer be treated as a voluntary exercise in the oil and gas sector but should be regulated by the federal government of Nigeria. Oil company managers could use the outcome of the study to compel the Nigerian government to amend the Land Use Act of 1978 to accommodate the host communities as co-owners of the oil resources. The Land Use Act of 1978 invested the power of ownership of all land in Nigeria to the government for control of the resources (Nwozor et al., 2019). I intend to disseminate the outcome of this study at conferences and workshops organized by professional and governmental bodies. I will also publish this study in ProQuest/UMI dissertation and scholarly journals.

Recommendations for Further Research

I examined a linear relationship between the oil companies' managers CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses using structured survey questions and tested hypotheses that did not allow for probing questions with 86 participants. Researchers conducting further studies could focus on the qualitative method where researchers could use probing questions to gather more detailed information from participants on the subject and provide a detailed description of the human experiences. Using probing questions could improve the limitations imposed by a structured statistical analysis of the survey and provide in-depth, nonnumerical data by examining the views of people who have experienced the problem. I selected managers and supervisors in oil companies with experiences in one or more of the following areas: managing CSR projects, dealing with issues of pipeline vandalism and repairs, oil spills clean up and remediation, and revenue losses. Researchers could expand the scope and select other categories of workers in the oil industry who could provide a different perception and increased knowledge of the subject area.

Reflection

The DBA journey started when I selected Walden University. I was excited and eager to start because I expected this was going to be a different learning experience. The journey was challenging because of the pressure and timeline for submission of school assignments, and balancing work, family, school, and other personal activities. I struggled understanding the APA Manual, and almost quit the program but a very close friend of mine insisted I continue because I was an inspiration to those willing to pursue the DBA journey. My experience in the oil industry spurred my interest to investigate the effect of CSR expenditures and pipeline vandalism on revenue losses of the oil companies' in Nigeria. The quantitative and qualitative courses opened my understanding of the various research methods and designs. I settled for a quantitative study because I wanted to explore the relationship between the variables. I decided to use a survey instrument administered through SurveyMonkey, which was a good experience. I encountered some challenges understanding how SurveyMonkey works, the export and analysis of data using SPSS, but I was able to overcome these challenges. My personal bias was that CSR expenditure would not affect revenue losses, but the use of an anonymous online survey eliminated my personal bias.

Conclusion

I used multiple linear regression to examine the relationship between CSR expenditure perception, pipeline vandalism perception, and perception of revenue losses among oil company leaders in Nigeria. The conclusion from the model was that the independent variables significantly predict the perception of revenue losses among oil industry leaders in Nigeria**.** The underlying theoretical framework was the stakeholder theory. Researchers have used stakeholder theory to examine the relationship between CSR and organizational performance (Adamska, Dabrowski, & Grygiel-Tomaszewska, 2016). The stakeholder theorist concept that CSR and sustainable development projects could reduce revenue losses to the barest minimum (Paul, 2015), was not in alignment with the inferential statistical outcome of my study. The nonalignment was attributed to the economic cost of environmental pollution, the pervasive poverty, and the other socio-ecological crises within the Niger Delta region. The outcome of this study corroborates findings from the existing literature on the causes of revenue losses in oil companies operating in the Niger Delta region of Nigeria.

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Appendix A: Survey Instrument

Factors that Affect Company Revenue Questionnaire (FACRQ)

Section A: Demographic Information

Please answer the following questions

1. Your age:

(i) 18-20 years ( ) (ii) 21–29 years ( ) (iii) 30 – 49 years ( )

(iv) Above 50 years ( )

2. How long has your company been operating in the Niger Delta?

(i) 1-5 years ( ) (ii) 6-10years ( ) (iii) 11-15 years ( )

(iv) Above 15 years ( )

3. How many years of experience do you have in the oil and gas industry? 1-5

(i) 1-5 years ( ) (ii) 6-10 years ( ) (iii) 11-15 years ( ) (iv) Above 15 years.

4. How long have you been responsible for CSR projects, managing pipeline vandalism or issues related to revenue losses in your company?

(i) 1-5 years ( ) (ii) 6-10 years ( ) (iii) 11-15 years ( ) (iv) Above 15 years ( )

Section B: CSR Expenditure, Pipeline Vandalism & Revenue Losses

Please put a check mark (X) on the statement that best reflects your opinion.

CSR Expenditure

5. Corporate social responsibility (CSR) projects of oil companies are adequately funded.

(i)Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

6. Oil companies spend a significant percentage of their annual budget on CSR Projects.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree

7. The cost of executing CSR projects affects the revenue of the oil and gas companies operating in the Niger Delta of Nigeria

i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

8 Oil companies should increase the amount of money spent on CSR projects in the host communities.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree

9. Representatives of host communities in oil producing areas are involved by oil companies in deciding CSR spending on projects.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

10. CSR projects executed by the oil companies adequately meets the needs and demands of the communities.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

Pipeline Vandalism

11. Pipeline vandalism adversely affects the revenue of oil companies in Nigeria

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(ii) Disagree ( ) (v) Strongly Disagree ( )

12. Pipeline vandalism will reduce significantly if oil companies provide adequate funding for CSR projects.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

13. Pipeline vandalism will reduce significantly if CSR projects are geared towards providing employment for angry youths

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(ii) Disagree ( ) (v) Strongly Disagree ( )

14. Involvement of host communities in protecting pipelines will reduce vandalism.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) (v) Strongly Disagree ( )

15. Pipeline vandalism adversely affects oil production activities of oil companies in Nigeria.

(i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

(iv) Disagree ( ) Strongly Disagree ( )

Revenue Losses

16. Oil companies suffer significant revenue losses by carrying out pipeline repairs as the result of vandalism

    (i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

    (iv) Disagree ( ) (v) Strongly Disagree ( )

17. Oil companies suffer significant revenue losses by executing CSR projects in the host communities

    (i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

    (iv) Disagree ( ) (v) Strongly Disagree ( )

18. The involvement of host communities in CSR projects and pipeline surveillance will reduce revenue losses.

    (i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

    (iv) Disagree ( ) (v) Strongly Disagree ( )

19. Cost incurred in securing oil pipelines, and cleaning of oil spills from vandalized pipelines significantly increase revenue losses of oil companies.

    (i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

    (iv) Disagree ( ) (v) Strongly Disagree ( )

20. Revenue losses will affect yearly CSR expenditure of oil companies in the host communities

    (i) Strongly Agree ( ) (ii) Agree ( ) (iii) Undecided ( )

    (iv) Disagree ( ) (v) Strongly Disagree ( )

Appendix B: Invitation to Participants by Email

Dear ______________,

My name is Faustina Igwebuike. I am currently a Doctor of Business Administration (DBA) student at Walden University.

My research study focuses on examining the relationship between corporate social responsibility (CSR) expenditure perception, pipeline vandalism perception, and perception of revenue losses in oil companies in Nigeria. I will examine this problem from the perspectives of how the predictor variables: CSR expenditure and pipeline vandalism relate to revenue losses in oil companies in Nigeria.

To help me complete this project, I am requesting you to access and complete the survey I have posted on Surveymonkey.com by clicking on the link https://www.surveymonkey.com/r/FaustinaIgwebuikeWaldenUniversity.

Participation is optional and your identity and that of company will be completely anonymous. Your contribution could help to improve corporate social responsibility expenditure, reduce pipeline vandalism, and minimize revenue losses of oil companies in Nigeria. The survey takes about 20 minutes to complete. I will send a follow-up e-mail within one week as a reminder that you have few more days to complete the survey.

If you have any question, please feel free to reach me on phone +2348099042036 or by e-mail at Faustina.igwebuike@waldenu.edu

Thank you.

Faustina Igwebuike
Doctor of Business Administration Student
Walden University

Appendix C: Letter of Permission to Oil Companies to Conduct Research

XXXXXXXX Company

Dear Sir/Madam,

Request for Permission to Recruit Research Participants

My name is Faustina Igwebuike. I am a Doctor of Business Administration student at Walden University. I am requesting for permission to recruit research participants especially managers and supervisors from your company. My research study is on the relationship between corporate social responsibility (CSR) expenditure, pipeline vandalism, and revenue losses among oil companies in Nigeria. I have selected your company as one of the companies for this study.

I am requesting for 100 or more managers and supervisors from your company to participate in this study. I will conduct this study using online survey questionnaire administered by SurveyMonkey. I will send the link to the survey questions to selected participants by e-mail. Participants will read the consent form before they can complete the survey questions. Completing the survey questions indicate acceptance. Participants will answer the questions in approximately 20 minutes. The inclusion criteria for study eligibility include: participant must be 21 years and above; has worked in an oil company for at least 5 years as a manager or supervisor; has responsibility for implementing CSR or community development projects; has responsibility for handling pipeline vandalism and repairs issues; security related issues, oil spills and remediation, and finally, has responsibility for handling issues related to revenue losses in an oil company. Participation in this study is voluntary.

In compliance with ethical requirements, your company and the participants will remain anonymous and the information collected for the study will be treated with utmost confidentiality. I will store data in a password protected file which I will destroy after 5 years of completion of the study. I will provide to participants and your company the research findings upon completion of the study. For further information and clarification about this study, please contact Faustina.igwebuike@waldenu.edu

Thank you for your assistance.

Yours sincerely,

Faustina Igwebuike
Walden University

Appendix D: Histogram of Regression Standardized Residuals