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Policy Evaluation of Environmental Sustainability of Supply Chain Practices on the Performance of Total Exploration and Productivity Nigeria LTD

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Abstract
Environmental and sustainability issues within supply chain has become a concern to regulating agencies , government legislation, and citizens of various countries demanding cleaner environment as a result of the climate change. This paper therefore attempt to examine the impact of environmental sustainability of supply chain on the performance of total exploration and productivity Nigeria LTD.. To achieve the objective stated above , the quantitative research method was adopted. The research strategy was therefore survey based, in which primary and secondary was used to collect the needed data to provide answers to the research question. The information collected was analysed using descriptive statistics, while linear regression was also used to test the hypothesis. The findings indicate that there is no significant relationship between environmental sustainability of supply chain and the performance of Total exploration and productivity LTD. The study therefore concludes that with the rising environmental regulations and public concern on climate change, it is only proper for cooperation to exist between the supply chain partners to bring a lasting solution to sustainability in the environment. Recommendations were made which focused on the need for total Nigeria LTD to implement an internal environmental management in order to reduce the environmental burden on climate change.

1.0 INTRODUCTION

Organizations in recent times are faced with a number of challenges ranging from financial crisis, climate change, environmental impact of their activities, and customer awareness of environmentally friendly products. Argument is therefore bound on the effect of human activities on the planet. According to 2003 report by intergovernmental panel on climate change (IPCC), 'a new and stronger evidence on global warming are attributed to the activities of humans'. It is in a bid to reduce this environmental burden and increase an Inter organizational shared responsibility that gave rise to this study on environmental sustainability of supply chain management, with emphasis on total exploration and productivity Nigeria limited.

A number of measures have been put forward to mitigate the challenges posed by climate change brought about the need to promote sustainable development, but so far nothing have been achieved. In a study by bonilla, keller and schmiele (2015) revealed that modern industries rely on supply chains to accomplish their goals. Therefore the carbon footprint (CF) of manufacturers (cement, gas, chemicals, and steels etc) under the Kyoto agreement initiated an acceptable standard of carbon dioxide emission which is set at 8% using 1990 as the base year for 2008 – 2012 for most European countries. The implication is that environmental sustainability of supply chain can be encouraged. The OECD report (2013) revealed the provision of incentives to countries that exhibit better compliance in reduction of carbon emission into the atmosphere.

Total exploration and productivity in Nigeria have brought with benefit and cost on the communities where they operate. for instance there is no denying the fact that Nigeria as a country have not benefited from the inflow of foreign exchange made from the sale of oil and gas. Until recently, oil and gas have remained the mainstay of Nigeria economy. But this is not without cost on the environment. The impact of multinational activity on the community in which they operate is indescribable. The effect ranges from soil and sediment in the Niger delta region, which is a situation in where the land is no longer fit for use. Other effects such as surface and underground water, marine environment, and biological diversity severely affected. According to other reports, the discharge of petroleum waste and hydrocarbon have caused immerse hardship on the people, such as environmental pollution, coupled with adverse health effect, which also brought about socio – economic problem on host communities.

Environmental sustainability of supply chain has become an emerging area of research in recent times, as result of the need to put pressure on corporations and countries to implement the Kyoto agreement on

environment. The oil and gas exploration in Nigeria of which Total exploration and productivity and their supply chains is one of the multinational operating in the country for a number of years and have contributed to a number of environmental degradation in the communities where they operate.

The study on supply chain and attempt to bring about effective environmental sustainability is new and incomplete (Bonilla, keller, and schmiele, 2015). A number of problems identified for this environmental issues are grouped into five specific areas, namely cost, complexity, operationalization, mind-set, as well as cultural changes and uncertainties (Abbasi and Nilsson, 2012); Ahmad and Mehmood (2015).

Cost is considered a major issue in achieving environmental sustainability due inability of the companies on supply chains to meet up with the financial burden associated with reducing the environmental impact of their activities. Equally, the complex nature that arises from their diverse operations has contributed to inability to attain the sustainability level. While operationalization can also not be achieved, as a result of stakeholder interest and implication of change outcome by the organization.

Other problems that contributed to environmental unsustainability of the supply chain revolve around the mind-set and cultural change that ostensibly deals with the polies and program at both departmental and organizational levels. Finally, the lack of regulatory and compliance mechanism have led to environmental unsustainability of the supply chains (Ahmad and Mehmood 2015). Therefore to attain to the issues raised above, the aim of this study will be, To identify ways in which cost is implemented by Total exploration and productivity Nigeria LTD, as well as to determine the relationship between environmental sustainability of supply chain and organizational performance.

2.0 Literature Review

The history and origin of supply chain management evolved for over a hundred years from labour intensive processes to present day managing of global network considered to have its root in logistics management. In the early 1980s, supply chain management gained some recognition due to advances in computer technology. According to Carter, Rogers and Choi (2015), the term supply chain management is credited to Oliver and Webber (1982) while the conceptual theory of supply chain where contributed by Chen and Paulray (2004); Cooper, Lambert and Pagh (1997); Croxton, Garcia-Dastugue, Lambert and Rogue (2001). The development of the theoretical concept, lead to the emergence of different definitions of supply chain management. For instance Lambert and Cooper (2000) defined supply chain management as the integration of key business processes from end user through original supplier that provides the product, services, information that add value to customers and their stakeholders. Even though this definition by Lambert and Cooper (2000) appears all encompassing by involving the different stakeholders in the supply chain, Mentzer et al, (2001) felt that supply chain will be better defined as a set of three or more businesses involved directly in upstream and downstream products or services that leads to the customers. Dibb, Simkin, Pride and Ferrell (2012) defined supply chain management as a long term partnership among marketing channels that reduce inefficiencies, cost and redundancies in the marketing channels and develop innovative approaches to satisfying targeted customers.

The understanding of the concept and practices of supply chain management led to the perspective on issues of sustainable supply chain management and implication on firm performance. Hall et al, (2012) in their study suggested that sustainable supply chain can only be achieved with the integration of environment, financial and social element. Most studies though have expressed their difficulty in understanding the effectiveness of sustainable supply chain management in terms of governance mechanism, since recent studies have argued on the effectiveness of this practice such as environmental sustainability (Lee, Plambei and Yatsko (2012).

Zhu, Sarkis and Lai (2008) also views environmental sustainability of supply chain management as a set of practices that is aimed at integrating environmental concerns into inter-organizational practices, which involves green supply, environmental purchasing and environmental operation management (Green, Zelbst, Mencham, and Bhadauria, 2012; Carter, Ellram and Ready, 1998).

In spite of the diverse opinion on the concept and classification of environmental sustainability of supply chain management, a number of studies have argued that there exist a positive impact of effective environmental sustainability of supply chain management on the performance of organization (Florida and Davison, 2001; Geffen and Rothenberg, 2000; Golic and Smith 2013). These findings have alleged the fears that a well-managed environmental concerns will obviously lead to improved performance of the organization. Although some also have argued on the validity of the findings owning to the fact that environmental sustainability within supply chain is a multi-dimensional construct, without a clearly specified domain and content. Tachizawa and Wong (2015) argued that supplier management is the key element of environmental sustainability.

2.1 Environmental Sustainability and Supply Chain Management Practices

Due to the healthy discussion that have been on-going in an attempt to understand environmental sustainability of supply chain, a number of definition has emerged on sustainable supply chain literature that tend to contribute to the understanding of this term. For instance Drumwright (1994) defined sustainable supply chain as the

organization that attempts to take into account the public consequence of organizational buying or bring about positive social change through the organization behaviour. Green et al, (1998) on the other hand refer sustainable supply chain as green supply, in which innovation in supply chain management and industrial purchasing maybe considered in the context of the environment.

Sustainable supply chain is defined by Cilibarti et al (2008) as a situation where all three dimensions of sustainability, such as economic, environmental, and social concerns are taken into account. Carter and Roger (2008) on the other hand described sustainability as an integration of environmental, social, and economic factors in other to enable organizations achieve their desired objective of value management.

Environmental supply chain management also according to Narasimhan and Carter (1998) consist of the purchasing function involving activities which includes reduction, recycling, reuse and the substitution of materials for better results. Even though this definition appears more encompassing and touches on the vital elements of supply chain that includes reduction and reuse or recycling of materials, other researchers equally fell that sustainable supply chain definition goes beyond that. Hall (2000) in his study of environmental supply chain dynamics defined sustainable supply chain as a phenomenon where environmental innovations diffuse from a customer to a supplier firm with environmental processes described as either product technology or technique development to reduce environmental impact.

Srivastava (2007) on the other hand sees green supply chain management as an integrating environmental thinking into supply chain management which includes product design, material sourcing and selection, manufacturing processes, delivery of finished s products to customers as well as end of life management of the product after its useful life.

The recent definition of which this study is aligned with is that defined by Seuring et al, (2008) where they viewed sustainable supply chain as the management of materials and information flows as well as cooperation among companies along the supply chain through three dimensions of economic, environmental and social concerns, which also includes stakeholder's requirement into account. This study chooses to align with this definition because it captures all the intervening variables required for the successful execution of sustainable supply chain management.

Environmental sustainability practices involved in supply chain is an attempt to reduce the environmental burden by bringing about collaboration through shared responsibility in order to maintain an effective environmental sustainability. Pimenta and Ball (2015) therefore identified a number of environmental sustainability practices which will form the core activities in upstream supply chain management. This is meant to include purchasing management, performance management, and collaboration.

Purchasing management is considered as one of the core activities in supply chain management, Pimenta and Ball (2015) are of the view that the role purchasing management plays is to ensure compliance within the sustainability criteria, as well as influences the behaviour of environmental suppliers (Kogg and Mont, 2012; Hollos, Blome and Foerstl, 2012). It is also understood that evaluating activities involved in purchasing management is meant to include selection, evaluation, as well as supplier development. Beside the identified three activities involved in supplier selection, Zsidisn and Siferd (2013) also considered the inclusion of packaging, recycling, reuse, resource reduction and final disposal as purchasing activities that should be effectively executed to bring about efficiency in environmental sustainability.

Igarashi et al, (2013) on the other hand suggested that, it is not enough to limit the activities of purchasing management to three numbers only, but instead should also include some purchasing procedure such as needs identification ad specification, criteria formulation, trend analysis, qualification and then final selection and performance evaluation.

The reasons, according to Seuring and Muller, (2008) for the establishment of supplier requirement are to ensure compliance with set standard. This is considered necessary as a result of the important role supplier's play in environmental sustainability. This is why the better informed the suppliers are, the better as a practice for selection (Igarashi et al, 2013).

As part of supplier selection, Gallear, Ghobadian and Chen (2012) are of the opinion that suppliers monitoring must be incorporated as part of the sustainability requirement in ensuring environmental sustainability. Srai et al, (2013) on the other hand insist that monitoring of suppliers is important to ensure full disclosure and accountability to internal and external stakeholders towards the achievement of both organizational performance and sustainable development.

Similarly, Gimenez and Tachizawa (2012) suggest that for sustainability to be adopted across the supply chain, it is important to adopt appropriate performance measurement that will be used to assess the activities of suppliers.

Suppliers' collaboration is expressed as the engagement of the suppliers between the different levels of the supply chain in which the organization is involved in and the effort to improve supplier's environmental performance (Vachon and Klassen, 2006). But before collaboration can be effective among suppliers and focal company, a number of issues have to be considered. First, is that a close relationship with suppliers is paramount

to the successful achievement of these practices (Nawrocka, Brooson and Lindhqvist, 2009). Secondly, investment should be made often in order to improve supplier sustainability and performance by constantly tooling, equipment and procedure which are unique to the supplier activity.

The work of Mangla, Kumar and Barua (2014) views environmental and sustainability issues as relevant to partners involved in supply chain, since regulating agencies, government and end users demand environmental sustainability of supply chains. In other words, sustainability has therefore gained consideration from inter-generational philosophical perspective to a multinational position (Mangla et, al 2014). Before now, the concept of sustainability was based on environmental issues, but in recent times, it has adopted a triple bottom line approach which environmental, economic and social perspective.

2.2 THE RELATIONSHIP BETWEEN SUSTAINABLE SUPPLY CHAIN AND ORGANIZATIONAL PERFORMANCE

It is a common knowledge among practitioners and researchers that environmental and social concerns are an important term in managing organization. This became necessary as a result of the rise in organizational concern on greenhouse emission and pollution in the environment. Hussein and Shale (2014) reiterated that practitioners and researchers are now more than ever before interested in how organization and their supplier impact on their environment and implication on the organizational performance and the society in which they operate.

Humphrey (2003) in his study emphasized that most firms have realized the impact of their activity on the environment and have therefore strived to improve organizational efficiency, make reduction in waste and also tried to overcome supply chain risk associated with their operation, which in the long run gives them the competitive position over their rivalries.

The contribution of environmental sustainability to firm's performance involves a combination of financial and non-financial benefits. Ahmad and Mehmood (2015) are of the opinion that financial measures which involves return on assets (ROA), return on investment (ROI) are no longer sufficient to assess a firms performance, but success can also be measured with the use of organizational impact and service quality to their teeming customers. The adoption of Kaplan and Norton for balance scorecard dimension can help organization monitor their performance by considering the process, customer, finance and innovation and learning, has enabled researchers to understand the benefit that will accrue to organization.

Study by Golicic and Smith (2013) emphasized that organization environmental supply chain practices positively affect the competitive advantage which invariably leads to improved market share, operational and accounting based form of performance.

Other studies have summed up the relationship between environmental sustainability and performance as a contribution between the supplier and buyer paradigm. Chen and Paulraj (2004) suggest that suppliers role in organizational performance cannot be over emphasized. Since their primary responsibility is to ensure that quality, flexibility, delivery, and cost of products adds to the overall performance of the firm.

The buyer performance on the other hand, contributed to the performance of the firm by also ensuring that firm's business performance on the basis of market share, return on investment, and firm income adds to the positive performance of the firm.

2.3 CHALLENGES TO ENVIRONEMNTAL SUSTAINABILITY OF SUPPLY CHAIN MANAGEMENT

The goals of corporations and their supply chain in recent times are to minimize the impact of their activities on the environment. According to Rauer and kaufmann (2015) this goal can only be achieved were their exist cooperation between supply chain partners. With the rising environmental regulation and rising public concern on climate change and other institutional forces, sustainable supply chain practices is considered high on the agenda of most organization (Zhu, Sarkis and Lai 2013; Linton, Klassen and Jagaraman 2007). As much firms wants to be involved in sustainable supply chain, studies have shown that they are faced with a myriad of challenges in implementing sustainable practices (Pagell and Shevchenko 2014). Scholars have therefore identified various factors militating against the successful implementation of sustainable supply chain to include internal and external barriers.

The internal challenges include;

a) High cost of sustainable supply chain practices

Even when the intention of firms in the supply chain is to maintain environmental sustainability of their operation, high cost associated with this practices has continued to be an impediment to successful realization of this effort, especially in the oil and gas sector (Min and Galle, 2001; Walker, Sisto and Mcbain 2008).

b) Newness of the concept of environmental sustainability

Although issues of environmental sustainability has been around for some time, it is still considered new by most organization, who claimed they knew close to nothing about the concept of climate change and environmental sustainability. Wycherley (1999); Zhu and Sarkis (2004) identified the newness of the concept as a challenge to

organizational support in implementing sustainable environmental practices.

c) *Limited top management support*:

Lack of top management support has also been linked with the setback in most firms achieving environmental sustainability within the supply chain. Top management are the highest decision making body of any firm, if environmental sustainability is not considered top of the agenda, that activity is unlikely to see the light of the day. Berns et al, (2009); Giunipero et al, (2012) are of the view that if environmental sustainability has received the desired support from top management, the regulation agencies would have achieved a percentage reduction in carbon emission in the environment.

The external barriers to sustainable supply chain;

a) Lack of available data for measuring environmental sustainability practices

The essence of collection and access to data is to enable organizations make the desired decisions on the impact of their activity on the environment. According to Veleva, Hart, Greiner and Crumbley (2013) lack of data or access to it has made it imperative for firms to channel their resources and as well as take innovative action towards the reduction of greenhouse gas (GHG). This is not only peculiar to oil and gas sector but for any organization that is involved in the production activities that emit gas into the atmosphere. Although for decades scholars have been carried out empirical study which tend to portray the dangers of environmental unsustainability, in spite of the effort by regulation agencies on the effect of environmental unsustainability of supply chain and the catastrophic impact on the environment.

b) Resistant suppliers:

Even though information on the impact of environmental sustainability has been well circulated to organizations and countries concerned, efforts to articulate a well-rounded policy and action by these firms is still lacking. Walker et al, (2008); Wycherley (1999) insist that most organizations would have made a discernible impact on environmental sustainability but will choose to resist the effort to do so for cheer ignorance. A number of firms, especially in the oil and gas industry are known to fall culprits to this, but they would rather choose to play the blame game. This kind of challenge can be overcome by putting pressure on organization to comply with lay down procedures.

c) Risk of losing key supply chain partners:

Understandably all suppliers on the organizational chain are not at the same financial level. Some are financially bigger than the other, therefore subjecting them to comply with certain regulations or the introduction of new and innovative handling of environmental issues might be considered expensive. But this argument can only be tenable where the benefit outweighs the cost of their activity. Koplin, Seuring, and Mesterharn (2006); Zhu, and Cote (2004) are of the view that the risk of losing key suppliers on the chain should be considered tenable, since a number of these firms have been given a enough time and opportunity to reorganize their system of operation to be in line with lay down regulations and procedures.

d) Differences in regulation:

Differences in country regulation are considered a major challenge in implementing environmental sustainability. Environmental sustainability is a global challenge that demands a global solution, as part of the agreement reached in Kyoto, japan on reduction in carbon emission. The Kyoto conference on climate change ended the conference with a common goal, which is to achieve two per cent reduction on carbon emission. To achieve this goal, different countries equally have to set its own goal and agenda in line with the objective of the Kyoto protocol.

The agreement reached in this conference sometimes appears to be sectional as different countries has a different interpretation of the implementation on environmental sustainability. Giunipero et al, (2012); Walker et al, (2008) suggested that environmental unsustainability will continue to pose a challenge to the rest of the world unless there is a unifying effort to implement environmental sustainable practices, irrespective of the country, industry or sector.

3.0 METHODOLOGY

The philosophy behind this study is positivist or quantitative approach. The choice of this philosophy is that impact of environmental sustainability of supply chain and the performance of Total exploration and productivity Nigeria LTD cannot be effectively ascertained if quantitative method is not applied. The quantitative or positivist method will enable the researcher to articulate a robust data collection and analysis technique that will eliminates any form of bias or influences which will enable the researcher to arrive at the truth on the performance of Total exploration and productivity Nigeria LTD (Saunders, Lewis and Thornhill, 2009).

The aim of approach is that primary and secondary means of data collection will be employed in this study. The primary sources will involve questionnaire, the secondary sources on the other hand will include documentary evidence, journals, books, magazines and other published materials.

This study will make use of descriptive survey method as a research strategy. The purpose of this method is

to identify the population of the study as well as data collection through primary and secondary means. The advantage of this research strategy is to guide the researcher in collecting, analyzing and interpreting data. This approach also ensures that collecting data in order to answer the research questions as well as test the formulated hypothesis. Above all this strategy has a number of components that encourage researchers to compare, manipulate, control, and then generalize.

The population of the study will include the supply chain in Total exploration and productivity Nigeria, these ranges from the exploration, production, refining, marketing, and the consumers. More specifically, the target of the population will compose of the senior and middle level managers from the Exploration, production, and refining department of the organization. The total number to be sampled is 150 employees. The importance of the sampling is to understand the effort made thus far by the organization in bringing about environmental sustainability.

The entire population of Total Nigeria LTD is 250, and using the Yaro Yamane formula to compute the sample size brought it to 150. This number is considered appropriate since it represents the opinion of the 250 employees of the organization.

The sample size of 150 is considered appropriate in an organization with a population of 250 employees. 150 employees can not only represent the opinion of 250 employees but also involve the senior managers, who are part of the decision making body of the organization. This approach is considered appropriate as a result of the nature of the study which tend to extend the information gathering to other organizations within the supply chain. The questionnaire therefore has to be distributed equally to each of the three organizations in the supply chain.

The method of data analysis used in this study is descriptive statistics. This is a method of organizing and presenting data collected from Total exploration and productivity LTD. The purpose of this method of analysis is to enable us to know the number of occurrence of a variable. The descriptive statistics applied in this study will make use of percentages to provide the bases for comparison between the different supply chain organizations.

4.0 DATA PRESENTATION AND ANALYSIS

Policy on reduction of gas flaring

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	18	36.0	36.0	36.0
	A	16	32.0	32.0	68.0
	UD	3	6.0	6.0	74.0
	DA	3	6.0	6.0	80.0
	SD	10	20.0	20.0	100.0
	Total	50	100.0	100.0	

Source: (Researcher, 2016)

The question was posed on respondents on whether management has a policy on reduction of gas flaring into the atmosphere. The highest number of respondents strongly agreed (36%) and agreed (32%) that management of Total Exploration and Production Nigeria limited have a policy on reduction of gas flaring into the atmosphere while 20% strongly disagree. The finding support the conclusion of Zhu, Sarkis and Lai (2013) and Linton, Klassen and Jagaraman (2007) studies that the rising environmental regulation and rising public concern on climate change and other institutional forces, sustainable supply chain practices is considered high on the agenda of most organization and oil exploration companies should adequately evolve policies on gas flaring to reduce the pollution of the atmosphere.

Operational Strategies on Minimization of Environmental Impact

		Frequency	per cent	Valid Per cent	Cumulative per cent
Valid	SA	12	24.0	24.0	24.0
	A	12	24.0	24.0	48.0
	UD	18	36.0	36.0	84.0
	DA	5	10.0	10.0	94.0
	SD	3	6.0	6.0	100.0
	Total	50	100.0	100.0	

Source: (Researcher, 2016)

This table sought to find out if there exist any operational strategies on minimization of environmental impact to the communities where TEPNL operate, a total of 12 respondents representing 24% strongly agreed and agree while 5 representing 10% disagreed. Based on the majority of responses TEPNL have operational

strategies in place to minimize environmental impact to the communities in which they operate.

In spite of the diverse opinion on the concept and classification of operational strategies and minimization environmental impact on supply chain management, the findings of this study agreed with a number of studies who have argued that there exist a positive operational strategy on environmental sustainability of supply chain management on the performance of organization (Florida and Davison, 2001; Geffen and Rothenberg, 2000; Golic and Smith 2013). These findings have alleged the fears that a well-managed environmental concerns will obviously lead to improved performance of the organization.

Cost on environmental sustainability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SA	24	16.0	16.0	16.0
	A	43	28.7	28.7	44.7
	UD	35	23.3	23.3	68.0
	DA	33	22.0	22.0	90.0
	SD	15	10.0	10.0	100.0
	Total	150	100.0	100.0	

Source: (Researcher, 2016)

As to whether there are cost on environmental sustainability that cannot be adequately address by TEPNL, 28.7% of the respondents agree, 23.3% are undecided while 22% strongly disagree. This implies that there are cost on environmental sustainability that cannot be adequately address by TEPNL. This finding support the view of Min and Galle, (2001); Walker, Sisto and Mcbain (2008) that even when the intention of firms in the supply chain is to maintain environmental sustainability of their operation, high cost associated with this practices has continued to be an impediment to successful realization of this effort, especially in the oil and gas sector.

5.0 CONCLUSION AND RECOMMENDATION

The goals of corporations and their supply chain in recent times are to minimize the impact of their activities on the environment. This goal can only be achieved were their exist cooperation between supply chain partners. With the rising environmental regulation and rising public concern on climate change and other institutional forces, sustainable supply chain practices is considered high on the agenda of most organization. As much firms wants to be involved in sustainable supply chain, studies have shown that they are faced with a myriad of challenges in implementing sustainable practices. The study aim at assessing the impact of environmental sustainability of supply chain management on the performance of total exploration and productivity Nigeria ltd and therefore conclude that there is no significant relationship between environmental sustainability of supply and the internal environment management of total exploration and productivity Nigeria limited while there is a significant relationship between organizational performance on the supply chain and the profitability of total exploration and productivity Nigeria limited on environmental sustainability.

Based on the findings of the study, the following recommendations are made:

1. On the findings that there is no significant relationship between environmental sustainability of supply and the internal environment management of total exploration and productivity Nigeria limited, it is recommended that the management of total Nigeria plc. should implement internal Environmental sustainability management practices involved in supply chain that will reduce the environmental burden by bringing about collaboration through shared responsibility in order to maintain an effective environmental sustainability through purchasing management, performance management, and collaboration.
2. On the findings that there is a significant relationship between organizational performance on the supply chain and the profitability of total exploration and productivity Nigeria limited on environmental sustainability, it is recommended that TEPNL should adopt the Kaplan and Norton balance scorecard dimension to monitor their performance by considering the process, customer, finance and innovation and learnings to understand the benefit that will accrue to the organization apart from ROA and ROI.

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