



(RESEARCH ARTICLE)



# Workplace Safety Compliance and Organizational Sustainability of Oil and Gas Servicing Companies in South-South, Nigeria

Mac-Arthur Ugonna Obi \*

*Department of Management, University of Port Harcourt, Nigeria.*

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## Abstract

This study examined how workplace safety compliance affects organisational sustainability of oil and gas servicing companies in South-South Nigeria. It has a particular focus on understanding the role of regulatory compliance for safety and safety training in achieving both economic and social sustainability. Using cross-sectional survey research approach, data was collect from management and operational staff at selected firms and it used multiple regression to analyse the data. The results found that safety compliance in terms of regulations and safety training significantly contribute to the economic sustainability of such companies, accounting for around 52% of the variation. Similarly, both regulatory safety compliance and safety training had strong positive effects on social sustainability, and can explain around 55% of the variation. In conclusions, the findings point out that organisations with robust safety policies and compliance to regulations and continuous training of employees will be more likely to enjoy an operational stability, profitability, and better relationship with stakeholders in the long term. Based on the results of the study, it is recommended that the oil and gas servicing companies institutionalise continuous safety education and regular retraining programmes to enhance worker competence and awareness. In addition, regulatory bodies should increase monitoring and make compliance certification and incentives tied to the demonstrated safety performance of firms. By incorporating safety code into corporate strategy, it is possible in the case of the oil and gas industry for sustainable growth and social responsibility to both continue mutually.

**Keywords:** Workplace Safety; Regulatory Compliance; Safety Training; Economic Sustainability; Social Sustainability; Oil And Gas Industry; Nigeria

## 1. Introduction

Organisational sustainability has become an important concern for business organisations today, particularly those operating in industries that face significant risks, like oil and gas. It is a company's long-term ability to flourish through balancing economic performance, social responsibility and environmental protection (Elkington, 1998; Dyllick & Muff, 2016; Okene & Sunday, 2023). For oil and gas servicing firms, sustainability is not merely about profitability, it is about safeguarding people, environment and assets in order to assure continuity and stakeholder trust. A sustainable organisation incorporates the ethics of using resources, human well-being and community welfare into their day-to-day activities (Epstein & Buhovac, 2014).

The oil and gas servicing industry works in intrinsically hazardous environments. Tasks such as drilling, maintenance of pipelines, and handling of chemicals pose major risks to workers and the nearby communities. In Nigeria, the South-South region particularly the reports of industrial accidents, oil spills, and environmental degradation are frequent which call for improved safety measures (Nwosu & Eze, 2021; Keffas & Olulu-Briggs, 2011). To be sustainable in the long run, companies will need to make safety management a central part of their operational strategy. Without a strong culture of workplace safety, social and environmental pillars of sustainability are easily compromised.

\* Corresponding author: Mac-Arthur Ugonna Obi; ORCID ID: 0009-0005-6804-4514

Workplace safety compliance is the degree of adherence of organisations to the set laws, safety standards, and best practises set to prevent employees from harmful conditions (Fernandez-Muniz et al., 2012). In Nigeria, safety compliance is governed by frameworks such as Factories Act (1990), Occupational Safety and Health Act (2004) and Department of Petroleum Resources (DPR) safety regulations as well as global standards such as ISO 45001 (Hale & Borys, 2013). Beyond fulfilling legal requirements, genuine compliance symbolizes a proactive safety culture, one that is accepting of constant training, free flow of communication and leadership dedication to accident prevention.

Research has found that organizations that invest in safety compliance have a reduced occurrence of accidents in the workplace, a decrease in workplace disruption, and an improvement in employee morale (Udoh & Etim, 2022). In the oil and gas servicing sector, where one safety failure can have devastating consequences to human and environmental lives, compliance is a crucial strategy of maintaining operational and reputational resiliency. Ultimately, workplace safety compliance and organisational sustainability go hand in hand. When companies treat their people and environment well, they secure their future. By making safety a part of sustainable practises, it is possible for oil and gas servicing companies operating in South-South Nigeria to attain not only regulatory compliance but also long-term organisational stability and global competitiveness.

### 1.1. Statement of the Problem

Weak safety culture has serious consequences for the sustainability of the organisation. Unsafe practices result in operational costs for accidents, downtime and compensation claims as well as undermine employee morale and the public trust. The oil and gas servicing industry in South-South Nigeria is one of the major industries contributing to the economy of South-South Nigeria, but it remains one of the most dangerous sectors of work, leaving numerous accidents at workplace, equipment failures, and oil spills continual jeopardising life, water bodies, and affecting activities (Nwosu & Eze, 2021). Although a number of regulations such as the Factories Act (1990), Occupational Safety and Health Act (2004), The Department of Petroleum Resources (DPR) safety guidelines etc. exist, there is still a lack of compliance among many firms. Too often, safety procedures are implemented only to pass inspection and not to create a true culture of safety (Udoh & Etim, 2022). Companies that put emphasis on safety have been noticed to have performance in enhanced efficiency, enhanced stakeholder confidence and an improved environmental level (Adebisi and Olayinka, 2020; Akinwale, 2023). Despite this, there are also many oil and gas servicing companies that still approach safety as a regulatory necessity, rather than as a strategic component of long-term sustainability.

Furthermore, there is lack of empirical evidence connecting workplace safety compliances directly to the economical, social, and environmental aspect of sustainability in the organisation in the Nigerian context. Many firms are still struggling to find a balance between production requirements and effective safety management, meaning that accidents are frequent and setbacks become common in terms of a company's reputation (Mensah, 2022). This study, therefore, aims at exploring the effects of workplace safety compliance via regulatory compliance, employee training, and safety culture on the sustainability of oil and gas servicing companies in South-South Nigeria. The purpose of the research is to produce useful knowledge and practical recommendations that can be used to help strengthen policies, improve leadership practises, and promote safer and more sustainable operations throughout the industry.

Drawing from this context, the present study aims to examine the relationship between workplace safety compliance and organizational sustainability among oil and gas servicing companies in South-South Nigeria. Specifically, the study seeks to:

- Assess the effect of regulatory safety compliance on the economic sustainability of oil and gas servicing companies.
- Evaluate how regulatory safety compliance influence the social sustainability of employees and communities.
- Examine the influence of safety training and awareness on the economic sustainability of oil and gas servicing firms.
- Determine the impact of safety training and awareness on the social sustainability of oil and gas servicing firms.

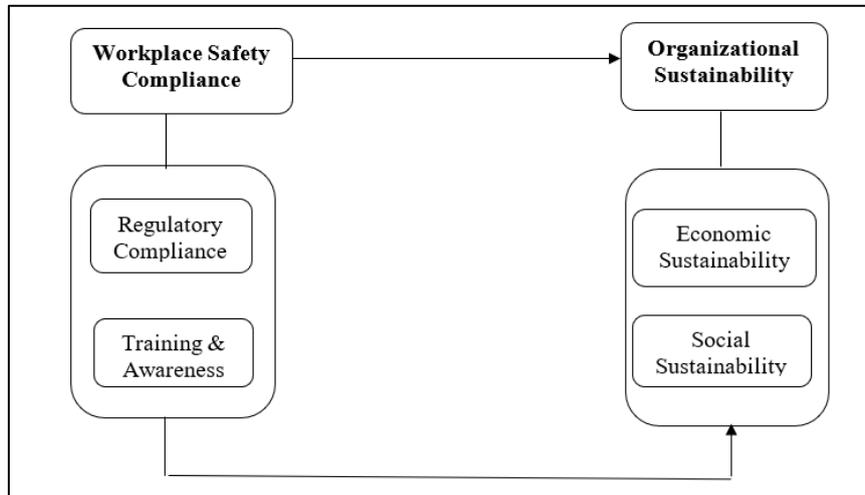
Based on these objectives and research questions, the following hypotheses were formulated:

- **H<sub>01</sub>:** Regulatory safety compliance has no significant effect on the economic sustainability of oil and gas servicing companies in South-South, Nigeria.
- **H<sub>02</sub>:** Regulatory Safety compliance has no significant influence on the social sustainability of oil and gas servicing companies in South-South, Nigeria.
- **H<sub>03</sub>:** Safety training and awareness has no significant influence on the economic sustainability of oil and gas servicing firms in South-South, Nigeria.

- **H<sub>04</sub>:** Safety training and awareness has no significant impact on the social sustainability of oil and gas servicing companies in South–South, Nigeria.

## 2. Literature Review

### 2.1. Conceptualizing Workplace Safety Compliance



(Source: Researcher's conceptualization, 2025)

**Figure 1** Conceptual Framework Diagram

This research work establishes the effect of safety compliance in the workplace to the organisational sustainability of oil and gas servicing companies in South-South Nigeria. The Table emphasizes compliance with safety as a strategic tool that would not only make sure that workers were protected but would enhance the long-term corporate performance and corporate responsibility. In this context, workplace safety compliance will act as independent variable and organisational sustainability will act as dependent variable. Workplace safety compliance is the extent to which organisations meet prescribed safety laws, policies and best practises aimed at ensuring the safety of workers and the prevention of workplace hazards (Fernandez-Muniz et al., 2012). It includes two major parts in this study, one regulatory safety compliance and the second, safety training and awareness. Compliance of regulatory requirements - regulatory compliance by adhering to statutory regulations such as the Factories Act (1990), Occupational Safety and Health Act (2004) and guidelines from Department of Petroleum Resources (DPR). Adhering to these standards helps firms reduce operational risks and avoid penalties and maintain business continuity Adebisi & Olayinka, 2020.

The second component which is safety training and awareness focuses on continuous education and sensitizations of employees on safe work practises. The regular training improves the capacity of workers to recognise, report, and prevent any safety risks (Clarke, 2013; Choudhry & Fang, 2022). It also creates a strong culture of safety in the organisation where every employee takes shared responsibility of keeping the environment safe and healthy. Such a culture promotes operational excellence and enhances firm social reputation in regards to the workers and host communities.

Organisational sustainability, on the other hand, reflects the ability of the company to survive in the long-term and balance the economic performance with the welfare of the employees as well as the community (Elkington, 1998; Dyllick & Muff, 2016). This study focuses on two major dimensions, economic sustainability and social sustainability. Economic sustainability is the ability of a firm to keep business operations profitable and productive while keeping costs and losses associated with accidents at a minimum (Akinwale, 2023). Social sustainability is concerned with the employees welfare, community relation and stakeholder trust (Mensah, 2022).

### 2.2. Theoretical Framework

#### 2.2.1. Safety Culture Theory

The Safety Culture Theory was developed after the 1986 Chernobyl disaster by the International Atomic Energy Agency (IAEA) as a way of explaining the values and attitudes towards safety in the workplace and how they affect behaviour

in the workplace. The theory contends that safety is not ensured by the compliance approach only but also created by the creation of a common culture in which all workers from top management to the front line workers make safety their top priority in everyday operations (Reason, 1997; Cooper, 2000).

Organisations that have a strong safety culture are proactive in identifying and controlling risks, resulting in fewer accidents, higher employee morale and improved operational performance (Clarke, 2013). In the oil and gas industry, where the work environment is by nature dangerous, the cultivation of a culture of safety is vital to the continuity of business and employee well-being. This theory is highly in line with the study's focus in regulatory compliance and safety training and awareness thus underscoring that when organisational practises are deeply embedded in issues regarding safety, firms achieve both economic and social sustainability.

### *2.2.2. Triple Bottom Line (TBL) Theory*

The Triple Bottom Line Theory was proposed by John Elkington in 1998 which extends the concept of corporate performance beyond profit to include people and planet. It assumes that sustainable organisations focus on balancing financial success with social responsibility and environmental stewardship. In high-risk industries such as oil and gas, this means making sure that the employees and host communities are well-off, while maintaining economic viability and minimising any environmental damage (Elkington, 1998; Dyllick & Muff, 2016).

From the TBL perspective, workplace safety compliance is a direct support to the "people" dimension (protection of employees and promotion of fair working conditions) with specific contribution to "profit" (reduced downtime, legal costs, threats to reputation). Compliance efforts and training efforts are therefore important drivers in achieving both social and economic sustainability.

### **2.3. Empirical Review**

A growing body of research uses high-risk industries such as oil and gas to illustrate the great link between workplace safety compliance and organisational sustainability. The population of this research are all oil and gas servicing companies registered in South-South Nigeria with twenty-five focus on those companies performing in production support, logistics, maintenance, and offshore services for the oil and gas sector. The data for the project was collected as structured data using primary data (questionnaire). The questionnaire was broken down into sections relating to demographic information, safety compliance practises and sustainability indicator. Evidence clearly indicates that when safety standards are met and when firms invest in training employees, not only are accidents reduced, but more importantly, safety will be reflected in financial stability, positive relationships with the community, and even employee well-being.

Studies have shown that strict compliance with the safety regulations improves the economic sustainability of a firm. Adebisi and Olayinka (2020) found that oil and gas companies that adhere to safety law relative to disruptions and reduced losses of operation. Similarly, Adie and Bassey (2021) noted that regulatory enforcement by agencies such as the Department of Petroleum Resources (DPR) contributes to the improvement of operational efficiency and profitability.

Nwosu and Eze (2021), reported that firms, who conduct regular safety audits, have fewer expenses with regards to accidents and result in increased productivity. These results suggest that compliance with safety rules helps to manage the costs associated with absenteeism, compensation, and equipment damage. Conversely, poor compliance often leads to frequent accidents and production downtime, which affects financial performance (Obasi & Ogbu, 2019).

Social sustainability is all about employee and community welfare. Udoh and Etim (2022) have also developed that adhering to safety laws will enhance employee satisfaction and public confidence. Their study demonstrated that organisations that are serious about safety are perceived to be socially responsible by workers and host communities. Similarly, Mensah (2022) found that the compliance of occupational health and safety (OHS) standards improves the workplace harmonisation and conflict.

If firms maintain a high level of safety standards, employees will feel valued and secure and they will have stronger morale and loyalty. On the other hand, failure to keep safety in mind fuels distrust and social tension, especially in communities that experience the environmental risks of oil and gas operations.

Employee training and awareness programmes are an important part of improving the economic performance. Clarke (2013) found that firms that have a consistent programme of training their employees on safety practises have lower

accident rates and higher rates of productivity. Similarly, Choudhry and Fang (2022) stressed safety education enhances awareness and rapid hazard response in order to minimise losses from workplace accidents.

Akinwale (2023) also reported that oil and gas servicing firms who spend their time and money buying regular safety drills benefit from increase in efficiency and cost control. Training helps the employees to do their work with responsibility and avoid any accidents that may interrupt their operations. In essence, a well-trained workforce is a safer and more productive workforce, which contributes to a company's economic sustainability.

Safety training also helps in the development of social sustainability by providing a more responsible and active workforce. Fernandez-Muniz, Montes-Peon, and Vazquez-Ordas (2012) find is that training improves commitment and trust of employees in management. In Nigeria, Ezenwa and Fajobi (2020) indicated that companies with continuous safety education have good relations with the community and have fewer labour disputes.

Adeyemi and Ojo (2021) further proved that employees that feel safe in their workplace with their employers are more loyal and motivated. This positive perception is not limited to the workplace as it builds the image and relationship of the firm with the host communities.

Although other research has shown connexions between safety and sustainability, most of it is about multinational businesses or industrial departments in general. There is little literature on how these relationships play out amongst oil and gas servicing firms in South-South Nigeria; where operational risks and regulatory issues are different. In addition, few studies have investigated the impact of regulatory compliance and safety training together in relation to economic as well as social sustainability. This study fills up such gaps using empirical evidence from the Nigerian oil and gas servicing industry. It examines how safety compliance as well as employee awareness contribute to sustainable performance with great practical insights for building safer elevated, more resilient and socially responsible organizations.

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### 3. Methodology

This research study uses cross-sectional survey research design. This approach was selected as it is possible to collect standardised data from a large number of respondents at one single point in time and thus, to perform statistical analysis of relations between safety compliance and sustainability indicators (Okene & Sunday, 2023). The design also lends itself to the objective comparison of the impacts of regulatory compliance and safety training to economic and social sustainability. The use of a quantitative survey is considered particularly appropriate for this study because it is a way of getting measurable evidence regarding perceptions, behaviour and level of compliance with regulations, within oil and gas servicing companies that operate in a complex regulatory environment.

The population of this work is all the registered oil and gas servicing companies in South-South Nigeria with special reference to those involved in production support and logistic, maintenance and offshore services. The respondents are management personnel, safety officers and operative personnel directly involved in setting up and monitoring safety protocols. A multi-stage sampling technique was applied first by selecting states which have significant oil and gas activities (Rivers, Delta, Bayelsa, and Akwa Ibom) and then randomly selecting companies and people respectively.

The sample size was determined using **Yamane's (1967) formula** for finite populations and it gave a representative sample of 250 respondents was determined out of population of 667 to ensure adequate representation.

The research work adopted primary data, which was obtained using a structured questionnaire that was designed on the basis of research objectives and variables. The questionnaire was divided into sections describing demographic information, safety compliance practises and sustainability indicators. Each item was rated using a five-point Likert scale ("Strongly Disagree (1)" to "Strongly Agree (5). The instrument was validated by experts in occupational safety and organisational behaviour and the instrument reliability was verified with the help of Cronbach's alpha coefficient and get a value of 0.87 that means that the instrument has high internal consistency.

The research uses multiple regression Table to analyse the impact of regulatory safety compliance and safety training with respect to the economic and social aspects of organisational sustainability. The Table is specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:  $Y$  = Organizational Sustainability (proxied by Economic and Social Sustainability),  $X_1$  = Regulatory Safety Compliance,  $X_2$  = Safety Training and Awareness,  $\epsilon$  = Error term. Separate Tables were estimated for economic and social sustainability to reflect the study's specific objectives.

Data was analysed using descriptive and inferential statistics with the help of Statistical Package for the Social Sciences (SPSS, version 27). Descriptive statistics like mean, standard deviation and percentages were used to summarise respondent demographic profiles and variable distribution. Inferential statistics particularly Pearson correlation and multiple regression analysis were used to test the research hypotheses at 0.05 level of significance. The results were presented in the form of tables and charts to make them easier to understand and interpret.

#### 4. Data Analysis and Results

This section is to present the data collected from the oil and gas servicing companies in South-South Nigeria and interpret it. The analysis focuses on appraising the impact of safety compliance at work regarding organisational sustainability. Out of the total 250 copies of the questionnaire, 228 copies were correctly completed and returned with a response rate of 91.2% which is highly adequate to be carried out in statistical analysis.

The demographic features of the respondents indicate that 65% of the respondents were male and 35% were female and the majority of the respondents were in the age range of 31-50 years. In terms of the roles, there were 40% safety officers, 35% operational and 25% managers or supervisory roles. On average, the respondent's amount of oil and gas industry experience was 7.6 years, suggesting a knowledgeable sample population.

**Table 1** The mean responses and standard deviations for the study variables.

Variable	Mean	Standard Deviation
Regulatory Safety Compliance (RSC)	4.26	0.61
Safety Training and Awareness (STA)	4.12	0.73
Economic Sustainability (ES)	4.08	0.69
Social Sustainability (SS)	4.21	0.65

The mean values suggest that respondents generally agreed their organizations demonstrate strong safety compliance and sustainable operational practices.

##### 4.1. Correlation Analysis

A Pearson correlation analysis was conducted to examine the relationships between variables. The results indicate strong and significant positive relationships among the study variables.

**Table 2** Correlation Analysis

Variable	RSC	STA	ES	SS
RSC	1			
STA	0.682**	1		
ES	0.624**	0.598**	1	
SS	0.605**	0.643**	0.697**	1

Note:  $p < 0.01$  (2-tailed) ; Source: Author's computation (2025).

The results indicate that both regulatory safety compliance and safety training are positively related to economic and social sustainability, implying that improved compliance and training efforts enhance overall organizational well-being.

##### 4.2. Regression Analysis

Two regression Tables were developed to test the hypotheses and assess the predictive influence of workplace safety compliance on both economic and social sustainability.

**Table 3** Safety Compliance and Economic Sustainability

Variable	B	Std. Error	t-value	Sig. (p)
Constant	1.124	0.214	5.25	0.000
RSC	0.416	0.072	5.78	0.000
STA	0.382	0.085	4.49	0.000
R <sup>2</sup> = 0.521, Adjusted R <sup>2</sup> = 0.514, F(2,225) = 125.32, p < 0.001				

The findings show that both regulatory safety compliance ( $\beta = 0.416$ ) and safety training ( $\beta = 0.382$ ) significantly contribute to the economic sustainability of oil and gas servicing firms, explaining about 52% of the variation in economic sustainability.

**Table 4** Safety Compliance and Social Sustainability

Variable	B	Std. Error	t-value	Sig. (p)
Constant	0.987	0.229	4.31	0.000
RSC	0.394	0.077	5.12	0.000
STA	0.429	0.082	5.23	0.000
R <sup>2</sup> = 0.548, Adjusted R <sup>2</sup> = 0.540, F(2,225) = 136.64, p < 0.001				

This Table shows that both safety compliance and training play an important role in social sustainability and explain approximately 55% of variation in social sustainability. The findings show that organisational sustainability relies on safety compliance at work and employee training as key enablers. Companies that invest in strong safety systems tend to have improving financial performance, productivity and community trust as a result. The findings show that adherence to safety regulations minimises operational risks which means downtime because of workplace accidents and helps the reputation of the firm. In the same way, training and awareness programs maintain the safety culture, resulting in uplifted employee morale and long-term engagement.

## 5. Discussion of Findings

The result of this study evidently revealed that there is a plausible importance of regulatory safety compliance, safety training and awareness in driving the economic and social sustainability of the oil and gas servicing companies in South-South Nigeria. The present regression result shows that regulatory safety compliance ( $b=0.416$ ) and safety training ( $b=0.382$ ) explains approximately 52% of the economic sustainability varied. Similarly, regulatory safety compliance ( $b = 0.394$ ) and safety training ( $b = 0.429$ ) accounts for around 55% of the variation of social sustainability.

H01: Regulatory safety compliance has no significant effect on the economic sustainability of the Oil and gas servicing companies in South-south, Nigeria, the study rejects the null hypothesis. Results show that regulatory safety compliance has a significant and positive effect on the economic sustainability of the oil and gas servicing companies in the region.

H02: Regulatory safety compliance has no impactful influence on the social sustainability of the oil and gas servicing companies in South-South, Nigeria. The null hypothesis is rejected in the study. Results show that regulatory safety compliance has a significant and positive effect on the social sustainability of the oil and gas servicing companies in the region.

H03: There is no significant relationship between safety training and awareness and economic sustainability of the oil and gas servicing firms in South-South, Nigeria. The null hypothesis is rejected in this study. The results have shown an existing and positive relationship between safety training and awareness and economic sustainability of oil and gas servicing firms in the region.

H04: Safety training and awareness has no significant impact on the social sustainability of oil and gas servicing companies in South-south, Nigeria. The Null Hypothesis is rejected in this study. The findings suggest significance and

positive impact of safety training and awareness on achieving social sustainability of the oil and gas servicing companies in the region.

These findings suggest identical that security is not only a regulatory duty however a strategic necessity for lengthy-time period success in the oil and gasoline business. When firms meet the safety rules, they minimise accidents at work, enhance productivity, and prevent expensive work interruptions. This is translated in better financial performance and operational efficiency. These findings are consistent with the findings from Abdulrahman et al. (2020) that adherence to safety standards leads to efficiency and loss from accidents.

Likewise, safety training and awareness were found to have a significant effect on economic as well as social sustainability. Continuous safety education enables employees, makes them more alert, and creates a culture of responsibility. When workers feel safe and valued, their motivation and commitment increase contributing to productivity and community goodwill. This supports the findings of Eze and Ugochukwu (2021), who found that the organisational firms that invest in employee training experience higher morale and achieve harmony in the organisation. These results are consistent with Adams and Petty (2022) who found that the level of safety compliance in organisations is associated with higher levels of operational efficiency and public trust. Likewise, the effects of safety training on customer service found in Okafor and Akpan (2021) revealed that structured safety training can improve employees' welfare and the competitive advantage of the enterprises in Nigerian oil and gas industry. Overall, the evidence provided highlights the fact that providing a safe workplace is not only a legal requirement but is a strategic factor for sustaining business performance.

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## 6. Conclusion

This study concludes that workplace safety compliance has a significant effect in improving economic and social sustainability in oil and gas servicing firms. Companies that prioritise regulatory safety compliance and invest in ongoing training programmes benefit from improved regulation compliance on one hand and an improved financial performance, as well as better relationships with employees and host communities on the other. Safety therefore is an important issue driving long-term corporate sustainability in the high-risk oil and gas environment of Nigeria.

### 6.1. Recommendations

Based on the study's findings the following recommendations are made:

- The senior managers of Oil and gas servicing companies in Nigeria's South-South region should put in place a structured safety programme, invest in training and cultivate a culture of accountability and continuous improvement by the establishment of a robust safety management system (SMS), Develop clear safety policies and procedures in line with national and international standards (e.g. DPR, OSHA, ISO 45001) Implement risk assessment protocols to identify, evaluate and mitigate risks before operations commence, etc.
- It is recommended for the senior management of the oil and gas servicing companies in south-south Nigeria to prioritise and strengthening regulatory compliance: Companies should prioritise adhering to all relevant s and standards to better their contribution to social stability. Invest in safety resources by investing adequate resources (financial, personnel, technology) to ensure that there is effective implementation and monitoring of regulatory compliance measures. Engage stakeholders By engaging and forming an open line of communication and cooperation between local communities, workers, and other regulatory bodies, establish trust and address concerns. Promote a safety culture by conducting initiatives to foster a safety-conscious culture in the organisation that stresses the need for worker well-being and social responsibility.
- The leadership of Oil and Gas Servicing firms in South-South Nigeria should invest in regular training and certification through conducting mandatory safety training for all employees including emergency response, equipment handling and hazard recognition, certifications up to date and specific to job roles through appointment of dedicated Safety Officers, Stay Informed and aligned with Regulations.
- Tailor training programmes through the development of training programmes, tailored to the unique risks and challenges Southern South Nigeria faced the oil and gas industry along with the specific social context of South-South Nigeria. Promote awareness campaign awareness campaigns should be conducted from time to time to reinforce the safety protocol and to foster a culture of vigilance among the workers and the community. Community engagement - Increasing the safety training and awareness programmes among community members thereby building better relationships and mutual understanding. Measure the training effectiveness by setting metrics to assess the effectiveness of safety training and awareness programmes on social sustainability, such as reduced incidents, improved worker morale and better community relations.

## 6.2. Limitations of the Study

In spite of containing great insights, the research comes with some limitations. First, it is based on a self-reported data and there may be a response bias. Second, the study is about oil and gas servicing companies in South-South Nigeria so that its generalisation might be limited to other regions or other sectors. Third, the cross-sectional design limits the ability to measure the effect of safety compliance on sustainability over a period of time.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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