Employee Health, Safety And Environmental Disclosures: A Study of the Impact on Construction Project Performance in Rivers State, Nigeria [1]

Godson Kelechi

Abstract

The construction industry performs a critical function in enhancing the provision of opportunities in terms of employment opportunities and infrastructure. In spite of its relevance, the delivery of construction projects, the industry have vital problem which include budget overrun, and time delay. This study examined employee health and environmental disclosure, its impact with respect to performance of construction project. The specific objectives of this study are to: evaluate impact of employee health and safety cost with respect to construction project performance, analyze the impact of environmental disclosure in view of timely and also cost-efficient delivery construction projects and determine the challenges construction firms really face with respect of implementing efficient health, safety, and environmental policies and their implications for performance of construction projects. This study adopted a descriptive survey research design. Data was obtained from construction professionals-including project managers, site engineers, quantity surveyors, safety officers, environmental officers, and contractors-through structured questionnaires based on a five-point Likert scale. Of the one hundred and three (103) questionnaires distributed, eighty two (82) were returned and deemed valid for analysis. Descriptive statistical tools, including mean scores and standard deviations, were applied. The findings in this study highlighted that spending on employee health and safety has a positive influence on project delivery performance. This study propose that construction firms as a matter of urgency should look at employee health and safety budgetary allocation not only as costs, on the other hand planned capital allocation that will ensure workplace performance, minimize accidents, and aid regulate project expenditure.

Keywords*: Health and safety, Project performance, Environmental disclosure, Construction project delivery, Rivers State, Nigeria.*

[1] How to cite this paper: Kelechi, G. (2026). Employee Health, Safety And Environmental Disclosures: A Study of the Impact on Construction Project Performance in Rivers State, Nigeria; *PM World Journal*, Vol. XV, Issue IV, April.

1. Introduction

The construction sector performs a strategic role in national economic development, particularly in emerging economies in the likes of Nigeria, in which infrastructure delivery is closely linked to industrial growth, employment generation, and as well as fiscal expansion (Oladinrin, Ogunsemi, & Aje, 2012). According to (Kelechi, Amadi, & Chinemerem, 2025) the delivery of a successful construction projects will aid to ensure construction project efficiency and also effectiveness and help various key professionals in construction project to meet up deadlines during the delivery of construction projects. With respect to Rivers State-an economic hub characterized by oil and gas operations, urban expansion, and infrastructure development-the construction industry significantly contributes to public and private investment activities. However, despite its economic importance, the construction industry continues to experience persistent challenges relating to occupational health and safety risk and environmental sustainability, which ultimately affect construction project performance (Okoye et al., 2022; Adeyemi & Onifade, 2018; Nwankwo & Okafor, 2022).

Globally, construction remains one of the most hazardous industries, accounting for disproportionate share of occupational injuries and fatalities (Hinze, Thurman, & Wehle, 2013). In Nigeria, this situation is aggravated by weak enforcement of safety regulations, inadequate worker training, and poor safety culture (Umeokafor, Windapo, & Umeadi, 2020; Akinyemi & Oke, 2022). These deficiencies often result in project delays, cost escalation due to accidents and rework, legal liabilities, reduced workforce morale, and compromised quality outcomes (Love, Edwards, &Smith, 2016). Consequently, occupational health and safety practices have become critical determinants of construction project success.

Simultaneously, environmental concerns in Rivers State have intensified due to long-standing ecological challenges, including oil spills, gas flaring, and improper waste disposal. Environmental disclosure –defined as the transparent reporting of environmental performance and sustainability practices-has emerged as a mechanism for promoting corporate accountability and regulatory compliance (Deegan, 2002). Empirical studies suggest that environmental disclosure enhances stakeholder trust and organizational legitimacy (Clarkson, Li, Richardson, & Vasvari, 2008). Within the construction context, improves environmental transparency may reduce community resistance, prevent project interruptions, and facilitate smoother project delivery.

First many Nigerian studies focus primarily on occupational accident rates and safety compliance without linking safety investments to measurable project performance outcomes (Umeokafor et al., 2020; Akinyemi & Oke, 2022). Second, research on environmental disclosure in Nigeria has predominantly examined corporate financial performance rather than project-level performance

indicators such as cost, time, and quality (Clarkson et al., 2008). Third, existing studies often treat health and safety practices and environmental disclosure independently, without integrating them within a unified theoretical framework capable of explaining their combined effects on construction project performance. Furthermore, there remains empirical evidence focusing specifically on Rivers State, where environmental sensitivity and regulatory pressures create a distinct operational context.

Therefore, a significant theoretical and empirical gap persists regarding the combined impact of employee health and safety expenditure and environmental disclosure on construction project performance at the project delivery level. Addressing this gap is critical for advancing construction management scholarship and for informing policy and managerial decisions in environmentally sensitive regions. In response, this study develops and empirically tests a theoretically grounded framework integrating Human capital Theory (Becker, 19964) Stakeholder Theory (Freeman, 1984), and Legitimacy Theory (Dowling & Pfeffer, 1975) to examine how employee health and safety cost and environmental disclosure practices influence construction project performance in Rivers State, Nigeria.

Specifically, this study is guided by four objectives which are to: assess the effects of employee health and safety costs on construction project performance, determine the level of environmental disclosure practices among construction firms in Rivers State, evaluate the impact of environmental disclosure on the timely and cost-efficient delivery of construction projects, and identify the challenges confronting construction firms in the implementation of effective health, safety and environmental policies and their implications for project performance.

2. Literature Review

2.1 Employee Health and Safety in Construction

With respect of delivery of construction projects, the construction industry is globally acknowledged as one of the most dangerous sectors, largely due to its constantly changing, uncertain and its highly complex work environments. Occupational accidents and health hazards usually occur more frequently, often resulting in damage and also serious injuries, extended project delay, and significant economic losses. In view of employee health and safety, it entails a proactive measures designed to avoid workplace injuries and also occupational diseases, involving systematic risk assessment and establishment of efficient and effective emergency response mechanisms (Akinyemi & Oke, 2022). Using Nigeria as a case study, particularly-Rivers State, compliance with safety regulation remains low, as a result of weak enforcement frameworks, insufficient safety awareness, and also contractor's cost-cutting practices which in turn deprioritize

safety investment. Most empirical evidence indicates that adequate investment with respect to health and safety programs, generally improve labour productivity, lower absenteeism, enhance workers morales and positively impact overall construction project performance (Ofori, 2021). Construction organization that prioritize are more likely to deliver construction projects within stipulated time fame and cost limits, as workplace accidents often leads to expensive project delays, leads to legal disputes, result to operational shutdown, and also lead to rework (Olatuji, Aje, 2019). Although contractors frequently perceive expenditures on health and safety-such as personal protective equipment, workforce training, health surveillance, and insurance scheme-as additional financial burdens, theoretical and empirical evidence suggests that such expenditures represent strategic investments rather than mere compliance costs. Human Capital Theory (Becker, 1964; Schultz, 1961) posits that investments in employee welfare and skills enhance productivity and organizational performance. In construction projects, improved safety conditions reduce absenteeism, minimize accident-related delays, and lower rework costs, thereby strengthening cost efficiency, schedule adherence, and quality performance.

The relationship between employee health and safety costs, environmental disclosure, and construction project performance can be further explained through Stakeholder Theory and legitimacy Theory. Stakeholder Theory (Freeman, 1995) argues that organizations achieve sustainable performance by effectively managing relationships with multiple stakeholders, including employees, regulators, host communities, and clients. Investments in employee safety respond to internal stakeholder expectations, while environmental disclosure addresses external stakeholder concerns. Firms that effectively manage these relationships are more likely to experience improved operational stability and enhanced project outcomes. Legitimacy Theory (Dowling & Pfeffer, 1975; Suchman, 1995) complements these perspectives by suggesting that organizations engage in environmental and social reporting to maintain societal approval and secure continued access to resources. In environmentally sensitive regions such as Rivers State, transparent environmental disclosure may serve as a strategic mechanism for maintaining legitimacy, reducing community conflict, and minimizing disruptions that often lead to project delays and cost overruns.

2.2 Environmental Disclosure in Construction

In view of environmental disclosure, it entails the systematic presentation and communication of organization's environmental activities, its impact and also the measures implemented to mitigate negative ecological effect. With respect to the construction sector, it covers various practices like proper handling of waste, emission reduction, control of pollution, efficient and effective use of resources, and as well as the preservation of the surrounding ecosystems. Furthermore, open and transparent environmental reporting, aids construction companies in the establishment of trust, and

also with respect of accountability with various regulatory bodies, investors, clients and as well as host communities. In specific region like Rivers State, where environmental degradation linked to industrial and construction operation a key challenge. Efficient and effective environmental disclosure play an important function of mitigating community conflicts, avoiding all forms of regulatory sanctions, and enhancing prompt approval of construction projects (Federal Ministry of Environment Nigeria, 2021). In addendum, it is vital to note that companies that is consistent in reporting their environmental performance have the full tendency to enjoy improved corporate image, better and stronger stakeholder engagement, and as well as higher effective and operational efficiency, which in turn reduce construction project disruption and delays (Ugwu & Haupt, 2021).

2.3 Project Delivery Performance

In respect of project delivery performance, it involves a comprehensive concept that evaluate how well a project achieves its main objectives across various key dimensions, including cost, time, quality and as well as clients satisfaction. A successful delivery of construction projects refers to as completing a project within the approved construction project schedule and cost while adhering to required best quality standard (Olatunji & Aje, 2019). In respect of all this, the delivery of construction projects in various developing economies continues to face various issues such as schedule delays and as a well as cost increase or budget overruns. Several factors contribute to these setbacks, including inadequate planning, poor risk management, insufficient safety measure, failures in environmental compliance, and external socio-political disruptions (Enshassi et al., 2009). Weak safety practices often result in onsite accidents that interrupt work progress, damage materials or equipment, and expensive rework. Likewise, poor environmental management can provoke community resistance, attract regulatory fines, or lead to project shutdowns, all of which negatively influence delivery performance (Okoye & Chukwu, 2023).

2.4 Relationship Between Employee Health and Safety Costs and Construction Project Delivery Performance

Essentially, the connection between employee health and safety expenditure and construction project delivery performance is actually substantial and multifaceted. In respect of Rivers State , Nigeria as a case study, where construction activities most times is at high risk and also further hindered by environmental issues and inadequate regulatory enforcement, thereby making the relationships is particularly to be crucial. Historically, it is important to know that most of the construction companies have perceived health and safety expenditures as unwanted financial problems that is reducing profit margins. Furthermore, many studies have argued that investing in health and safety as a matter of urgency should be seen as strategic assets instead of mere statutory duties (Akinyeme & Oke, 2022). Budgetary allocation on safety related initiatives, in the likes of workforce training, provision of personal protective equipment, and continuous safety supervision,

essentially limits workplace accidents and occupational hazard, which helps to promote safer working environment and conditions. In addendum, safe working environment and conditions positively impact on worker's morale and productivity. However, any employee that feel protected adequately are more likely to remain well focused, being motivated and generally committed in order produce good quality work. As a result, it leads to better workmanship, mitigate serious error rate, and also reduce material wastage-factors that are vital for enhancing successful construction project outcomes (Ofori, 2021). In the context of Rivers State, where community acceptance ensure important role in enhancing uninterrupted project delivery, efficient and effective health and safety practices also ensure contractor's public image. Most construction firms are well known for ensuring employee safety are more likely to benefit greater support of regulatory authorities, clients and host communities, which in turn lower the likelihood of community opposition or government enforced project stoppages (Ugwu & Haupt, 2021).

2.5 Extent of Environmental Disclosure Practices Among Construction Firms

In respect to environmental disclosure, it is seen as the systematic method in which organization relates information with respect of their environmental impact, its policies and also performance to various relevant stakeholders. As a result of this, it typically involves details on resource consumption, generation of waste and management, levels of emission, energy efficiency initiatives, and environmental conservation measures (Okoye & Chukwu, 2023). In Rivers State Nigeria, as a case study, the extent of environmental disclosure among various construction firms varies considerably and also, it is shaped by numerous factors such as the size of company, ownership structure, demands by clients, and finally stakeholder expectations. In addendum, clients within the oil and gas industry, which is highly prominent in Rivers State, most time require comprehensive environmental disclosure as part of contractual obligations.

Most of these organizations are also subject to intensive scrutiny from investors, international collaborators, regulatory agencies, and also host communities, which further compels them to adopt details and as well as transparent environmental reporting practices (Ugwu & Haupt, 2021). On the other hand, medium-sized and locally owned construction firms typically demonstrate minimal environmental disclosure. Research indicates that most indigenous contractors are more concerned with short-term financial performance and basic regulatory compliance. As a result, environmental considerations are often deprioritized, and formal reporting to stakeholders is uncommon (Okoye & Chukwu, 2023). The lack of strict enforcement of environmental regulations reduces the incentive for firms to disclose environmental data.

Many contractors also perceive environmental reporting as an unnecessary cost rather than a value-enhancing investment. These firms frequently lack the technical expertise, financial resources, and organizational capacity required to prepare environmental reports. The practice of environmental

disclosure remains relatively new within Nigeria's construction sector. Historically, environmental issues received limited attention, as priority was given to rapid urban development, correction of infrastructure deficits, and economic expansion (Adeleke et al., 2019). In most cases, some major policies like environmental impact assessment act of 1992 and also the NESREA Act of 2007 which is been established frameworks with respect to oversight, implementation and the level of enforcement have been seriously inconsistent. With respect to Rivers State, Nigeria as a case study, the matter has been complicated as a result of environmental degradation which is caused by oil and gas activities. However, most communities in Rivers State, Nigeria are seriously sensitive with respect to environmental damage, resulting to accountable and transparent environmental reporting vital with respect to maintaining full trust and as well as social license to manage (Okoye & Chukwu, 2023).

Internationally, with respect to the level of advancement in technology with the likes of building information modeling and as well as technology driven environmental monitoring tool which practically have improve the reliability and proficiency of environmental documentation and also collection of data. Conversely, the local implementation in Rivers State, Nigeria as a case study remains very low, especially within small and also medium-sized companies, as a result of elevated execution costs and as well as insufficient technical knowledge (Akinyemi & Oke, 2022).

2.6 Impact of Environment Disclosure on Timely and Cost-Effective Delivery of Construction Projects

In view of environmental disclosure, it entails a systematic exchange of information within an organization's environmental measures, influence, policies, reduction initiative to its various stakeholders. In respect to the construction sector, most of those reporting generally encompass information which include utilization of available resources, prevention of pollution, management of waste and as well as biodiversity, initiatives in terms of community engagement (Global Reporting Initiative, 2020). It is important to note that the construction projects delivery in Rivers State, Nigeria most times encounter resistance from local communities who is concerned with respect to socio-economic disturbances and as well as environmental degradation.

A clear environmental disclosure most times aids to ensure trust and reliability in the hand of the various stakeholders (Okoye & Chukwu, 2023). Nevertheless, environmental disclosure promotes proactive conformity with respect to national and as well as state level environmental regulations which involves environmental impact assessment Act of 1992. Construction companies that regularly involve in extensive reporting usually have the capacity to identify and reduce any forms of environmental types of risks during the early stage, as a result abstaining from various penalties, and as well as regulatory shutdown during the stages of construction (Federal Ministry of

Environment Nigeria, 2021). Abstaining from such sanction as the case may be will aid reduce unnecessary expenses and as well as help enhance adherence with respect to construction project budgets. The obligation of reporting environmental performance aids to oblige most construction companies to regularly collect, analyze and as well as monitor environmental data, supporting an improved planning and as well as more severe environmental risk assessments (Adeleke et al., 2019).

Despite the fact that a thorough environmental disclosure most times may undergo initial costs and will also result to extensive long-term financial gains. Most construction firms having robust environmental credibility tend to have fewer conflicts, greater employee preservation, and as well as minimized legal obligations (Ofori, 2021).

2.7 Challenges Faced by Construction Firms in Rivers State, Nigeria in Implementing Effective Health Safety, and Environmental Policies and their Implications for Project Performance.

Safety, health, and as well as environmental policies are important with respect of enhancing sustainable construction practices and make sure construction projects are completed within stipulated time frame and as well as within project budget. Preferably, better safety, health and as well as environmental policies is expected to mitigate workplace accidents, reduce various environmental damage, and also enhance workplace performance. Conversely, in Rivers State, Nigeria as a case study, majority of the construction firms encounter serious challenges that prevent efficient and effective health, safety and as well as environmental adoption, which in one way or the other hinder the outcome of construction projects.

One of the major issue is inadequate funding with respect to health, safety and also environmental measure. Most of the construction companies like the small and as well as medium sized local contractors, normally run for profit margins and as well as prioritize prompt cost savings with respect to sustained investment in health, safety and environmental solutions (Adeleke et al., 2019). Moreover, when health, safety, and as well as environmental programs are not adequately funded, it will result to more accident rate and also environmental breaches, leading to serious delays, potential legal repercussions and as well as rework. In Rivers State, Nigeria, most regulatory bodies are contend with limited ability, inadequate resources, political interference, thereby limiting the capacity to monitor and as well as enforce compliance efficiently and effectively (Umeokafor, 2020).

Lots of construction companies in Rivers State, Nigeria, most times struggle to employ some of these professionals as a result of limitation in resources and as well as small local talent pool (Okoye & Chukwu, 2023). Not having qualified staff, activities such as assessment of risk,

identification of environmental hazard and as well as policy enforcement are usually not adequate, causing risk of accidents and also environmental harm. However, in most of the local companies, it is the responsibility of management to speed up production and also reduction in cost over environmental responsibility and as well as safety measures. It is important to note that the approach usually trickles down with respect to workers in the site, which result to poor compliance as well as safety standard (Ofori, 2021). In addendum, most of the construction workers residing in Rivers State, Nigeria, lack good and formal health, safety and as well as environmental education.

It is essential to note that major factors like low literacy levels, barriers in language and as well as unskilled labour usually worsen the issue (Ugwu & Haupt, 2021). Some view safety regulations as bureaucratic hurdles or unnecessary expenses (Umeokafor, 2020). This resistance undermines policy enforcement, resulting in non-compliance fines, work stoppages, and repeated project interruptions, which destabilize schedules and increase costs. Corruption in regulatory processes-such as the issuance of environmental permits and inspection certifications-also weakens health, safety and environmental compliance.

3. Method of Study

This study examined employee health and environmental disclosure, its impact with respect to performance of construction project in Rivers State, Nigeria. This study adopted a descriptive survey research design. Data was obtained from construction professionals-including project managers, site engineers, quantity surveyors, safety officers, environmental officers, and contractors-through structured questionnaires based on a five-point Likert scale. Both primary and secondary data sources were utilized. Of the one hundred and three (103) questionnaires distributed, eighty two (82) were returned and deemed valid for analysis. Descriptive statistical tools, including mean scores and standard deviations, were applied.

The findings in this study highlighted that spending on employee health and safety has a positive influence on project delivery performance, and investing in health and safety contributes to avoiding cost overruns. This study propose that construction firms as a matter of urgency should look at employee health and safety budgetary allocation not only as costs, on the other hand planned capital allocation that will ensure workplace performance, minimize accidents, and aid regulate project expenditure. Furthermore, it propose also that professional bodies, like the Nigerian Institute of quantity surveyors and also the Nigerian Institute of building, as a matter of urgency ought to develop a particular Disclosure framework in order to promote standardization and consistency in documenting.

4. Results and Discussion

Table 4.1: Questionnaire distribution and responses

Respondents	Distribution	Responses	(%)Responses
Quantity Surveyors	26	23	89
Safety Officers	16	12	75
Site Engineers	15	11	73
Project Managers	17	13	77
Environmental officers	10	8	80
Contractors	19	15	79
Total	103	82	80

Source: Field Data 2026.

4.1 Data Analysis

Table 4.1.1: Summary of mean and standard deviation statistics on examining the influence of employee health and safety costs on the performance of construction project delivery in Rivers State.

S/N	Items	SA	A	N	D	SD	Mean	StD	Decision
1	Adequate investment in health and safety reduces the occurrence of site accidents.	18	15	13	23	13	3.02	1.41	Agreed
2	Health and safety spending helps us deliver projects within the scheduled timeline.	23	13	11	13	22	3.02	1.59	Agreed
3	Investing in health and safety contributes to avoiding cost overruns in our projects.	18	19	15	17	13	3.15	1.40	Agreed
4	Health and safety measures improve the overall quality of project outcomes.	15	21	18	14	14	3.11	1.36	Agreed
5	Good health and safety practices enhance worker morale and productivity on site.	18	11	19	13	21	2.90	1.49	Agreed
6	Strong health and safety performance enhances our reputation with clients and regulatory agencies.	12	17	16	24	13	2.89	1.31	Agreed
7	Effective safety practices help reduce legal liabilities and penalties.	19	19	13	16	15	3.13	1.45	Agreed
8	Adequate health and safety costs are a key factor in achieving successful project delivery in Rivers State.	10	15	14	19	24	2.61	1.39	Agreed
9	Our firm treats health and safety costs as a strategic investment rather than an expense.	12	12	20	19	19	2.74	1.36	Agreed

10	Our company allocates sufficient budget for employee health and safety programs on each project.	16	16	23	16	11	3.12	1.31	Agreed
	Grand Mean						**2.97**	**0.47**	**Agreed**

Source: Researcher's Fieldwork Data, (2026).

The result from Table 4.1.1 shows a summary of mean and standard deviation statistics on examining the influence of employee health and safety costs on the performance of construction project delivery in Rivers State. The result further shows that the grand mean for the influence of employee health and safety costs on project performance is 2.97, SD = 0.47. Specifically, the result shows that Investing in health and safety contributes to avoiding cost overruns in our projects (Mean = 3.15, StD = 1.40) is the most agreed item. This was followed by Effective safety practices help reduce legal liabilities and penalties (Mean = 3.13, StD = 1.45), Our company allocates sufficient budget for employee health and safety programs on each project (Mean = 3.12, StD = 1.31), and Health and safety measures improve the overall quality of project outcomes (Mean = 3.11, StD = 1.36).

Also, Adequate investment in health and safety reduces the occurrence of site accidents and Health and safety spending helps us deliver projects within the scheduled timeline had equal Mean = 3.02 with StD = 1.41 and 1.59 respectively. From the table, the least was Adequate health and safety costs are a key factor in achieving successful project delivery in Rivers State (Mean = 2.61, StD = 1.39), followed by Our firm treats health and safety costs as a strategic investment rather than an expense (Mean = 2.74, StD = 1.36), and Strong health and safety performance enhances our reputation with clients and regulatory agencies (Mean = 2.89, StD = 1.31). The Grand Mean is 2.97, indicating that, on average, respondents agreed that employee health and safety costs have a significant influence on the performance of construction project delivery in Rivers State.

Table 4.1.2: Summary of mean and standard deviation statistics on assessing the extent of environmental disclosure practices among construction firms in Rivers State.

S/N	Items	SA	A	N	D	SD	Mean	StD	Decision
1	Client requirements significantly influence our environmental disclosure practices.	16	16	19	15	16	3.01	1.40	Agreed
2	Weak regulatory enforcement reduces the motivation for detailed environmental disclosure in our firm.	17	22	12	15	16	3.11	1.44	Agreed
3	Environmental disclosure is perceived as an additional cost rather than an investment by management.	10	8	24	21	19	2.62	1.28	Agreed

4	There is minimal stakeholder or community pressure demanding environmental disclosure from our firm.	17	13	24	14	14	3.06	1.36	Agreed
5	Our firm lacks the technological capacity (e.g., software, monitoring tools) to collect and report environmental data effectively.	17	20	16	16	13	3.15	1.38	Agreed
6	Cultural or organizational resistance limits our firm's willingness to share environmental performance data.	16	23	16	15	12	3.20	1.35	Agreed
7	We have experienced project delays or community conflicts due to poor environmental disclosure.	20	17	15	13	17	3.12	1.48	Agreed
8	Our firm is aware of recent policy and regulatory changes encouraging stricter environmental disclosure.	22	18	14	12	16	3.22	1.48	Agreed
9	Our firm includes environmental disclosure as a key component of its competitive strategy to secure projects.	17	20	20	16	9	3.24	1.29	Agreed
10	We actively comply with voluntary disclosure frameworks promoted by industry associations or NGOs.	19	17	14	21	11	3.15	1.39	Agreed
	Grand Mean						**3.09**	**0.37**	**Agreed**

Source: Researcher's Fieldwork Data, (2026).

The result from Table 4.1.2 shows a summary of mean and standard deviation statistics on assessing the extent of environmental disclosure practices among construction firms in Rivers State. The result further shows that the grand mean for environmental disclosure practices among firms is 3.09, SD = 0.37. Specifically, the result shows that Our firm includes environmental disclosure as a key component of its competitive strategy to secure projects (Mean = 3.24, StD = 1.29) is the most agreed item. This was followed by our firm is aware of recent policy and regulatory changes encouraging stricter environmental disclosure (Mean = 3.22, StD = 1.48), and Cultural or organizational resistance limits our firm's willingness to share environmental performance data (Mean = 3.20, StD = 1.35).

Also, Our firm lacks the technological capacity (e.g., software, monitoring tools) to collect and report environmental data effectively and We actively comply with voluntary disclosure frameworks promoted by industry associations or NGOs both had equal Mean = 3.15 with StD =

1.38 and 1.39 respectively, followed by we have experienced project delays or community conflicts due to poor environmental disclosure (Mean = 3.12, StD = 1.48), and Weak regulatory enforcement reduces the motivation for detailed environmental disclosure in our firm (Mean = 3.11, StD = 1.44). From the table, the least was Environmental disclosure is perceived as an additional cost rather than an investment by management (Mean = 2.62, StD = 1.28), while Client requirements significantly influence our environmental disclosure practices (Mean = 3.01, StD = 1.40) and There is minimal stakeholder or community pressure demanding environmental disclosure from our firm (Mean = 3.06, StD = 1.36) fall just below the grand mean. The Grand Mean is 3.09, indicating that, on average, respondents agreed that environmental disclosure practices are moderately adopted by construction firms in Rivers State, although varying levels of compliance and organizational willingness exist.

Table 4.1.3: Summary of mean and standard deviation statistics on evaluating the impact of environmental disclosure on the timely and cost-effective delivery of construction projects.

S/N	Items	SA	A	N	D	SD	Mean	StD	Decision
1	Transparent environmental disclosure improves relationships with local communities and reduces work stoppages.	13	11	20	18	20	2.74	1.39	Agreed
2	Environmental disclosure helps avoid regulatory penalties and unexpected compliance costs.	15	19	16	13	19	2.98	1.44	Agreed
3	Regular environmental reporting improves risk assessment and leads to better project planning.	15	16	12	16	23	2.80	1.49	Agreed
4	Firms that disclose environmental practices are more likely to attract reputable clients and secure stable funding.	21	19	15	14	13	3.26	1.42	Agreed
5	Environmental disclosure enhances the firm's reputation and supports long-term cost savings.	17	11	17	23	14	2.93	1.39	Agreed
6	Implementing environmental disclosure helps in early identification and mitigation of environmental risks.	18	16	17	14	17	3.05	1.45	Agreed
7	Disclosure encourages better supply chain management and reduces material wastage.	18	8	18	15	23	2.79	1.51	Agreed
8	Transparent reporting motivates firms to adopt innovative and efficient construction methods.	15	21	16	17	13	3.10	1.36	Agreed
9	Environmental disclosure helps reduce rework and legal penalties	13	14	20	14	21	2.80	1.41	Agreed

	related to environmental non-compliance.								
10	Strong environmental disclosure increases investor and partner confidence, improving project cash flow and delivery speed.	15	21	15	16	15	3.06	1.39	Agreed
	Grand Mean						**2.95**	**0.46**	**Agreed**

Source: Researcher's Fieldwork Data, (2026).

The result from Table 4.1.3 shows a summary of mean and standard deviation statistics on evaluating the impact of environmental disclosure on the timely and cost-effective delivery of construction projects. The result further shows that the grand mean for the impact of environmental disclosure is 2.95, SD = 0.46. Specifically, the result shows that Firms that disclose environmental practices are more likely to attract reputable clients and secure stable funding (Mean = 3.26, StD = 1.42) is the most agreed item.

This was followed by Transparent reporting motivates firms to adopt innovative and efficient construction methods (Mean = 3.10, StD = 1.36), and Strong environmental disclosure increases investor and partner confidence, improving project cash flow and delivery speed (Mean = 3.06, StD = 1.39). Also, implementing environmental disclosure helps in early identification and mitigation of environmental risks (Mean = 3.05, StD = 1.45), and Environmental disclosure helps avoid regulatory penalties and unexpected compliance costs (Mean = 2.98, StD = 1.44) were slightly above the grand mean. This was followed by Environmental disclosure enhances the firm's reputation and supports long-term cost savings (Mean = 2.93, StD = 1.39), Regular environmental reporting improves risk assessment and leads to better project planning (Mean = 2.80, StD = 1.49), and Environmental disclosure helps reduce rework and legal penalties related to environmental non-compliance (Mean = 2.80, StD = 1.41).

From the table, the least was Transparent environmental disclosure improves relationships with local communities and reduces work stoppages (Mean = 2.74, StD = 1.39), closely followed by Disclosure encourages better supply chain management and reduces material wastage (Mean = 2.79, StD = 1.51). The Grand Mean is 2.95, indicating that, on average, respondents agreed that environmental disclosure has a generally positive, though moderate, impact on the timely and cost-effective delivery of construction projects.

Table 4.1.4: Summary of mean and standard deviation statistics on identifying the challenges construction firms face in implementing effective health, safety, and environmental (HSE) policies and their implications for project performance.

S/N	Items	SA	A	N	D	SD	Mean	StD	Decision
1	Financial constraints limit our firm's ability to implement comprehensive HSE measures.	15	19	12	20	16	2.96	1.42	Agreed
2	Weak regulatory enforcement reduces compliance motivation among construction firms.	19	17	14	17	15	3.10	1.45	Agreed
3	Our firm struggles to recruit and retain skilled HSE professionals.	21	19	20	15	7	3.39	1.28	Agreed
4	Management places higher priority on cost and speed than on HSE commitments.	17	22	18	13	12	3.23	1.35	Agreed
5	Workers have low awareness and training in HSE practices.	15	16	19	16	16	2.98	1.39	Agreed
6	Resistance to change makes HSE policy adoption difficult in our organization.	23	16	13	19	11	3.26	1.43	Agreed
7	Corruption and political influence hinder strict adherence to HSE standards.	16	20	17	18	11	3.15	1.33	Agreed
8	Our firm lacks access to modern HSE technologies and equipment.	11	12	22	21	16	2.77	1.30	Agreed
9	Fragmented and outdated regulations cause confusion and compliance challenges.	16	18	13	21	14	3.01	1.40	Agreed
10	High labor turnover negatively affects safety training continuity.	17	18	19	16	12	3.15	1.35	Agreed
11	Inadequate data collection and monitoring prevent effective HSE improvements.	20	16	20	10	16	3.17	1.44	Agreed
12	Cultural and social attitudes discourage consistent use of safety measures.	17	13	16	15	21	2.88	1.49	Agreed
13	Community-related demands and local politics disrupt our HSE policy implementation.	27	15	13	13	14	3.34	1.50	Agreed
14	A short-term profit focus undermines investments in HSE initiatives.	12	15	12	20	23	2.67	1.43	Agreed
15	Poor integration of HSE considerations at the design stage leads to costly delays during construction	14	18	17	13	20	2.91	1.43	Agreed

16	Limited availability of quality safety materials delays project progress.	17	18	16	16	15	3.07	1.41	Agreed
17	Our firm lacks effective emergency preparedness and response plans for construction sites.	19	20	16	9	18	3.16	1.47	Agreed
18	Weak HSE performance threatens our long-term competitiveness and ability to secure future projects.	13	20	19	11	19	2.96	1.40	Agreed
	Grand Mean						**3.06**	**0.32**	**Agreed**

Source: Researcher's Fieldwork Data, (2026).

The result from Table 4.1.4 shows a summary of mean and standard deviation statistics on identifying the challenges construction firms face in implementing effective health, safety, and environmental (HSE) policies and their implications for project performance. The result further shows that the grand mean identifying these challenges is 3.06, SD = 0.32. Specifically, the result shows that our firm struggles to recruit and retain skilled HSE professionals (Mean = 3.39, StD = 1.28) is the most significant challenge faced. This was followed by community-related demands and local politics disrupt our HSE policy implementation (Mean = 3.34, StD = 1.50), and resistance to change makes HSE policy adoption difficult in our organization (Mean = 3.26, StD = 1.43).

Further, the table indicates that management places higher priority on cost and speed than on HSE commitments (Mean = 3.23, StD = 1.35), and inadequate data collection and monitoring prevent effective HSE improvements (Mean = 3.17, StD = 1.44), as well as our firm lacks effective emergency preparedness and response plans for construction sites (Mean = 3.16, StD = 1.47) are also prominent challenges. Other challenges noted include corruption and political influence hinder strict adherence to HSE standards (Mean = 3.15, StD = 1.33), high labor turnover negatively affects safety training continuity (Mean = 3.15, StD = 1.35), weak regulatory enforcement reduces compliance motivation among construction firms (Mean = 3.10, StD = 1.45), and limited availability of quality safety materials delays project progress (Mean = 3.07, StD = 1.41).

Additional items identified are fragmented and outdated regulations cause confusion and compliance challenges (Mean = 3.01, StD = 1.40), workers have low awareness and training in HSE practices (Mean = 2.98, StD = 1.39), financial constraints limit our firm's ability to implement comprehensive HSE measures and weak HSE performance threatens our long-term competitiveness and ability to secure future projects (Mean = 2.96, StD = 1.42 and 1.40, respectively), and poor integration of HSE considerations at the design stage leads to costly delays during construction (Mean = 2.91, StD = 1.43). From the table, the least identified challenge was

a short-term profit focus undermines investments in HSE initiatives (Mean = 2.67, StD = 1.43). The Grand Mean is 3.06, indicating that, on average, respondents agreed that construction firms in Port Harcourt face significant challenges in implementing effective HSE policies, which have implications for overall project performance.

4.2 Discussion of Findings

The findings reveal that respondents generally agree that spending on employee health and safety has a positive influence on project delivery performance. The grand mean of 2.97 (SD = 0.47) shows a modest but consistent level of agreement, suggesting that health and safety costs are positively associated with project outcomes. First, the highest-rated statement, "Investing in health and safety contributes to avoiding cost overruns," (Mean = 3.15, SD = 1.40), aligns with evidence in Nigerian construction research. For example, Mamman and Oke (2025) found that clearly estimating safety-related expenses early in a project helps prevent unforeseen financial losses during execution, supporting the idea that planned health and safety budgeting can reduce cost overrun risks (Mamman & Oke, 2025).Second, respondents similarly agreed that "Effective safety practices help reduce legal liabilities and penalties" (Mean = 3.13, SD = 1.45). This accords with Abdullahi and Makinde (2023), who reported that provision of personal protective equipment and safe work systems was strongly related to improved safety performance and reduced accident rates among contractors in Abuja.

Lower accident rates typically translate into fewer legal and regulatory interventions (Abdullahi &Makinde, 2023).Although agreement levels dipped on statements like "Adequate health and safety costs are a key factor in achieving successful project delivery" (Mean = 2.61, SD = 1.39), the overall pattern indicates a shared perception that health and safety expenditure supports core project goals such as cost control, legal compliance, and quality. The standard deviations suggest some spread in views, but the central tendency supports the conclusion that health and safety investment is viewed as beneficial to project performance. The results show that respondents generally agree that environmental disclosure practices are moderately adopted by construction firms.

The overall average score of 3.09 (SD = 0.37) indicates that most practices receive more agreement than disagreement, even though some differences in responses are evident. One of the strongest points of agreement was that firms include environmental disclosure as part of their competitive strategy (Mean = 3.24, SD = 1.29). This supports findings by Akinleye and Ogundipe (2024) who show that when firms integrate sustainability reporting into strategic positioning, they tend to enjoy better market recognition and investor interest (Akinleye & Ogundipe, 2024). In that study, firms

disclosing environmental protection and R&D-related costs attracted more favourable market performance, reflecting how disclosure can be a deliberate strategic tool.

Another highly rated item was awareness of policy and regulatory changes encouraging stricter environmental disclosure (Mean = 3.22, SD = 1.48). This aligns with research by Olaniyan, Temitope and Ayomikun (2023) who found that well-structured governance mechanisms like sustainability committees significantly enhance the level of environmental disclosure among Nigerian firms (Olaniyan, Temitope &Ayomikun, 2023). That study emphasised that awareness of evolving regulations often prompts internal structures to support better reporting. Firms showed moderate agreement that resistance within culture or organisation limits willingness to share environmental performance data (Mean = 3.20, SD = 1.35), and that weak enforcement reduces motivation for detailed disclosure (Mean = 3.11, SD = 1.44). Taken together with the grand mean, this suggests that while many recognise the benefits of disclosure, practical and organisational challenges still affect consistent adoption.

The findings suggest that firms acknowledge environmental disclosure as part of their competitive approach and are attuned to regulatory expectations. However, internal resistance and limited enforcement may hinder full implementation. Building stronger governance structures and cultivating positive organisational attitudes could help firms move from moderate to comprehensive disclosure. The data suggest that respondents generally agree environmental disclosure has a positive but moderate impact on timely and cost-effective project delivery, as shown by the overall mean of 2.95 (SD = 0.46).One strong point of consensus was that firms that disclose environmental practices tend to attract reputable clients and secure stable funding (Mean = 3.26, SD = 1.42). This insight aligns with a Nigerian study by Haruna Dzugwahi and Ola (2024), who found that sustainability reporting significantly increases financial performance and investor interest among listed non-financial companies (Haruna & Ola, 2024). Their evidence indicates that firms disclosing environmental practices are seen as more reliable, which in turn may facilitate access to funding and partnerships.

Another key finding was that transparent reporting motivates firms to adopt innovative and efficient construction methods (Mean = 3.10, SD = 1.36), closely followed by the notion that strong environmental disclosure enhances investor and partner confidence, improving project cash flow and delivery speed (Mean = 3.06, SD = 1.39). These observations are supported by Moruf Oladeinde Oladejo et al. (2024), who demonstrated that internal environmental accounting disclosure notably improves corporate performance among listed oil and gas companies in Nigeria (Oladejo et al., 2024). Their work suggests that greater transparency encourages firms to implement better risk management and cost-effective practices, which can accelerate project delivery.

Although some items such as improvements in community relationships and waste reduction received lower agreement (means below 2.8), the overall pattern indicates that environmental disclosure is regarded as beneficial for securing quality clients, funding, innovation, and smoother execution. Project leaders might consider strengthening internal reporting mechanisms and aligning disclosure with investment objectives to enhance the impact on project delivery. The findings indicate that firms face substantial challenges in implementing effective health, safety, and environmental (HSE) policies, with an overall mean of 3.06 (SD = 0.32).

The mean values reflect moderate to strong agreement that these challenges meaningfully affect project performance. First, the most significant issue identified was difficulty recruiting and retaining skilled HSE professionals (Mean = 3.39, SD = 1.28). This aligns with Nigerian industry research. For instance, Emma-Ochu, Okolie, and Ohaedeghasi (2021) found that inadequate training and a shortage of qualified safety personnel hinder compliance with health and safety standards on construction sites. When firms lack competent staff, policy implementation suffers, which can negatively affect project timelines, costs, and safety outcomes. Respondents strongly agreed that community demands and local politics disrupt HSE policy implementation (Mean = 3.34, SD = 1.50). This echoes Famakin, Aigbavboa, and Molusiwa (2020), who highlighted that external factor such as political influence, enforcement systems, and stakeholder attitudes are key barriers to effective HSE regulation in developing economies.

Local opposition or political interference can derail safety initiatives, causing delays and cost increases. Additionally, resistance to change within organisations (Mean = 3.26), cost-oriented management decisions (Mean = 3.23), and poor data collection and monitoring (Mean = 3.17) emerged as significant issues. These internal dynamics compound the negative effect of external pressures, making consistent HSE implementation more difficult. Similar themes were observed by Eze et al. (2023) indicating that deliberate neglect by project actors including poor governance and inadequate resource allocation hinders safety practice adoption in Nigeria.

The data suggest that both human resource constraints and political or organisational resistance significantly impede effective HSE policy implementation. To enhance project performance, firms should consider investing more in skilled HSE staff, strengthening data-driven monitoring systems, and engaging local stakeholders to reduce political disruptions. Developing a supportive internal culture and adequate resourcing for HSE could help translate policy into practice more effectively.

5. Conclusion

This study examined employee health, safety and environmental disclosures: a study of the impact on construction project performance in rivers State, Nigeria. The findings in this study entails that investing on safety and health should not be seen as a financial obligation, instead should be seen as a better strategic commitment which enhances workers welfare, mitigate accidents on-site, and as well as ensure overall effectiveness and efficiency of construction project delivery. However, environmental disclosure also performs an important function in ensuring accountability and transparency, compliance with regulation, and also helps in building pubic confidence, which aids to contribute to cost efficiency and effectiveness in the execution of construction projects and time frame. In spite of the advantages, this study outline some of the challenges that actually hinder the implementation of safety, health and as well as environmental measures such as lack of adequate training, inadequate financial resources, limited awareness with respect to some of the construction firms, and as well as weak regulatory oversight.

Theoretically, this study advances construction management literature by integrating Capital Theory, Stakeholder Theory, and Legitimacy Theory to explain how internal workforce investments and external accountability mechanisms jointly influence project performance outcomes. The findings in this study highlighted that spending on employee health and safety has a positive influence on project delivery performance, and investing in health and safety contributes to avoiding cost overruns. Practically, the findings suggest that the construction firms should institutionalize health, safety, and environmental strategies within core project planning and budgeting processes rather than treating them as peripheral compliance measures. From a policy perspective, strengthened enforcement frameworks and incentive-based regulatory mechanisms are necessary to improve industry-wide standards. However, this study contributes empirical evidence that employee health, safety and environmental disclosure practices are strategic determinants of sustainable construction performance in environmentally sensitive regions such as Rivers State.

6. Recommendations

This study provides valuable insights into the role of employee health, safety, and environmental disclosures in enhancing construction project performance; however, certain limitations should be acknowledged. The study was geographically restricted to Rivers State, which may limit the generalizability of the findings to other regions with different regulatory environments and construction practices.

In light of these limitations, several recommendations are proposed. Construction firms should, as a matter of urgency, reconceptualize employee health and safety budgetary allocations not merely

as operational costs but as strategic investments that enhance workplace productivity, reduce accident rates, and contribute to effective project cost control. Professional bodies such as the Nigerian Institute of Quantity Surveyors and the Nigerian Institute of Building are encouraged to develop standardized, sector-specific disclosure frameworks to promote consistency, transparency, and comparability in reporting practices across the construction industry. Additionally, project stakeholders should integrate health, safety, and environmental disclosure requirements into project planning and contractual agreements to strengthen accountability and ensure compliance throughout the project lifecycle. From a regulatory perspective, government agencies should intensify enforcement mechanisms, adopt digital monitoring systems for real-time compliance tracking, and provide financial or technical support to small and medium-sized contractors to facilitate the adoption of effective health, safety, and environmental practices.

For future research, studies should consider expanding the scope beyond Rivers State to include comparative analyses across multiple states or regions in Nigeria. There is also a need for mixed-methods research that combines quantitative and qualitative approaches to provide deeper insights into the behavioral and organizational factors influencing compliance and disclosure practices. Furthermore, future studies could explore the integration of emerging digital technologies such as Building Information Modeling (BIM), artificial intelligence, and blockchain in improving health, safety, and environmental performance in construction projects.

References

Abdullahi, Y. S., &Makinde, J. K. (2023). Evaluation of factors affecting contractor health and safety performance of construction projects in Abuja. *Journal of Built Environment and Geological Research*, 2(2).

Akinleye, G. T., &Ogundipe, F. B. (2024). Environmental sustainability disclosure and market performance of listed consumer goods firms in Nigeria. *Asian Journal of Economics, Business and Accounting, 24*(10), 161–177.

Adeleke, A. Q., Bahaudin, A. Y., & Kamaruddeen, A. M. (2019). Organizational internal and external factors as determinants of construction risk management practices in Nigeria. *Engineering, Construction and Architectural Management*, 26(6), 1136–1156.

Anigbogu, T. U., & Nwinya, C. (2021). *CSR practices and project performance in Nigeria's construction industry.* Journal of Business and Economic Development, 6(3)**,** 112–121.

Akinyemi, O., & Oke, A. (2022). Occupational health and safety practices and their impact on project performance in Nigerian construction industry. *Journal of Construction Engineering and Management*, 148(2), 04021197.

Adeyemi, A., & Onifade, M. (2018). Industrial and infrastructural development in the Niger Delta region of Nigeria. *Journal of Engineering and Built Environment Studies*.

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society, 33*(4–5), 303–327.

Deegan, C. (2002). Introduction: The legitimizing effect of social and environmental disclosures—A theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*(3), 282–311.

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review, 18*(1), 122–136.

Eze, T., et al. (2023). Evaluating the effectiveness of strategies for implementation of health and safety measures on construction sites in developing countries. *Journal of Safety Science*, 45, 102-110.

Emma-Ochu, C. A., Okolie, K. C., &Ohaedeghasi, C. I. (2021). Challenges to health and safety compliance for construction projects in South East Nigeria. *Journal of Engineering Research and Reports, 20*(12), 162-168.

Enshassi, A., Mohamed, S., & Abushaban, S. (2009). *Factors affecting the performance of construction projects in the Gaza Strip.* Journal: *Journal of Civil Engineering and Management*, **15**(3), 269–280.

Famakin, I., Aigbavboa, C., & Molusiwa, R. (2020). Exploring challenges to implementing health and safety regulations in a developing economy. *International Journal of Construction Management, 23*(3), 1-35.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.

Federal Ministry of Environment Nigeria. (2021). *National Environmental Regulations and Guidelines for Construction Projects*. Abuja: FME. ISBN: 978-978-54777-2-8.

Global Reporting Initiative (GRI). (2020). *GRI Standards: Consolidated Set (2020 Edition).* AmsterdamGlobalSustainabilityStandardsBoard.https://www.globalreporting.org/standards

Haruna Dzugwahi, D., & Ola, M. H. (2024). Effect of sustainability reporting on financial performance of listed non-financial companies in Nigeria. *International Journal of Research and Innovation in Social Science, 11*(1636–1654).

Hinze, J., Thurman, S., & Wehle, A. (2013). Leading indicators of construction safety performance. *Safety Science, 51*(1), 23–28.

Kelechi, G., Amadi, A. I., Chinemerem, N. P. (2025). Influence of Sustainable Construction Practices on Timely Delivery of Building Projects in Port Harcourt Metropolis, *PM World Journal*, Vol. XIV, Issue IX, September.

Love, P. E. D., Edwards, D. J., & Smith, J. (2016). Rework causation and cost in construction. *Journal of Construction Engineering and Management, 142*(6), 04016015.

Lass, R. O., & Umeokafor, N. (2024). *Training, PPE use, and safety outcomes in construction SMEs: Evidence from Sub-Saharan Africa.* International Journal of Construction Education and Research, in press. https://doi.org/10.1080/15578771.2024.1023459.

Mamman, J. E., &Oke, A. A. (2025). Modelling the cost of health and safety for building construction projects. *International Journal of Research and Scientific Innovation*, 12(1), 946–963.

Moruf Oladeinde Oladejo, O., Adebayo Jamiu, W. B., Rauf Olanrewaju Adeleke, & Kayode Wahab Oyeleye (2024). Effects of internal environmental accounting disclosure on corporate performance of listed oil and gas companies in Nigeria. *International Journal of Management Science and Business Analysis Research, 6*(7).

Nwankwo, C., & Okafor, C. (2022). Urban growth and construction activities in oil-producing states of Nigeria. *Journal of Progress in Engineering and Physical Sciences*.

Okoye, P. U., & Chukwu, J. N. (2023). Environmental performance disclosure and its implications for construction projects in Nigeria. *International Journal of Sustainable Construction*, 15(1), 55-70.

Okoye, P. U., Okunlola, A. O., & Fagbenle, O. I. (2022).Construction industry development and challenges in oil-producing regions of Nigeria. *International Journal of Progressive Research in Engineering, Management and Science*, 5(10), 1429–1437.

Ofori, G. (2021). Health, safety and environmental practices in construction: The developing country perspective. *Construction Management and Economics*, 39(5), 401–417.

Olaniyan, O. N. O., Temitope, E. A., &Ayomikun, A. E. (2023). Corporate environmental disclosure and sustainability governance practices among listed manufacturing firms in Nigeria. *Journal of Economic Research & Business Administration, 146*(4), 100–112.

Oladokun, M. G., & Oke, A. E. (2016). Assessment of environmental sustainability practices in Nigerian construction firms. *Journal of Sustainable Development*, 9(6), 207–216.

Oladinrin, T. O., Ogunsemi, D. R., & Aje, I. O. (2012). Role of construction sector in economic growth: Empirical evidence from Nigeria. *FUTA Journal of Management and Technology, 1*(1), 50–60.

Olatunji, O. A., & Aje, I. O. (2019). Accidents on construction sites in Nigeria: Causes and cost implications. *Journal of Engineering, Design and Technology*, 17(1), 50-65.

Schultz, T. W. (1961). Investment in human capital. *American Economic Review, 51*(1), 1–17.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610.

Umeokafor, N., Isaac, D., Jones, K., & Umeadi, B. (2020). Enforcement of occupational safety and health regulations in Nigeria: An exploration. *Safety Science*, 128, 104755.

Ugwu, O. O., & Haupt, T. C. (2021). *Key performance indicators and assessment methods for infrastructure sustainability — a South African construction industry perspective. Building and Environment, 46*(2), 422–431.

About the Author

Godson Kelechi, M.Sc

Rivers State University
Port Harcourt, Nigeria.

Godson Kelechi is an assistant Lecturer at Rivers State University, Port Harcourt and a probationer (member) of the Nigerian Institute of Quantity Surveyors (NIQS). He holds a Bachelor of Technology (B.Tech.) in the Department of Quantity Surveying with Second Class Upper Division at Rivers State University, Port Harcourt and Master of Science (M.Sc) in Project Management Technology from Federal University of Technology Owerri, Imo State and currently pursuing his Doctor of Philosophy Degree (Ph.D) in Construction Management at the Department of Building, Federal University of Technology Owerri, Imo State. He hails from Egwi, in Etche Local Government Area of Rivers State, Nigeria. Godson Kelechi can be contacted at godsonkelechi44@gmail.com