

Contractor Selection Management and Quality Assurance in Construction Works in Emergencies: Case Study of UNDP Stabilization Programme in North-East Nigeria

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Abstract

The existence of a large number of contractors in a limited number of projects and uncertain construction industry environment results in intense competition between them; with the selection of the contractors as a challenge most at times to clients. The study aimed at examining the contractor selection management and quality assurance in construction works in emergencies within the UNDP Stabilization Programme in North-East Nigeria. Achieved through specific objectives such as: analyzing the relationship between contractor project budget-cost compliance and the timely delivery of emergency projects for UNDP's stabilization project managers in North-East Nigeria; and examining the relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria. The study adopted quantitative research design (survey design) with the questionnaire as the instrument for primary data collection. The questionnaire was designed and validated and reliable before administering the questionnaire in the field. The data

collected through the questionnaire was analyzed using descriptive method of data analysis utilizing frequency count and simple percentage with the help of Statistical Package for Social Sciences (SPSS). The findings based on the research objectives revealed that: there is very strong relationship between contractor construction budget-cost line compliance and timely delivery of emergency construction in UNDP with 93%; there is strong relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria with 67.2%. The research recommended that emergencies construction projects in UNDP in the North-East should base operational decision on transparent and defined operational indicators that guide contractor selection and quality assurance; and, project end-user knowledge and psycho-social situations should be well understanding by all contractors (direct implementers and third parties).

Keywords:

Contractor Project Budget-Cost Compliance; Timely Delivery of Emergency Projects for Stabilization; Contractor Technical Capability for Zero Defects and Failures in Emergency Stabilization Projects; Contractor Selection Management and Quality Assurance; Contractor Selection; Quality Assurance in Construction Works; Context and Challenges UNDP Stabilisation Facility Project; Fundamental Theories.

Introduction

In many countries, there are thousands of contracting firms, which range from sole traders to large firms employing a workforce of several thousands (Roger *et al.* 1993). According to Ibrahim, Mike, Sami and Alex (2002), the existence of a large number of contractors in a limited number of projects and uncertain construction industry environment and other sister industry results in intense competition between them. The selection of construction contractors is very often conducted during tendering, as tendering gives a client a choice in awarding contract a company which proposes the lowest price and short construction cycles, but usually they do not allow to precisely evaluate a tenderer (Xiaohong, 2011). Construction projects fall into the procurement of works which is one of the main functions of the public sector (Briggs & Nsikan, 2022).

Quality is a must, not an extra benefit and quality encompasses more than just the final goods and services that a business offers; it also refers to the worker processes and job procedures that employees utilize to accomplish their duties (Tanya, Ishika & Ravinder, 2024). Quality assurance (QA) is concerned with ensuring that quality criteria are met. Quality Assurance (QA) is a management method that is defined as all those planned and systematic actions needed to provide adequate confidence that a product, service or result will satisfy

given requirements for quality and be fit for use (Storey, Jones & Russell, 2000). A Quality Assurance programme is defined as “the sum total of the activities aimed at achieving that required standard (ISO, 1994). Quality assurance covers all aspects of quality including quality control, quality audit, inspection, and calibration. It is applicable throughout all phases of a project including design, procurement, manufacturing, testing, site construction, erection, and commissioning. Reliability and other quality characteristics can only be achieved by exercising control over all phases of work. The impact of quality management on the reputation of the construction firm is very great and could affect the organization’s growth and vision (Mane & Patil, 2015).

The North-East region of Nigeria has grappled with significant challenges over the past decade, primarily stemming from the Boko Haram insurgency, and this conflict has resulted in the displacement of millions, widespread infrastructure damage, and loss of life. Collaborating with the Nigerian government, the United Nations Development Programme (UNDP) has implemented a Stabilization Programme to address these issues. The program focuses on rehabilitating infrastructure, fostering economic recovery, and delivering essential services to the affected population in the three states of Borno, Adamawa and Yobe.

A crucial facet of the Stabilization Programme is the reconstruction of key infrastructure such as schools, hospitals, security facilities, courts, and residential structures. The success of these construction projects hinges on effective contractor selection management and the implementation of quality assurance measures. This thesis aims to investigate the practices of contractor selection management and quality assurance in emergency construction projects, using the UNDP Stabilization Programme in

North-East Nigeria as a case study. Construction projects are frequently initiated by an idea or a need for change, and they are regarded transient businesses that stop when the project is completed (Naji, Gunduz & Falamarzi, 2022).

The security situation in North-East Nigeria has continued to be precarious, volatile and highly unpredictable the increased level of criminality in the area over the past few years has created untold hardship on the civilian population, exacerbated the food crisis situation, and increasing wave of Internally Displaced Persons. Some of the security challenges facing Nigeria and most importantly the Northeast are not limited to unemployment, ethnicism, poor control borders, terrorism, inefficient Government intervention, lack of faith in security agencies (as terrorists seem to be more equipped than the security agencies), corrupt government officials, poverty, imbalance in development and loss of socio cultural and communal value system (Olayinka, 2019). The visible impacts of violent conflict extend beyond the tragic loss of human lives to include the destruction of essential service infrastructures and the closing of schools. Consequently, children face significant barriers hindering their ability to attend school and participate in learning activities.

Despite notable efforts in reclaiming and stabilizing certain regions to address deteriorating socio-economic conditions, the Nigerian government has made significant progress in reclaiming and stabilizing specific regions. However, its efforts to eradicate insecurity and rebuild the lives of affected individuals have seen only partial success. As Agenda2030 emphasizes leaving no one behind, effectively attaining the Sustainable Development Goals (SDGs) in Nigeria necessitates tackling the crisis and its developmental repercussions in the north-eastern region (UNDP, 2021).

The United Nations Development Programme (UNDP) plays a significant role in post-conflict regions, engaging in stabilization projects to enhance rapid infrastructural development (UNDP, 2023). To a reasonable extent, the growth of a country is somewhat reliant on the quality of its infrastructure and construction projects (Wasiu & Modupe, 2012). In the context of emergencies, such as those experienced in North-East Nigeria due to conflicts and disasters, the effective management of construction works becomes crucial for facilitating stabilization and recovery efforts. The most important concern of the construction industry in Nigeria is the increasing cases of collapsed buildings across the country recently (Abdulkareem & Adeoti, 2010). Since building facilities contributes immensely to the economy of every nation, the concepts of quality management in construction projects cannot be completely ruled out (Farooqui, Masood & Aziz, 2008). Organizational performance is measured in terms of customer satisfaction, through reduced customer complaints (Kloot, 1999). In order to be able to perform, organizations should critically look at customers and all stake holders in business and know how best they are satisfying their needs.

Statement of the Problem

Organizations are confronted with several challenges in their core operations and this hampers their performance levels. United Nations Development Programme is a United Nations agency with a responsibility of development projects that deals with many contractors for purpose improving living standard of the people; mostly, executing their projects through contractors. Among this large number of contractors, selecting the most appropriate one is an important decision to be made by the client (Ibrahim *et al.*, 2002). Construction works must always be managed in an effective manner to ensure objective achievement.

Construction contractors have big influences upon projects and their successes; therefore, it is quite critical to select a qualified contractor in the process of construction management (Xiaohong, 2011).

Previous studies by Naren Gupta *et al.* (2013); Kabli *et al.* (2017); Khosoa and Md Yusof (2019); Sahil and Samiksha (2020) examined contractor selection and Quality Assurance. Studies by Sahil and Samiksha (2020); Khosoa and Md Yusof (2019); and Ayettey and Danso (2018) examined contractor selection management and quality assurance. There are no existing studies on contractor selection management and quality assurance in emergencies projects in United Nation Development Programmes in the North-East region of Nigeria where emergencies are endemic since 2009. There is a gap which this study set out to fill. It is on this note that, the study tends to assess the UNDP's contractors' selection management and quality assurance in construction works in emergencies in the North-East Nigeria stabilization Programme, case study of UNDP stabilization programme.

Aims and Objectives of the study

The broad aim of this study is to examine contractor selection management and quality assurance in construction works in emergencies within the UNDP Stabilization Programme in North-East Nigeria. The specific objectives are to:

- i. Analyze the relationship between contractor project budget-cost compliance and the timely delivery of emergency projects for UNDP's stabilization project managers in North-East Nigeria.
- ii. Examine the relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria.

Literature Review

Contractor Project

Budget-Cost Compliance

In construction projects, the project cost and budget are closely linked, making it easier to create a situation where the project cost exceeds the budget (Alva, Rodriguez, Esquivel, Rodriguez & Chavez, 2021; Ye, 2021; Montes, Falcón & Ramírez, 2016). If this problem occurs, it will reduce the overall construction efficiency, affect the project, and seriously affect the overall construction quality. To ensure the accuracy of the project cost budget of construction projects, it is necessary to fully grasp the actual situation and choose the appropriate project cost budget measures (Musarat, Alaloul, Liew, Maqsoom & Qureshi, 2020; Waliulu, 2020). The only way to achieve construction goals and management objectives when dealing with complex construction problems is by choosing reasonable budgetary measures (Wang, Sepasgozar, Wang, Sun & Ning, 2019; Xie, Shen, Fang & Wan, 2019; Wang, 2017). Therefore, enterprises need to pay great attention to the problem of over-budgeting engineering costs, and when preparing construction projects, cost estimators need to pay great attention to grasp the various constraints that exist fully, and they need to carry out budgetary studies in advance and choose reasonable solutions for the safety hazards that exist (Yang, Li & Yang, 2024). Capital construction projects play a significant role in infrastructure development and economic growth (Pugachev, 2023). However, the successful execution of such projects requires careful planning, budgeting, and cost control. Effective budget and cost management allow for minimizing financial risks and ensuring the quality execution of project tasks (Yang *et al.*, 2024).

Cost is the most critical parameter (Becker, Jaselskis & El-gafy, 2014; Ke, Ling & Ning, 2013; Sweis, Sweis,

Rumman, Hussein & Dahiyat, 2013) within the standard success criteria of cost, schedule, and performance targets, often called the “iron triangle” (Williams, 2016; Pfleeger & Atlee, 2006) when it comes to managing projects. However, in reality, project cost overruns and scope creep are normal phenomena in infrastructure and construction projects carried out in both developed and developing countries (Smith, 2014; Doloi, 2013). According to Kwon and Kang (2018), project budgets are funds estimated during the planning phase based on what the project is expected to cost at completion, and it is very difficult to estimate project budgets accurately before executing the projects due to lack of information and risks.

According to Investopedia.com (2020), compliance cost refers to all the expenses incurred to adhere to applicable regulations. Compliance costs include salaries of people working in compliance, time and money spent on reporting, new systems required to meet retention, and so on. Project cost overruns are significant problems in government project management as well. In government project management, projects are complex and larger. Thus, many large-scale, complex systems development projects also experience persistent cost and schedule overruns (U.S. Government Accountability Office [GAO], 2013). The rationale for budgeting is to collect and allocate limited resources among competing public needs, provision of public goods and services and redistribution of income (Kanyi & Minja, 2019; Klammer, 1973). As such, budgeting has been one of the critical tools used to spearhead the transformation and re-structuring of public sector organizations in most countries around the world (Srinivasan, 2000). Therefore, according to Alhammadi, Al-Mohammad and Rahman (2024), Suleiman (2021), Nwokenkwo (2019), Zwikaël and Smyrk (2019),

Ayodele and Alabi (2014) utilized based on experience in construction works in emergencies, project execution and delivery, contractor who comply with emergency projects budgets generally deliver such projects on time; contractors who generally complain and want budget review of emergencies projects are generally associated with delayed project delivery or even abandoned project; and, contractors associated with financial stability and project cost-budget compliance deliver their projects on time. Budgeting is a financial management system of an enterprise achieved through the development and implementation of interconnected budgets that quantitatively and/or monetarily reflect controlled aspects of activities. According to Management of the construction project budget (2023), budgeting is employed to achieve the following objectives:

- i. Enhance the efficiency of managing material and financial resources.
- ii. Optimize the process of making economically balanced business decisions.
- iii. Assess potential consequences of business decisions.

According to Pugachev (2023), cost control in capital construction projects plays a pivotal role and holds significant importance. It ensures effective management of project financial aspects and enables the achievement of several crucial objectives:

- i. Prevention of overspending and risk management: by helping to avoid overspending and undesirable financial risks, cost control aids in mitigating potential losses. Monitoring expenses allows for early detection of budget deviations and taking measures to rectify them, thus minimizing potential losses.
- ii. Budget management: in this context, systematic cost control allows for efficient project budget management. This entails allocating funds to different stages and categories of expenditures,

ensuring a balance between available resources and project requirements.

iii. Decision making: it is based on information about actual and projected costs, which subsequently provides a foundation for deciding how to allocate resources, when to adjust plans, and what changes to make to the project.

iv. Transparency and reporting: stakeholders such as investors, clients, and managers can track resource expenditures and be confident in the effective utilization of funds.

v. Process improvement: analyzing deviations and their causes helps identify

errors and deficiencies in project planning and execution. This can serve as a basis for process improvement and prevention of similar issues in the future.

vi. Achievement of planned results: cost control contributes to achieving planned project results.

vii. Efficient resource utilization: cost control allows for efficient utilization of financial resources, subsequently helping to avoid excessive spending and enhancing the project's economic efficiency.

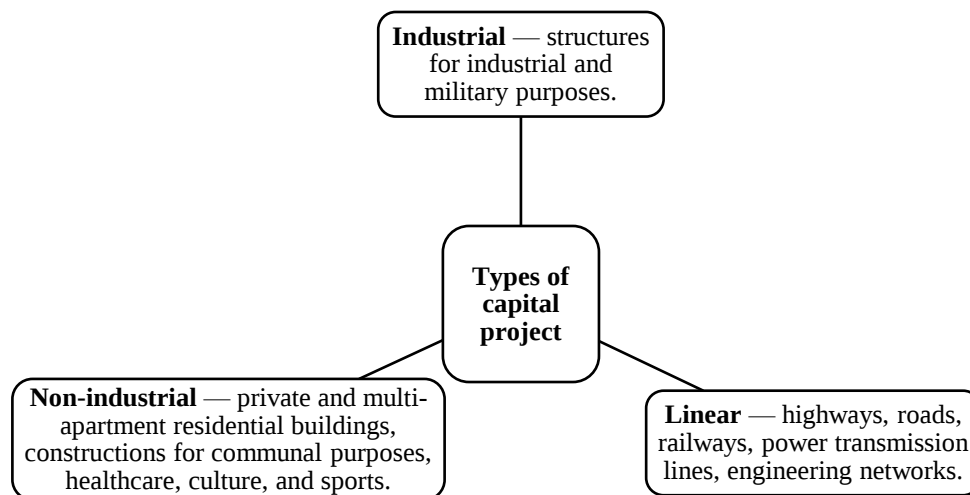


Figure 1: 3-types of capital objects

Source: Order No. 928/pr dated November 2, (2022).

The cost of construction projects mainly includes direct, indirect, profit, and tax components; and the direct cost mainly refers to the physical and auxiliary construction costs in the construction process, including equipment, labor, materials, inspection, and other costs (Yang *et al.*, 2024). Indirect costs are incurred in project management and production activities, including management fees and business activities. Cost budgeting is a crucial task in a construction project. Through the cost budgeting work, we can estimate the capital investment of the project and the cost consumption of each link in the

construction project to realize the project's scientific investment. Budget and cost management focus on the construction segment, an important cost segment in the building construction process (Caadas, 2018; Sobczyk, Janusz & Małgorzata, 2018; Huang, 2017). According to Akanmu, Anumba and Ogunseiju (2021) and, Zhao (2016), executing cost budgets for construction projects, controlling the transfer and use of funds, and securing sufficient funds for the project are essential to achieve the basic control objectives of capital operations. Also, Yang *et al.* (2024) stated that, financing and planning are crucial aspects of engineering projects that significantly impact project cost budgeting and cost management. To

develop residential construction projects, it is crucial to establish a sound cost budget management system that increases the adequacy and rationality of cost use. Cost budgets exist in all aspects of construction, and the combination of budget target breakdowns and early warning mechanisms can effectively control project costs, scientifically reduce costs and improve economic efficiency (Lin & Lu, 2020). Since the quality of work is directly related to the cost inputs and economic benefits of a construction project, it is essential to complete cost budgets with high quality to obtain results in project cost management. Elserougy, Khodeir & Fathy (2024) stated that, problems with costs overrun occur when actual expenses surpass planned expenditures and the final settlement exceeds projected amounts.

Timely Delivery of Emergency Projects for Stabilization

The industry saddled with the responsibility of construction faces numerous challenges, especially in developing countries (Ofori-Kuragu *et al.*, 2016), as projects are always delayed or abandoned while aiming for timely, cost effective and acceptable quality of project delivery (Amewu *et al.*, 2020). Prioritizing timely delivery, organizations as UNDP can make a significant difference in the lives of those affected by emergencies and disasters. One of the most vital construction project aspects is to complete a project in minimum time restricted to the time–cost trade-off as overlapping activities' planning and their impact on the project under limited resource constraints should be considered (Mohamed, Ibrahim & Soliman, 2021). Timely delivery of emergency projects is ensured by organizations such as: develop emergency response plans and by establishing comprehensive emergency response plans that outline procedures and protocols; allocate resources effectively including personnel,

equipment, and funds, to support emergency response efforts; as well as, monitoring progress through regular monitoring the progress and adjust plans as needed to ensure timely delivery. Mahamid (2011) stated that, commencement delays, poor resource management, insufficient inspectors, and communication breakdown between construction parties as some of the contributors of time delay in construction projects. Slow financial and payment procedures and decision-making process, limited authority among supervision staff, risk allocation mainly on the contractor and lack of design drawings coordination were the causes of delays of construction projects in Kuwait (Al-Tabtabai, 2012). Timely delivery of emergency projects is crucial for mitigating the impact of disasters, saving lives, and ensuring the continuity of essential services. Timely delivery of emergency projects is prioritized to:

- i. Minimize losses through quick response and delivery of emergency projects help reduce losses and damages.
- ii. Save lives by timely delivery of emergency services and projects can save lives and prevent injuries.
- iii. Restore essential services as emergency projects ensure the continuity of essential services, such as healthcare, water, and sanitation.

The benefits of timely delivery of emergency projects include:

- i. Improved response times by timely delivery enables emergency responders to respond quickly and effectively.
- ii. Reduced economic losses through quick delivery of emergency projects helps minimize economic losses and disruptions.
- iii. Enhanced community resilience by timely delivery of emergency projects helps communities recover faster and become more resilient.

Contractor Technical Capability for ZeroDefect and Failures in Emergency Stabilization Projects

Technical capability refers to an organization's ability to perform specific technical functions or tasks, typically related to IT infrastructure, systems, software, and other technology-based functions; this capability often includes technical skills, tools, frameworks, and expertise within a company's IT and engineering departments, enabling the development, deployment, maintenance, and scaling of technology solutions (Bizzdesign, 2025). Technical competence of contractors is the ability to use relevant skills and expertise in technical expertise and equipment competence to construct residential buildings to ensure project delivery according to specifications with the desired quality within the scheduled time

and costs (Aje & Famakin, 2012). The performance of local builders is the primary means of success in any building construction project, as the builders make the design a reality. Better and improved performance of local builders leads to increased customer satisfaction, better reputation of builders and thus competitiveness in the market (Sigdel, 2023). The construction sector is people-oriented and encompasses both skilled and unskilled labour. The availability of necessary construction skills affects the quality, cost, time, and safety as well as the stakeholders' satisfaction. Due to the low technical skills, it may lead to an increase in cost, project delay, quality reduction, an increase in the number of accidents on site, rework and low productivity of the workforce. The availability of necessary construction skills affects the project's success (Oke *et al.*, 2018).

Table 1: Technical Capabilities vs Business Capabilities

	Technical Capability	Business Capability
Purpose	Supports technology-driven goals and functions within the organization.	Enables core business functions to achieve strategic goals.
Scope	Focuses on specific technical skills, systems, and infrastructures.	Encompasses broad business activities that contribute to competitive advantage.
Role in Organization	Often centered in IT, engineering, and tech-focused departments.	Spans across departments such as operations, finance, marketing, and human resources.
Impact on Strategy	Enhances operational efficiency, innovation, and technical resilience.	Aligns business processes with long-term strategic objectives and customer needs.
Dependency	Serves as a foundation that enables or enhances business capabilities (e.g., IT supporting CRM).	Defines requirements for technical capabilities to support specific business outcomes.
Examples	Coding skills, network security, data analytics, and cloud infrastructure.	Product development, customer service, supply chain management, and financial planning.

Source: Bizzdesign (2025).

Firms and countries have higher performance because they have greater

technological resources (Wang & Li-Ying, 2015; Ndofo *et al.*, 2011) and also a higher level of technological capability

(Bag *et al.*, 2020; Tang *et al.*, 2020). Technical capability is what ensures construction project is delivered to serve many benefits, this capability encompasses many components. As in other industries, technology is used in the construction industry to transform material inputs into desired outputs (Egmond & Smook, 2001). Sazali, Raduan and Suzana (2012) stated that, technology is a complex concept with various meanings in a variety of contexts. In principle, technology consists of four closely related components: knowledge, engineering, products and, organisations. According to Biemo, Bayu, Krishna and Sonny (2021), the steadily increasing size of the industry, coupled with the government's desire to accelerate the development of the nation's infrastructure, means that the construction industry is facing some challenges to include increasing demand for improved delivery and quality of construction products and, open market conditions have forced contractors to be better prepared and more competitive against foreign contractors to secure construction contracts in their own country. Such dynamic conditions have forced contractors to find ways to enhance their capacity, which includes improving their technological capability. Technological capability significantly affects the performance of a company (Egmond & Smook, 2001). However, it should be noted that the absorption and adoption of technology cannot be achieved by simply acquiring and employing the technology but also requires effort to develop the capability to master the technology; the latter is a process of gathering or accumulating technological capabilities and should be considered a key investment. Technological learning strategies play a decisive role in effectively guiding and monitoring firm-level technological capability (Sobanke *et al.*, 2014).

Sekarsari (2005) stated that, for contractors, developing a learning mechanism system is generally seen as a technical process. The relationship between learning technology, technological capabilities, and company performance was outlined by Liu, Qian and Chen (2006), and Marcelle (2004) concluded that improving the effectiveness of capacity building and technological learning requires the simultaneous, proportionate and systemic management of five key elements: financing, management and coordination, culture and leadership, managing relationships with suppliers and, innovation systems. Performance enhances technical capability, and Appelbaum *et al.* (2015) stated that performance is a successful achievement of an assigned undertakings measured against pre-set known of recognised excellent accuracy, accomplishment, cost and within the time. Also, Ahmed *et al.* (2009), project performance is defined as a degree of achievement of certain endeavour or undertaking which relates to the prescribed goals or objectives that form project features. According to Babatunde *et al.*, (2010), every client aims to make sure that the project completed within the stipulated time, with high quality and within an agreed budget. According to Mishlanova (2019), investment and construction projects undeniably comply with the requirements of the project financing model in terms of long-term, capital intensity, risk sharing, special use of funds, which involves specific signs of the implementation of the investment and construction project:

- i. Technical and technological, economic, legal insulation of the investment and construction project,
- ii. Attribution of responsibility for a specific risk to a specific project participant with the condition of ensuring competence and effectiveness of activities,

- iii. Targeted provision of project profitability,
- iv. Priority of project cash flow over assets, etc.

Construction defects present one of the most pervasive challenges facing the building industry, with far-reaching consequences that extend beyond immediate financial costs (Samuel, 2025). Defects in construction projects can significantly affect overall project budgets, delay completion schedules, compromise occupant safety, and diminish client satisfaction and trust. The sources of these defects are multifaceted but typically arise from three primary factors: flaws in design, use of substandard or inappropriate materials, and deficiencies in workmanship. Addressing these root causes requires a systematic and multidisciplinary approach that integrates expertise from architecture, engineering, materials science, and construction management. Historically, many construction projects have taken a reactive stance toward defects—identifying and rectifying problems after they have occurred. This reactive approach often leads to costly rework, project delays, disruption of operations, and potential legal disputes, placing significant strain on all parties involved. In contrast, modern construction management philosophies advocate for proactive defect prevention strategies that embed quality assurance principles throughout the project lifecycle (Kissabekov, 2023). By anticipating and mitigating risks at the earliest stages—during design, procurement, and construction—projects can avoid many of the issues that traditionally result in defects.

Preventing defects early in the construction lifecycle not only minimizes the need for expensive repairs and litigation but also promotes the longevity and safety of the built environment (Kissabekov, 2024). Moreover, it reinforces the reputation of architects,

engineers, contractors, and suppliers as professionals committed to excellence and accountability. As buildings become increasingly complex, with tighter regulations and higher client expectations, the importance of defect prevention grows ever more critical. Biemo, Bayu, Krishna and Sonny (2021) stated that, a solid understanding of technology can help contractors effectively use appropriate technology to increase their competitiveness in dealing with business dynamics. For contractors, the technological capability building process reflects the dynamic relationships within the construction business environment and the contractor's corporate strategy, technological capabilities and performance. The business environment is an external condition to which a contractor must respond appropriately to gain competitive advantage, which refers to market demands, competition, business and economic conditions, regulatory conditions and the environmental and social provisions that govern the industry. Quality refers not just to product quality but also to process and design quality (Psarommatis *et al.*, 2022b; Psarommatis, 2021; Psarommatis *et al.*, 2020a). According to Jun *et al.* (2020), operating with low quality has a variety of negative consequences, ranging from direct financial losses to indirect consequences such as a bad influence on the company's reputation.

Building construction is an important component in city development which requires a focus on quality and safety (Akhmad, Benny & Afdaluz, 2023). That UNDP embarked on a stabilization programme to stabilized the North-East region of Nigeria. However, sometimes the building construction process is not free from potential defects and failures that can affect the quality and reliability of the building structure (Akhmad *et al.*, 2023). As according to Chong, Low and Perform (2005), defects can come from

various aspects including: design, construction process, materials and maintenance. Zero-Defect Work is the most recent technique for quality assurance (Psarommatis *et al.*, 2022b; Psarommatis, 2021; Psarommatis *et al.*, 2020a). Zero defect work was first mentioned in 2013 (Di Foggia & D'Addona, 2013; Ferretti *et al.*, 2013; Myklebust, 2013) and focusing on specific applications. Quality control and assurance are critical components of all production systems, whether continuous or discrete that is why contractors' capability to tolerate zero defects is very vital for the integrity of the firms and to achieve the project's aim (Sousa, Nazarenko, Grunewald, Psarommatis, Fraile, Meyer & Sarraipa, 2022). Together with product quality assurance, process quality assurance is one of the cornerstones of zero defects manufacturing in the zero defects with the approach based on preventive and corrective strategies to avoid quality losses, by extracting meaningful insights from sensor data, as well as other data sources (Anaya, Kirchberger, Pardo, Salgado & Fraile, 2020). However, project success depends upon the construction performance but due to defects quality may be reduced as defective construction not only increases the cost but also increase the maintenance cost. Building defect is more comprehensive than mere manufacturing defects (Siddiqui & Biswas, 2019). Siddiqui and Biswas (2019) opine that, contractors with proven technical expertise of construction works in emergency projects rarely associated with defective emergency project deliveries. Psarommatis *et al.* (2022b; 2020a) also asserts that, projects managers generally emphasize technical competencies of specific emergency project so as to assure zero defective project execution. Jun *et al.* (2020) stated that, contractor previous experience and quality projects executed are used by UNDP emergency project

managers as assurance of zero defective or project failure.

Contractor Selection Management and Quality Assurance

The construction industry is a critical sector that plays a crucial role in the development and re-construction of regions affected by emergencies. Contractor selection management and quality assurance are essential components to ensure successful project implementation and sustainable outcomes in such challenging contexts. Effective contractor selection management involves identifying, evaluating, and choosing competent contractors with relevant experience, skills, and resources. Quality assurance, on the other hand, is a systematic process to maintain the required standards and achieve the desired project deliverables. Emergency construction management involves planning, organizing, and coordinating construction activities in response to crises. It includes the rapid identification of critical infrastructure needs, efficient procurement of contractors, and the establishment of effective project execution mechanisms to address emergency situations effectively. Stabilization projects aim to rebuild and restore essential infrastructure in conflict-affected areas, promoting stability and facilitating the return of displaced populations. UNDP's involvement in stabilization projects in North-East Nigeria highlights the importance of effective contractor selection and quality assurance for successful project outcomes. The contractor selection is a critical activity that determines the success and failure of the project. Contractor's selection is considered the most challenging decision for a client (Kog & Yaman, 2014). The selection of a contractor involves a multi-attribute decision process that requires individuals to leverage competing objectives and limited resources when making their

decisions (Watt *et al.*, 2010). Doloi *et al.* (2011) confirms that multi-criteria choice is in favor of clients. Aje *et al.* (2009) clarify that choosing an experienced contractor is paramount to successful project delivery. Liu *et al.* (2015) investigate that the project success in addition to other factors largely depends on the degree to which the contractor characteristics match the project delivery system. Khoso and Md Yusof (2019) identified the following contractor selection factors for a project to be successful; i.e., adequacy of equipment available to contractor, general experience of firm, specific experience with respect to type and size of the project, prior working relationship of contractor with the owner and consultant, change orders in past contracts, disputes and claims in past projects, and past record of time and budget. Alzahrani and Emsley (2013) investigate the impact of contractor's attributes on project success from an immediate post construction perspective and links those attributes to project success objectives.

Pre-requisites for Effective Contractor Evaluation and Selection Process

According to the Public Procurement Regulation (2013), Public Entities (PEs) must take into consideration the following factors for an effective contractor evaluation and selection process:

- i. **Identification of potential contractors:** In the contemporary competitive global economy, mere reliance on existing contractor relationships is insufficient for organizational survival; rather, proactive identification of potential contractors is very important because it is also linked to several interconnected factors. Firstly, engaging with new contractors facilitates access to advanced technologies, thereby enhancing organizational capabilities and competitiveness (Doherty & McAuley, 2020). Secondly, engagement with new contractors often presents opportunities

for cost reduction, particularly through the utilization of inexpensive labor resources (Sarasvathy & Venkataraman, 2020). Thirdly, the entry of new contractors into the competitive landscape can stimulate market dynamics, fostering innovation and intensifying competition (Majid, Li, & Nordin, 2021). Lastly, diversifying the contractor base mitigates the risk of work disruptions by reducing dependency on a limited pool of suppliers (Wang & Sarkis, 2021). Therefore, proactive identification and integration of potential contractors serves as a vital strategy crucial for organizational resilience and success in the contemporary global market.

- ii. **Information requests to contractors:** in the context of contractor engagement, after the identification of potential contractors, the buyer initiates formal communication to solicit pertinent information regarding the contractors' competencies in executing designated tasks. Such solicitations, contingent upon specific requirements, are commonly referred to as Requests for Information (RFIs). RFIs serve a multifaceted purpose, addressing diverse needs within the procurement process. Primarily, an RFI serves as a conduit for the buyer to discern differentiating attributes between the offerings of the supplier and those of competing firms within the marketplace. This clarification is vital for the buyer to cultivate a clear understanding of prevailing market dynamics, thereby enhancing strategic decision-making and market positioning (Jones, 2019). Subsequently, a Request for Proposal (RFP) is dispatched by the buyer when there exists a defined set of performance criteria or requirements that necessitate fulfillment. The RFP serves as a comprehensive document delineating the buyer's expectations, objectives, and desired outcomes. Through the RFP, the buyer seeks to solicit detailed proposals from potential contractors, thereby facilitating informed decision-making and

ensuring alignment with organizational objectives (Smith *et al.*, 2020). In conclusion, a Request for Quotation (RFQ) is issued when the buyer has precise specifications of the goods or services required. RFQs serve to solicit competitive pricing bids from potential contractors based on the specified requirements. By leveraging RFQs, buyers can streamline the procurement process, optimize cost efficiencies, and expedite vendor selection (Kumar & Ailawadi, 2018). The deployment of RFIs, RFPs, and RFQs represents a strategic approach employed by buyers to elicit essential information, articulate requirements, and facilitate informed decision-making within the procurement process. These documents serve as instrumental tools in fostering transparency, efficiency, and alignment with organizational objectives.

- iii. **Contract Terms:** The contract outlines various provisions including nonpayment terms specifying the obligations of each party, the execution details such as delivery quantity, location, service level, technical specifications, and the contract duration. Additionally, it delineates payment terms detailing what and how the contractor will be compensated (Smith, 2020; Jones *et al.*, 2018).
- iv. **Negotiation Process:** During negotiation, both the buyer and contractor strive to secure favourable terms from each other to the extent that both parties are content and mutually benefit from the agreement (Fisher *et al.*, 2017; Lewicki *et al.*, 2015).
- v. **Contractor Evaluation and Contract Award:** The buyer evaluates contractors based on specific criteria such as price, quality, or a combination of both, ranking them from the most suitable to the least suitable. This process helps determine which contractor will be awarded the contract. In cases where contractors are equally qualified, the buyer may opt for a sole award to one contractor. Conversely, if one contractor significantly outperforms others but when there is need

to expedite project completion, the buyer may choose to grant multiple awards (Davidson, 2019; Benton & Maloni, 2005).

Factors Influencing Contractors' Selection and Decision-Making Approach (Criterion)

The process of selecting the best contractor is pivotal in construction projects due to its direct influence on project outcomes. Various factors need consideration to ensure appropriate contractor selection, as failure in this regard can lead to work quality deficiencies and project delays. The core objectives of the contractor selection process include risk minimization, quality enhancement, and fostering robust relationships between the contractor and the buyer. While cost is often perceived as the primary criterion by some buyers or organizations, researchers advocate for a multi-criteria approach, highlighting the importance of considering several crucial factors. Marzouk (2013) delineated essential criteria for selecting the optimal contractor, encompassing aspects such as a proven work history demonstrating specialization and skill quality, the contractor's extent of quality control measures, adherence to safety protocols, responsiveness to warranty issues, flexibility, and teamwork in resolving delays, and the ability to meet project schedules. Deliberation on such criteria facilitates the selection of the most suitable contractor, yielding numerous benefits for all parties involved, including the achievement of high-quality work, mitigation of work completion delays, adherence to project timelines, and compliance with estimated costs.

Hartmann (2019) identified four primary criteria for contractor selection: price, technical expertise, quality, and cooperation. While price remains pivotal due to contractors' objectives of profit maximization and cost reduction, it should not be the sole determinant.

Technical proficiency is equally critical, with contractors needing to demonstrate professionalism, experience, and competence in addressing specific technical challenges. Doloï (2009) expanded on this notion by introducing 43 sub-criteria to assess the optimal contractor, emphasizing that selecting the lowest-priced tender alone is inadequate

and does not guarantee the contractor's reliability (Marzouk, 2013). According to Marzouk (2013), the following table outlines the most important criteria in decision making and factors that influence the contractor selection process. *Table 2: Factors Influencing Contractors' Selection and Decision-making Approach*

Criterion	Factor	Definition
Cost	Cost Overruns	The project cost exceeding the anticipated value during construction.
	Flexibility in Payment Terms and Conditions	Contractor's willingness to adjust payment terms to reduce costs.
	Tender Price	The price offered by the contractor, often the lowest to secure the tender.
	Failure to Complete Contract	Number of unfinished works by the contractor.
	Financial Stability	Contractor's financial health and stability.
Quality	Quality	Contractor's standard of work quality, assessed through past projects.
	Staff's Behavior and Experience	Competency of laborers and experience of technical personnel.
	Prevention of Vandalism	Measures taken to prevent vandalism at the worksite.
Safety	Examination of Unlawful Dumping	Contractor's compliance with waste disposal and pollution regulations.
	Safety Awareness on the Job Site	Adherence to safety protocols and measures on the worksite.
	Insurance, Repair, and Warranty	Maintenance programs for onsite equipment, responsiveness to warranty issues, and insurance coverage.
Disputes	Contractor Incompetency to Deliver Materials on Time	Timely delivery of materials to prevent work disruptions.
	Disputes and Arbitration	History of disputes and arbitration in previous projects.
	Failure to Conform with Quality Specifications	Adherence to quality standards specified for the project.
	Lack of Readily Accessible Utilities on Site	Provision of utilities such as bathrooms and offices for project personnel.
Time	Delay	Contractor's track record of completing projects on time.
	Experience of the Company	Reputation, familiarity with the project area, and knowledge of construction regulations.
Tender	Tender Quality	The quality of the tender submission provided by the contractor.
	Willingness to Tender	Contractor's eagerness and effort in securing the tender.

It can be deduced from the table that, adopting a comprehensive approach to contractor selection, involves multiple criteria that goes beyond cost alone, which is imperative for ensuring project success and mitigating risks. By evaluating factors such as technical expertise, quality, and cooperation alongside price, stakeholders can make informed decisions conducive to favourable project outcomes.

Types of Contracts and their Conditions

In the construction industry, there are various contract types based on their classification (Suprpto *et al.*, 2016). Three primary contracts are identified: lump-sum contracts, target-cost contracts, and cost-reimbursable or cost-plus contracts, and they are classified according to the allocation of risk, with lump-sum contracts posing the most risk for the Contractor and cost-plus contracts transferring the majority risk to the

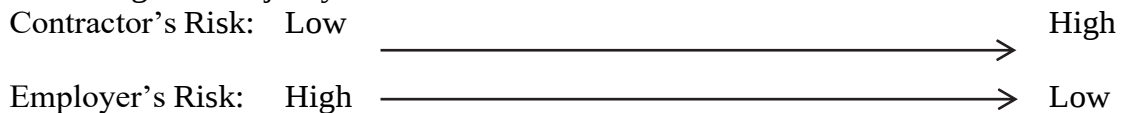


Table 2 provides a comparison of the characteristics of fixed-price and cost-plus contracts in construction:

Cost-Plus-Percentage of Cost (CPPC)	Cost-Plus-Fixed-Fee (CPFF)	Cost-Plus-Incentive Fee (CPIF)	Fixed-Price Incentive (FPI)	Firm-FixedPrice (FFP)
Cost-plus		Target-cost		Lump-sum

Source: Al-Harbi (1998).

The characteristics of the two extreme contracts (fixed-price and cost-plus contracts) in the menu are summarized in Table 4. The target-

Employer. The authors elaborate on each type in subsequent subchapters to provide a more comprehensive understanding. Additionally, Suprpto *et al.* identify several types of incentives prevalent in contracts, including cost incentives (common in target-cost contracts), schedule incentives (found in all contract types), performance incentives (implemented through quality control measures), and safety incentives. They also highlight variations of the cost-plus contract, such as cost-plus percentage of cost and cost-plus fixed fee. Target-cost contracts are alternatively referred to as cost-plus incentive fee contracts, while lump-sum contracts are also recognized as firm-fixed price contracts. The authors suggest that fixed-price incentive contracts lie somewhere between these two extremes, offering a nuanced perspective on contract types and their conditions.

Table 3: Existing types of contracts according to their risk-allocation, own elaboration

costcontract has mixed characteristics between those two contracts.

Table 4: Comparison of Fixed-price and cost-plus contracts in construction

	Fixed-price contract	Cost-plus contract
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Risk allocation mainly on	Contractor	Buyer
Incentives for quality	Less	More
Buyer administration	Less	More
Good to minimize	Costs	Schedule
Documentation efforts	More	Less
Flexibility for change	Less	More
Adversarial relationship	More	Less

i. Lump-sum contracts

In a lump-sum contract, the Contractor is obligated to deliver specified services or products for a predetermined fixed price, thereby assuming the bulk of the associated risks (Rodríguez, 2016). This risk allocation often prompts Contractors to include a higher contingency mark-up in their bids to mitigate potential losses (Fuller, 1920). Alternatively, unit-price or unit-rate contracts, wherein the Contractor receives a fixed payment for each unit of work completed, offer greater flexibility in accommodating variations in work quantities (WebFinance Inc., 2017a). Consequently, the Contractor's actual profit hinges on both their bid price (PT) and their ability to manage costs efficiently. Given the Contractor's profit-maximizing motive, there exists a strong incentive to minimize costs, as profit is directly linked to cost reduction. However, this economic focus may overshadow non-financial project requirements such as quality and safety (Berends, 2000), potentially leading Contractors to compromise on these aspects to lower expenses. Furthermore, Contractors are implicitly incentivized to expedite project timelines, as shorter durations typically translate to reduced costs (Berends, 2000).

ii. Target-Cost Contracts

Target-cost contracts represent a contractual arrangement where the Employer reimburses the Contractor for actual allowed costs, while also sharing a

portion of the cost savings or overruns in relation to a pre-established target cost. This arrangement, aimed at fostering a cooperative relationship between the parties, entails a sharing ratio dictating the extent to which deviations from the target cost impact the Contractor financially (Institution of Civil Engineers, 2013). Alongside allowed costs, disallowed costs, such as overhead expenses or defect correction costs, are borne solely by the Contractor (Institution of Civil Engineers, 2013). In addition to cost reimbursement and the sharing fraction, the Contractor receives a fee, typically inclusive of overhead and profit, for their services (Institution of Civil Engineers, 2013). Moreover, target-cost contracts often feature payment ceilings and floors to regulate compensation to the Contractor. The prevalence of target-cost contracts is on the rise due to their numerous advantages over other contract types (Broome & Perry, 2002). These contracts are increasingly favored for fostering collaborative relationships, with standard contract templates provided by entities like the New Engineering Contract facilitating their adoption (Perry & Barnes, 2000). Furthermore, target-cost contracts are lauded for enhancing trust and transparency between parties (Badenfelt, 2008). By apportioning cost risk to the Employer, who is typically better equipped to handle such risks, while incentivizing cost reduction efforts by the Contractor, these contracts align incentives with project objectives (Berends, 2000).

While target-cost contracts are believed to incentivize efficiency and cost savings

(Chan *et al.*, 2010), they can also lead to disputes in high-risk projects if the risk-sharing mechanism is inadequate (Hosseinian & Carmichael, 2014). Research suggests that the sharing ratio and fixed fee must be calibrated to account for the Contractor's risk aversion and uncertainty levels to ensure equitable risk distribution (Hosseinian & Carmichael, 2014). Nevertheless, the complexity of defining contract scope and accommodating scope changes during project execution remains a major challenge associated with target-cost contracts (Chan *et al.*, 2010). Scholars have extensively studied the allocation of risk and the sharing of cost overruns or savings in target-cost contracts (Al-Harbi, 1998). Determining the optimal risk-sharing fraction is crucial to incentivize Contractor efficiency while mitigating excessive risk-taking (Fuller, 1920). Perry & Barnes (2000) argue that the Contractor's sharing ratio should not fall below 50% to maintain a sufficiently strong incentive. Empirical studies suggest that sharing ratios typically range between 0.3–0.7 (Badenfelt, 2008), underscoring the need for careful consideration of risk allocation in target-cost contracts.

iii. Cost-Plus Contracts

Cost-plus contracts, as defined by the Center for Strategic and International Studies (n.d.), involve reimbursing the contractor for all allowable costs. Typically, these contracts include a fixed fee or a percentage of direct costs to cover overhead and contractor profit. The fee structure may or may not be tied to actual costs, leading to potential conflicts between the contractor and client, as noted by Fuller (1920). The advantages of cost-plus contracts, outlined by Fuller (1920), include the ability to commence work before finalizing designs, flexibility for the owner to adjust quantities and construction types, and reduced emphasis on precise cost estimates due to payments

being based on actual costs. These contracts also mitigate the need for highly specified lump-sum contracts, promote cooperation between the parties, and streamline the contractual process. However, Fuller (1920) also highlights several disadvantages, such as undefined costs for the employer upfront, reduced competition leading to potential inefficiencies, and the risk of favouritism during tendering. Additionally, there's a concern that contractors may prioritize resources for lump-sum projects over cost-plus contracts, potentially impacting quality. Moreover, open book accounting in cost-plus contracts necessitates significant clerical work for both parties, and contractors may be less diligent if they perceive no consequences for delays or increased costs. To address some of these drawbacks, Fuller (1920) suggests implementing fixed fees or capping fees based on costs. Target-cost contracts are also proposed to mitigate the incentive to inflate costs inherent in traditional cost-plus arrangements.

Contractor Selection

The process of selecting a contractor for a construction project is intricate and multifaceted, largely contingent upon the appropriateness of the tender requirements (Bochenek, 2014). Scholarly investigations into contractor selection date back to the early 1960s, with various selection criteria being proposed over time, ranging from linear to nonlinear programming methods (Khan & Al-Hosany, 2016). The proliferation of criteria underscores the significant contribution of the construction industry to the economic advancement of nations. Choosing the most qualified contractor is a critical decision for both clients and project managers (Pinamang *et al.*, 2018). Given that selecting an unsuitable contractor can result in cost overruns, delays, and substandard work, clients face considerable challenges in making this decision (Kog & Yaman, 2014). Ensuring

that the selected contractor can effectively execute the project and adhere to contractual specifications is imperative to meet the client's needs. In emergency contexts, such as post-conflict scenarios, efficient contractor selection becomes paramount. Scholars like Smith *et al.* (2017) stress the importance of rapid mobilization and expertise in similar environments when selecting contractors for emergency construction projects. Key considerations include:

- i. **Contractor prequalification:** This is the initial stage in the selection process which involves the evaluation of potential contractors' capabilities and credentials against established criteria. This process aids in shortlisting qualified contractors, ensuring that only those with requisite qualifications and experience are invited to bid. Multi-Criteria Decision-Making (MCDM) Models, such as Analytic Hierarchy Process (AHP) and Technique for Order Preference by Similarity to Ideal Solution (TOPSIS), enhance the objectivity and transparency of contractor selection (Chen *et al.*, 2019; Nguyen *et al.*, 2020).
- ii. **Risk Management:** The dynamic nature of emergency scenarios necessitates robust risk management practices during contractor selection. Kaming *et al.* (2018) advocate for integrating risk assessment frameworks that consider factors such as contractors' financial stability, past performance, and adaptability to adverse conditions. Effective risk management mitigates potential challenges like contractor defaults, substandard work, and financial instability. Fundamentally, effective contractor selection is very key to ensuring successful project outcomes, particularly in emergency contexts where rapid mobilization and risk mitigation are non negotiable. By employing rigorous prequalification processes and integrating comprehensive risk management strategies, stakeholders can enhance the likelihood of engaging capable contractors and achieving project objectives.

Quality Assurance in Construction Works

Quality assurance (QA) in the construction industry has become increasingly relevant, with a lot of time allocated to the preparation and scrutiny of contractual claims. Notably, clients have become more perceptive in their application of standard building contract requirements (Al-Tmeemy *et al.*, 2019). These contracts distinctly assign the burden of proof to the contractor, necessitating the provision of evidential support, often in the form of documentation. However, the task is frequently complicated by the absence of relevant records, exacerbating economic losses alongside goodwill. A retrospective examination of project records often reveals overlooked inquiries and delayed problem identification, attributed not to a lack of expertise or initiative among involved parties, but rather to time constraints imposed by competing priorities. Moreover, the limitation of individual experience can obscure a comprehensive understanding of looming challenges, leading to crises precipitated by poor quality that undermine the apparent progress of contracts, resulting in delays and escalated costs, thus nullifying anticipated benefits.

The implementation of a comprehensive quality management system (QMS) is imperative to ensure adherence to international standards in construction project delivery, particularly in emergency contexts (Al-Tmeemy *et al.*, 2019). ISO 9001 certification is underscored as a pivotal benchmark for quality assurance and continual improvement initiatives. Effective monitoring and evaluation (M&E) mechanisms are paramount for identifying potential issues and ensuring compliance with project specifications (Chan *et al.*, 2021). Chan *et al.* (2021) advocate for real-time monitoring through the integration of technology, facilitating enhanced efficiency and informed decision-making throughout construction processes. In emergency scenarios,

capacity building initiatives targeting local contractors and project stakeholders are indispensable for ensuring long-term sustainability (Zou *et al.*, 2018). Knowledge transfer and skill

development programs are emphasized to bolster the proficiency of local construction entities.

Quality control (QC) in construction, as posited by Ayettey and Danso (2018), revolves around ensuring that the work meets specified criteria and limits set forth by the construction agency. This involves meticulous

inspection from material sourcing to final production, encompassing verification of soil characteristics, adherence to drawings and designs, structural integrity, durability, material quality assessment, compliance with specifications, material testing, and equipment inspection. Enhancing work quality entails incorporating materials and fittings conforming to contractual standards and UNDP regulations and procedures.

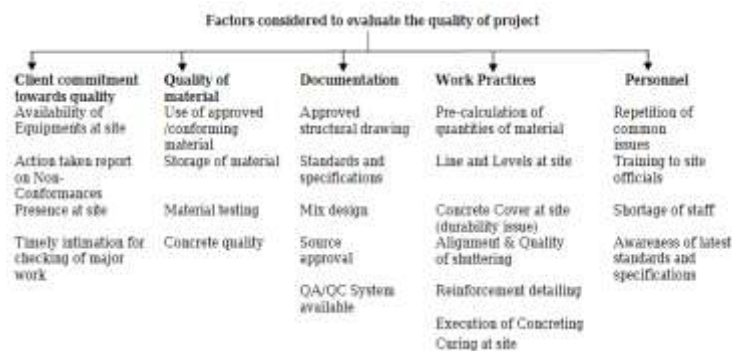


Figure 2: Factors Considered to Evaluate the Quality of Project

Source: Ayettey and Danso (2018)

In the construction industry, quality assurance managers encounter numerous challenges that pose risks to their capacity to achieve timely and budget-conscious delivery of high-quality projects. Principal among these challenges is the absence of well-defined criteria that distinguish between acceptable and substandard workmanship, inadequate internal oversight mechanisms for monitoring and evaluating contractor performance throughout the phases of construction and project delivery, and inadequate communication channels among project stakeholders concerning contract amendments and extensions. These challenges collectively contribute to heightened financial pressures affecting all parties involved (Smith, 2018; Jones & Brown, 2020; Miller *et al.*, 2021). The absence of clear definitions increases these challenges where construction quality assurance managers

face difficulties in ensuring that project workers adhere to owner-set standards due to ambiguous delineations of good and bad workmanship. This lack of clarity leads to confusion among workers and pressures them to perform without clear guidance or expectations. Establishing explicit policies for contractor task performance and employing software tools to define quality standards can mitigate this issue. Additionally, regular team meetings facilitate alignment on project goals and expectations (Elsayah, 2016).

Poor communication among project stakeholders regarding contract amendments and extensions further complicates project management (Taylan *et al.*, 2017). While digital collaboration tools, such as construction management software, offer an effective solution by streamlining communication processes, enabling faster information exchange, and reducing inefficiencies.

Another significant challenge is the inconsistent or lack of quality control

monitoring throughout construction phases (David & Han, 2014). Monitoring contractor and employee performance across multiple locations and tasks poses logistical difficulties. Digital platforms provide an effective means of enhancing monitoring capabilities, allowing project managers to oversee projects more efficiently and ensure adherence to quality standards.

Addressing these challenges requires a multifaceted approach involving clear policy definition, effective communication strategies, and the adoption of digital tools for improved oversight and project management.

Context and Challenges UNDP Stabilisation Facility Project

The case study of the UNDP Stabilization Programme in North-East Nigeria underscores the urgency of infrastructure rehabilitation and development in a post-conflict environment. The region's specific challenges, including security risks and limited resources, necessitate a tailored approach to contractor selection and quality assurance. To ensure the success of construction works in North-East Nigeria, UNDP can benefit from best practices in contractor selection management, through the implementation of MCDM models that consider local contractors' capabilities, previous experience in conflict-affected regions, and financial stability.

i.UNDP Contract Selection Process

The process of contractor selection within the United Nations Development Programme (UNDP) is a critical aspect of project implementation, ensuring the engagement of qualified entities for efficient and effective project execution (UNDP, 2016). The UNDP's procurement guidelines outline a comprehensive framework for the selection of contractors, emphasizing transparency, fairness, and value for money (UNDP, 2018). This process typically involves the

publication of procurement notices, prequalification of potential bidders, evaluation of proposals based on predetermined criteria, and contract award to the successful bidder (UNDP, 2020). Central to the UNDP's contractor selection process is the principle of competitive bidding, wherein multiple qualified firms are invited to submit proposals for project implementation (UNDP, 2016). This approach aims to foster competition, enhance accountability, and maximize the utilization of available resources (UNDP, 2018). Furthermore, the UNDP prioritizes the inclusion of sustainable development considerations in the selection criteria, promoting environmentally friendly and socially responsible practices among contractors (UNDP, 2020).

The UNDP's contractor selection process is guided by international best practices and principles of integrity, professionalism, and accountability (UNDP, 2016). Stringent evaluation criteria are applied to assess the technical, financial, and organizational capacities of prospective contractors, ensuring their ability to meet project requirements and deliver quality results (UNDP, 2018). Moreover, the UNDP maintains robust mechanisms for monitoring and oversight throughout the procurement process, safeguarding against fraud, corruption, and conflicts of interest (UNDP, 2020). UNDP's contractor selection process is characterized by transparency, competitiveness, and adherence to sustainable development principles. By upholding high standards of procurement integrity and accountability, UNDP strives to achieve value for money and maximize the impact of its development projects.

Pre-requisites for Contracting

The following are pre-requisites for issuing an individual contract:

- **Budgetary Provisions:** Managers of requesting units must ensure that funds

for the services or activities are approved and available in the appropriate budget(s)/account(s) before beginning the engagement process.

- **Terms of reference:** Managers of requesting units are responsible for preparing the terms of reference for the assignment. These are the basis for the sourcing, evaluation, and selection of individual contractors. They clearly specify deliverables and/or activities and the degree of expertise required, as well as the name and title of the immediate supervisor. When drafting the terms of reference, the requesting unit should consider whether the assignment requires intellectual or support services, as well as whether a daily fee or a lump sum payment option is more appropriate under the circumstances. It must clearly state:

General background information relevant to the assignment; The objectives of the assignment; The scope of work, which must be consistent with the budget, and contain a detailed description of deliverables and activities; The duration of the assignment; The duty station and expected places of travel, if any; Monitoring and progress controls, including reporting requirements, frequency, format and deadlines; A clear and unequivocal definition of the final product/s or deliverables (e.g., survey completed, workshop conducted, data collected, reports written, etc.), the timeframe for their completion, and payment milestones; The approval process required to certify outputs prior to authorizing payment, and payment milestones if applicable; A clear and precise description of the selection criteria, including the required degree of expertise and qualifications such as specialized knowledge, language needs and experience; If applicable, a detailed list of all inputs and services provided by UNDP or any implementing partners in order to perform the contract; and Any other relevant information. The terms of

reference should also state whether the assignment requires a partial, intermittent, or full-time presence on UNDP premises. If a full-time presence is required, a justification must be provided. If support services such as office space, equipment, secretarial services, etc. are required, the terms of reference should clearly state what arrangements are being made and indicate the responsible party.

ii. Selection and Engagement of Individual Contractors

All individual contractors must, unless otherwise allowed under this policy, be selected through a competitive process instituted by the holder of delegated procurement authority. When initiating the selection process, the requesting unit must first determine whether intellectual or support services are needed. This distinction should be reflected in the terms of reference, evaluation method and payment terms. Minimum requirements vary, depending on the contract value, as summarized in the following table 5:

Table5:Classificationofcontractor thresholds

Minimum requirements based on the contract value					
Amount in USD	Sourcing	Receipt of offers including financial	Evaluation	Reference check for selected candidate	Review and approval of contract award
Less than \$5,000	No competitive process necessary, past performance review and note-to-file is sufficient	Yes, even if only one candidate	Review against the established criteria and provide a note-to-file	To be determined by the business unit depending on the nature of the assignment	Evaluation team prepares and signs the note-to-file for the procurement authority's approval
\$5,000–\$100,000	At least three qualified candidates to be considered. Advertisement optional	Yes	Desk review against criteria, interview is optional	Yes	Delegated procurement authority's approval
Above \$100,000	International Advertisement mandatory*	Yes	Interview is mandatory	Yes	Contract committee approval depending on the delegated procurement authority of the business unit

*International advertisement refers to publication in any media (print or electronic/digital) that is internationally visible and accessible. The UNDP or UNGM global websites are recommended. The threshold of no-competition for Individual Contractors has been increased to \$10,000. The review of this threshold will be included in the review process for the Increased Delegation of Procurement Authority. Additionally, Business Units have the option to independently request an increase in the no-competition threshold for Individual Contractors. Regional Chief Procurement Officers (RCPOs) are tasked with approving such increases if they align with the organization's best interests, ensuring proper documentation of approvals.

iii. Selection Process

The selection process includes the following steps;

- **Sourcing of candidates:** where a competitive process is required, qualified candidates must be identified through an international advertisement, by sourcing from an established roster or by prior nomination of known individuals with good qualifications and outstanding performance for the type of assignment involved. Qualified candidates meet the minimum requirements established for the selection process. An individual contractor selection process is considered competitive, even if it results in less than three responsive bids;
- **Receiving offers:** Offers responding to the procurement notice should be received by the procurement unit by a stipulated deadline. Offers may be

received by hand delivery, fax or email. For the last two, a dedicated fax number or email account must be used to ensure confidentiality.

- **Evaluation method:** The requesting unit shall establish an ad hoc three-member evaluation team to conduct an evaluation and interview if required. The number of members may vary according to the complexity of the terms of reference but should never be less than two. At least one member must be from a unit other than the requesting unit. At least one member must be a UNDP staff person, and he/she shall take the role of chairperson of the team. The team will conduct the shortlisting, and assess and rate each shortlisted candidate based on the documents submitted, as well as review the results of reference checks, until a final candidate has been identified for the award of an individual contract. Procurement staff involved in the selection process must function as the Secretary to the evaluation team and will be expected to: Render guidance to team members on policy issues; and prepare the evaluation report supported by matrices of ratings, notes and minutes of the evaluation process.

- **Interview Stage (if applicable):** Interviews are mandatory if contract amounts are expected to exceed US \$100,000. Below that amount, interviews are optional, based on what business units deem most beneficial. When interviews take place, the same evaluation team must conduct them. They shall agree, prior to the interviews, on the questions to ask, and the skills and knowledge that candidates should demonstrate in response. Questions should clearly relate to established evaluation criteria. In order to ensure fairness, candidates should be asked the same questions during each

interview. Nevertheless, no member of the evaluation team should be prevented from asking other relevant and follow-up questions. The evaluation team must assess and rate shortlisted candidates based on their submitted documentation and their interview performance.

- **Negotiations and clarifications:** Negotiations often come with risks. They may bring into question the fairness, transparency and integrity of the procurement processes, and undermine the confidence of the market in UNDP. This activity must always be handled properly and professionally and in accordance with UNDP policy guidance. Negotiation is not mandatory in a selection process. If everything is in proper order and clearly agreed between UNDP and the candidate, there is no need for negotiation. Negotiation in a competitive process is not to be understood or misconstrued as a means of bargaining with the candidate who has fully met the requirements of the technical and financial evaluation. Negotiation must not imply that a candidate must accept a price reduction or additional scope of work not originally required in the terms of reference as a condition for awarding a contract. It must not be used to deprive the most responsive candidate from being awarded the contract.
- **Award:** After a candidate has been selected, the contract award may be subject to further review, depending on its duration and total amount. Please refer to information on the delegation of procurement authority and its limits.

Fundamental Theories

1. Normative Theories on Contract Design

The choice of an appropriate contract with respect to the Contractor payment

terms for the project is a crucial decision (Antoniou *et al.*, 2013a). This implies that different contract types are probably more suitable than others depending on the project characteristics, but no contract type can be said to be better than others in general. According to Ward & Chapman (1994), there are three main problems in Employer-Contractor relationships: moral hazard, adverse selection and risk sharing. Moral hazard can appear if the Client cannot tightly control the Contractor and verify the quality of the product he is delivering. An example of this is what may happen if the Client selects the least expensive Contractor for a lump-sum contract. After being awarded the contract, the Contractor may cut corners and reduce quality from the agreed standard in order to decrease the actual costs and gain a higher profit. Adverse selection happens when there is asymmetric information in a market. In the framework of a tendering process, it is quite difficult for an Employer to know the Contractor that provides less costs for the whole project (considering all costs and including factors such as schedule and quality, not only the tendering price). Contrastingly, the Contractor will have the information of how he plans to perform the works.

If considered the bidding process, it seems that there is an additional trade-off between stimulating competition in the bid, avoiding increasing the costs for transferring risks to the Contractor and giving incentives to lower the costs (McAfee & McMillan, 1986). It is concluded that the optimal contract, considering the bidding process, is usually a target-cost contract and may also be a lump-sum contract, but it is never a cost-plus contract (McAfee &

McMillan, 1986). The complexity of the project may also play a major role for the contract type selection; projects which are complex from an organizational point of view are bound to favour the use of cost-plus or target-cost contracts (Nkuah, 2016). Finally, well-qualified Contractors should be able to use cost-plus contracts, under supervision of the Employer (Fuller, 1920).

2.Principal-Agent Theory: Moral Hazard, Incentives and Risk

“Agency theory provides a unique, realistic and empirically testable” explanation on cooperative problems (Eisenhardt, 1989). The principal-agent theory states that a principal engages an agent to perform work on behalf of the principal. The agent is self-interested, rational and risk-averse (Eisenhardt, 1989). There may also be information asymmetry, where the agent has more information than the principal (Eisenhardt, 1989) (Hosseinian & Carmichael, 2014). Hence, this is applicable to the Employer (principal) – Contractor (agent) relationship in a construction project. Therefore, it is possible that the agent behaves in an opportunistic way, because the principal is not able to perfectly monitor the agent’s effort, which eventually leads to a certain outcome (Hosseinian & Carmichael, 2014). In emergencies, where objectives may be complex and uncertain, this theory helps to understand and mitigate potential agency problems. The principal-agent theory addresses the challenges arising from the separation of ownership and control in construction projects. Effective contractor selection and quality assurance mechanisms can align the interests of the principal (e.g., UNDP) and the agent

(contractor), fostering better project outcomes.

As the effort causes costs to the agent, he will try to minimise it. Given these premises, agency theory states that outcome-based contracts can actually align the principal's and agent's interests, but with the disadvantage of transferring risks to the Contractor, who is usually more risk averse and thus requires a higher bonus than the Employer to bear the risks. The aim of the agency theory is to find an optimal contract in the framework of effort-based (behaviour-based) and outcome-based contracts for governing the principal-agent relationship (Eisenhardt, 1989). An outcome-based contract for example, is a lump-sum contract, where the principal will pay for the completed works, no matter how much effort (actual costs) the Contractor put into the works. Contrastingly, target-cost contracts or cost-plus contracts have characteristics of effort-based contracts, because the payments of the Employer are primarily related to the costs that the Contractor has incurred. Target-cost contracts have additionally some characteristics of outcome-based contracts (there is a target cost, independent of the effort) and there is an effort-dependent incentive.

If it is easy to measure the outcome, an outcome-based contract will probably be more suitable (Eisenhardt, 1989). Also, if the principal is informed about the behaviour of the agent, the agent is more likely to behave the way the principal wants him to. Thus, the more information the principal has, the more effective a behaviour-based contract will be. In fact, easily programmable tasks can be governed by behaviour-based contracts (Eisenhardt, 1989). Also, in long-term

relationships, the principal will get to know the agent, so he will be able to assess his behaviour more easily and a behaviour-based contract seems more suitable (Eisenhardt, 1989).

The Employer wishes to incentivize the Contractor to reduce the costs by transferring some risks to him. However, if the Contractor is more risk-averse than the Employer, which is often the case, the costs for bearing the risks will be larger than if the Employer borne the risks. That is, projects with high outcome uncertainty should be governed by effort-based contracts rather than by outcome-based contracts (Eisenhardt, 1989). Then, with increasing risk-aversion of the agent, effort-based contracts rather than outcome-based contracts should be predominant. In this case, there is a trade-off between providing incentives (avoiding moral hazard on the part of the agent) and the costs of transferring risks (McAfee & McMillan, 1986).

3.Theories of Risk-Allocation in Contracts

The risk allocation for the different risks (cost overruns, local political / cultural risks, geological risks, environmental risks, etc.) in the three contracts considered is quite different. According to the risk-allocation literature, the parties should choose a construction contract that allocates the risks in a suitable way. For instance, Chan *et al.* (2011) was consulted to investigate the ideal risk allocation in construction contracts. According to their survey, done to contract and senior managers, certain risks should be allocated to the Client (e.g., a change in the scope of work), while others should be shared or be allocated to the Contractor.

Several risk-allocating rules, such as “Each risk should be allocated to the party who is best capable to manage it at the least possible cost” have been provided by the literature (Chan *et al.*, 2011). Therefore, the risk allocation should depend, among other factors, on the relative risk aversion of the parties. The risk-aversion can be varied, for instance a public Owner would probably be risk-neutral (Hosseinian & Carmichael, 2014), a private one may be rather risk-averse (Fuller, 1920). Other risk-allocation rules are discussed regarding FIDIC standard contracts in (Law Office Dr. Hök, Stieglmeier & Kollegen, 1999). Nonetheless, the risk allocation is very different in a lump-sum contract, where the Contractor takes nearly the whole risk in the project or in a cost-plus contract, where the risks are mainly with the Employer. Between them, there are several contracts which allocate a different amount of risk to the parties, such as target-cost contracts (Al-Harbi, 1998). As too little attention is being paid to the contract selection matter (Russell, n.d.), it seems unlikely that these contracts are optimizing the risk- allocation in the projects where they are used. For instance, the sharing scheme of target-cost contracts is often established in an arbitrary way, without focused research on the matter (Hosseinian & Carmichael, 2014).

Risks are not allocated as preferred by the parties in the contracts (Hartman *et al.*, 1998), and it might also be the case that in practice the risks are not allocated according to the risk allocation rules presented in the literature either (Hanna *et al.*, 2013), but that they are simply transferred to the party with the least negotiation power or that the risk - allocation is simply linked to the regular

type of contract used in the industry, instead of thoroughly taking into account the risk aversion of the parties. Another possibility is that, in reality, the risks are allocated according to the type of contract initially chosen, without making significant amendments to the contract and without considering the optimal allocation at all. In fact, Chan *et al.* (2011) proposed further qualitative investigations to investigate the actual risk allocation in practice, which could be performed by means of in-depth case studies of projects

4.Transaction Cost Economics theory

Transaction cost economics theory examines the choice of procurement methods (e.g., competitive bidding vs. negotiation) based on transaction costs. In emergency contexts with limited information and time, this theory helps identify the most cost-efficient and effective procurement approach. Transaction costs theory may be one of the most important organizational theories because of studies done (Williamson, 2017), and it remains one of the main perspectives in organizational studies (Macher & Richman, 2018). Moreover, transaction costs economics theory is frequently viewed as a subset of new institutional economics. The new trend in transaction costs is to describe firms from a new perspective based on organizational terms, as governance structures, not in neoclassical terms, as production functions (David & Han, 2014). Evidence has been found that the performance of firms which take into consideration transaction costs is better than the performance of firms which do not consider them (Macher & Richman, 2018). Furthermore, it was found that companies that follow the basic transaction costs hypothesis, (i.e., having high costs of finding and negotiating with partners), tend

to use a higher degree of control (Williamson, 2017). In addition, transaction-costs economics has recognized that the productivity of a value chain is a function of both production costs and transaction costs, and that, moreover, transaction costs are significant and have a major impact on economic efficiency from a global sourcing perspective companies get their intermediate products from outside suppliers if the transaction costs of external purchases are lower than domestic ones. In other words, transaction costs determine the governance structure of a supply chain (Brouthers & Brouthers, 2013).

Research Methodology

This study used a survey method to generate responses from sample population. Direct interviews were used to enhance the survey method. The unit of analysis was the United

Nations Development Programme (UNDP) and construction projects in the northeast Nigeria, the main development organisation of the UN that that assists nations in eradicating poverty and achieving sustainable human development, promoting democratic governance, crisis prevention and recovery, and promoting environmental sustainability. The sample of this study was derived from the population of the study which comprised the employees of UNDP in the North-East region of Nigeria. The participants were randomly selected from the population was drawn from the functional areas such as procurement/Supply, senior management team, Human resources team, Finance, operations, and engineering.

Table 6: Demonstrates the distribution of the population of the study

Participating Units	Number	Percentage (%)
Senior management	10	7.0
Operations, field offices, Programmes	20	14.0
Procurement/ Supply/warehouse	25	17.0
Emergencies Projects Constructions team	20	14.0
Construction's M & E Team	10	7.0
Human Resources Team	10	7.0
Finance/Accounts	10	7.0
UNDSS Team	8	5.0
Communication & Fundraising	5	3.0
Transport Team	10	7.0
ICT Team	18	12.0
Total	146	100.0

The research sample was derived from the research population using Yamane (1964) as used by Onwe (2012) model of determining a sample from a finite population. The model states that:

$$n = N / 1 + N(e)^2$$

.....

..... (i)

$$\text{Therefore, } n = 146 / 1 + (146 \times 0.05 \times 0.05) = 146 / 1 + (146 \times 0.0025) = 146 / 1.365 = 107.$$

This sample was redistributed among participating units using the principle of proportional stratification.

Table 7: Distribution of Sample Size

Unit	Number	%	Proportional Stratification	Total
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Snr MGT	10	7.0	0.07 x107	8
Operations	20	14.0	0.14 x 107	14
Supply	25	17.0	0.17 x 107	18
Emergency Construction	20	14.0	0.14 x 107	15
M&E	10	7.0	0.07 x 107	8
HR	10	7.0	0.07 x107	8
Finance/Acct	10	7.0	0.07 x107	8
UNDSS	8	5.0	0.05 x107	5
Communication	5	3.0	0.03 x107	3
Transport	10	7.0	0.07 x 107	8
ICT	18	12.0	0.12 x107	12
Total	146	100	–	106

Literature review- aided survey questionnaire was designed by the researcher to link the independent and dependent variable proxies designed and used to collect the primary data from the participants of the study. The instrument for data collection was tested for validity through two processes such as pre-test on 5 employees of UNDP in the Procurement/supply team for content comprehension and understanding. The response was 85%. There are two uncompleted research propositions. Such rejected propositions were dropped from the draft. The second process of instrument validation was the vetting by two experts in project best-practices and local vendor sensitivities in crisis communities and development operations. This process reduced the research propositions to 16 items. The reliability of the instruments was ascertained through the administration of the

instruments to two different respondents during an interval of 15days. The average return rate was 100% while the average completion rate was 87.5%. These results confirmed that the contents of the instruments were sufficiently relevant to the aim and objectives of the thesis. The data collected were analysed descriptively using frequency count (F) and simple percentages (%).

Result and Discussion

Out of the 106 total questionnaires administered to the participants of the study, 56 questionnaires were successfully returned for analyses amounting to 53% total response rate as displayed in table 8 below from all the participating units.

Table 8: Questionnaire Return Rate by Units

Units	Questionnaire Administered	Questionnaire Returned	Return Rate (%)
Senior Management	8	4	50.0
Operations	14	8	57.0
Supply (Procurement)	18	10	56.0
Emergencies Construction Team	14	6	43.0
Monitoring & Evaluation team	8	4	50.0
Human Resources	8	4	50.0

Finance/Accounts	8	4	50.0
UNDSS (Security) Team	5	3	60.0
Communication	3	2	67.0
Transport/Logistics	8	5	63.0
ICT	12	6	50.0
Total	106	56	53.0

Source: Field Survey, 2024.

Objective 1: Analyze the relationship between contractor project budget-cost compliance and the timely delivery of emergency projects or UNDP's stabilization project managers in North-East Nigeria

This objective was analysed descriptively using frequency (F) and percentages (%). Table 9 below display the participants' agreement on the relationship between contractor project budget-cost compliance and the timely delivery of emergency projects for UNDP's stabilization project managers in North-East Nigeria. 30(53%) of the participants strongly agree with the statement that emergencies construction execution and delivery comply with construction budgets and timely delivery; 20(36%) of the participants agree with the statement; 0% of the participants Undecide with the statement; 6(11%) of the participants disagree with the statement, while, 0% of the participants strongly disagree with the statement. 20(36%) of the participants strongly agree with the statement 'complaining and restless contractors for construction budget review are generally associated with construction delays or uncompleted'; 36(64%) of the

participants agree with the statement; while 0% of the participants are Undecides, disagree, and strongly disagree with the statement. 32(57%) of the participants strongly agree with the statement 'construction contractors associated with financial stability and construction budget compliance generally deliver construction project on time'; 18(32%) of the participants agree with the statement; 0% of the participants Undecide with the statement; 6(11%) of the participants disagree with the statement; 0% of the participants strongly disagree with the statement.

From table 8 below taking the average of the responses of the participants on the degree of their agreement, it can be revealed that 93% of participants agreed that there is a relationship between contractor construction budget-cost line compliance and timely delivery of emergency construction in UNDP.

Table 9: Relationship between Contractor's Construction budget-cost compliance and emergency construction timely delivery to UNDP

Statements	Responses	Frequency (F)	Percentage (%)
Emergencies construction execution and delivery comply with construction budgets and timely delivery	SA	30	53.0
	A	20	36.0
	U	0	0.0
	D	6	11.0

	SD	0	0.0
	Total	56	100.0
Complaining and restless contractors for construction budget review are generally associated with construction delays or uncompleted	SA	20	36.0
	A	36	64.0
	U	0	0.0
	D	0	0.0
	SD	0	0.0
	Total	56	100.0
Construction Contractors associated with financial stability and construction budget compliance generally deliver construction project on time	SA	32	57.0
	A	18	32.0
	U	0	0.0
	D	6	11.0
	SD	0	0.0
	Total	56	100.0

Source: Field Survey (2024).

The outcome of this objective validates the results of Alhammadi, Al-Mohammad and Rahman (2024), Suleiman (2021), Nwokenkwo (2019), Zwikael and Smyrk (2019), Ayodele and Alabi (2014) that project budget-cost compliance and the timely delivery of emergency projects are very important for the realization of project objective and ensure budget/cost overrun in a construction of projects. It also, validates the earlier assertion of Elserougy *et al.* (2024) that, problems with costs overrun occur when actual expenses surpass planned expenditures and the final settlement exceeds projected amounts.

Objective 2: Examine the relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria

This objective was also analysed descriptively using frequency (F) and percentages (%). Table 10 below display the participants' agreement on the relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria. 20(35.7%) of the participants

strongly agree with the statement 'construction contractors' high technical expertise is rarely associated with defective unfinished construction deliveries'; 10(17.9%) of the participants agree with the statement; 0% Of the participants are Undecides with the statement; 10(17.9%) of the participants disagree with the statement; while, 16(28.5%) of the participants strongly

disagree with the statement. 30(53.6%) of the participants strongly agree with the statement 'Emergency construction managers generally emphasize technical expertise to assure zero construction defects in UNDP'; 26(46.4%) of the participants agree with the statement; while, 0% of the participants are Undecides, disagree, and strongly disagree with the statement. 20(35.7%) of the participants strongly agree the statement that 'contractors previous experience of quality are strong assurance of construction quality and control against defective constructions'; 8(14.3%) of the participants agree with the statement; 0% of the participants are Undecides with the statement; 28(50%) of the participants disagree with the statement, while, 0% of

the participants strongly disagree with the statement.

From table 10 below taking the average of the responses of the participants on the degree of their agreement, it can be revealed that 93% of participants agreed that there is a relationship between contractor construction budget-cost line compliance and timely delivery of emergency construction in UNDP.

Table 10 reveals a value of 67.2% of the participants agreed to there is relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria.

Table 10: Relationship between construction contractor's technical capabilities and occurrence of zero defects and failures in emergency stabilization projects

Statements	Responses	Frequency (F)	Percentage (%)
Construction Contractors high technical expertise are rarely associated with defective unfinished construction deliveries	SA	20	35.7
	A	10	17.9
	U	0	0.0
	D	10	17.9
	SD	16	28.5
	Total	56	100.0
Emergency construction managers generally emphasize technical expertise to assure zero construction defects in UNDP	SA	30	53.6
	A	26	46.4
	U	0	0.0
	D	0	0.0
	SD	0	0.0
	Total	56	100.0
Contractors previous experience of quality are strong assurance of construction quality and control against defective constructions.	SA	20	35.7
	A	8	14.3
	U	0	0.0
	D	28	50.0
	SD	0	0.0
	Total	56	100.0

Source: Field Survey (2024).

The finding of this objective conforms with the result of Psarommatis *et al.* (2022b); Psarommatis *et al.* (2020a); Jun *et al.* (2020); Siddiqui and Biswas (2019) that, proven technical expertise of construction works is paramount in emergency projects with defective emergency project deliveries. Also, contractor's technical competencies of specific emergency project assure zero defective project execution. Therefore, if the

performance of contractors in project delivery must be improved, it is pertinent to seek for ways and factors to improve their performance in project delivery as the identification of ways and factors to improve contractor's performance based on their capability in project delivery, benefit the client most as contractors will deliver projects without a risk being placed on the client who is saddled with the ownership and occupation risks (Dauda, 2022).

Conclusion and Recommendations

Conclusion

Based on the findings of the study, the research concluded that:

- i. There is very strong relationship between contractor construction budget-cost line compliance and timely delivery of emergency construction in UNDP with 93%.
- ii. There is strong relationship between contractor technical capability and the occurrence of zero defects and failures in emergency stabilization projects in North-East Nigeria with 67.2%.

Recommendations

1. Based on the research conclusions, the research recommended that:

- i. Emergencies construction projects in UNDP in the North-East should base operational decision on transparent and defined operational indicators that guide contractor selection and quality assurance.
- ii. Project end-user knowledge and psycho-social situations should be well understanding by all contractors (direct implementers and third parties).

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