

## CHAPTER TWELVE

### INCESSANT CONSTRUCTION PROJECT FAILURE: CONTEMPORARY ISSUES FOR ARCHITECTS' CONSIDERATIONS IN NIGERIA

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#### ABSTRACT

*As resources become increasingly scarce, the importance of effective project management has grown, particularly to prevent project failures and resource wastage. This is especially relevant in Nigeria, where public project management tools and procedures are often underutilized. This study investigates the underlying causes of construction project failures in Nigeria, with a focus on public sector projects. Using a quantitative research approach, data was gathered through a survey of 115 built environment professionals (BEPs) with experience in public projects in Niger state. The results indicate that the most critical factors affecting project success are related to human resources, planning, and implementation. Among the human resource factors, payment delays due to government bureaucracy were identified as the most significant, severely disrupting project timelines and contractor efficiency. In terms of planning, scope creep without corresponding budget adjustments emerged as a major issue, underscoring the need for accurate budgeting. Inadequate monitoring and poor inspections were highlighted as the main implementation challenges, pointing to the necessity for stronger oversight and quality control. Overall, human factors were deemed the most critical, with all related sub-factors rated highly. The paper concludes that addressing these key areas can significantly enhance project management practices in Nigeria, reducing the frequency of project failures and optimizing the use of resources.*

**Keywords:** Construction project, project management, project failure, Nigeria



## INTRODUCTION

The significance of project management has seen substantial growth globally, especially within the construction industry. Each project presents unique challenges, with distinct operational environments and technical requirements. However, during economic downturns, projects are particularly vulnerable to failure due to various issues. Even when resources are available, projects often fail due to plan deviations, flawed planning, and ineffective management (Ubani *et al.*, 2013). These factors highlight the numerous constraints that can hinder the initiation or progression of construction projects. In Nigeria, several authors (Odediran *et al.*, 2012; Oladimeji & Ojo, 2012; Aniekwu & Audu, 2010) have pointed out the inability of project executors to successfully implement projects, largely due to inadequate planning for contractual needs. This often results in poor planning, limited management capabilities, cost and time overruns, and, ultimately, project failure and abandonment. To effectively execute and manage public projects, it is crucial to employ robust project management approaches, including master planning and short-term scheduling, to identify and manage limitations.

Over the years, Nigeria has witnessed a significant number of abandoned and failed development projects, particularly in the public sector. These abandoned projects, which have become a blight on the built environment, are reported to number over 56,000 across the country. According to Ibrahim *et al.* (2022), two-thirds of large projects completed after 1960 have been abandoned, with the federal government alone abandoning 11,886 projects in the last 40 years. These projects are scattered across Nigeria's six geopolitical zones. Kontagora (1993) estimated that the cost of these unfinished or abandoned projects exceeds N300 billion (approximately \$390 million), a figure that would take about thirty years to address at the current government execution capacity. The widespread abandonment and failure of construction projects in Nigeria have not been given sufficient attention, leading to a ripple effect on the construction industry and the national economy as a whole.

Given the significant role of the building and construction industries in any nation's economy, the role of project managers in effectively executing public projects in Nigeria demands much greater focus, particularly due to the numerous challenges they face. The limited use of



modern project management tools, methodologies, and techniques in public building projects further exacerbates the problem, contributing to the high rate of project failures and abandonments. The aim of this research is to investigate and analyse the underlying causes of construction project failures in Nigeria, with the goal of identifying key factors, patterns, and dynamics that influence project outcomes. The specific objectives of the study are to (i) examine the contextual factors contributing to construction project failures in Nigeria; (ii) assess the impact of poor project planning and management practices on construction project outcomes in Nigeria; and (iii) explore strategies and interventions for mitigating the risk of construction project failures and enhancing project performance in Nigeria.

## LITERATURE REVIEW

Existing literature has extensively examined the factors contributing to infrastructure project failures, delays, and abandonments, with many studies focusing on private sector or industry-wide perspectives (Shehu et al., 2014). However, some research (Kabirifar & Mojtahedi, 2019; Owusu-Manu *et al.*, 2019; Awolusi, 2021) has centered on government project failures, delays, and abandonments due to their significant impact on national growth and development in various developing countries, where multiple stakeholders are involved. This study aims to review these literatures within the Nigerian context, as well as globally, focusing on developing nations, to identify factors leading to infrastructure project failures, delays, and abandonments, and to propose improvement measures to mitigate these issues. In Akande *et al.* (2018) study, the authors focused on the factors influencing project management success in public building projects in Niger State, Nigeria. Their research emphasized the importance of effective project management within the built environment and public institutions. However, the study's scope was limited, and it did not take a comprehensive approach to analyzing the critical criteria for project success or failure, leaving conceptual gaps.

Cross and Abbas (2019) explored project failure and its impact on construction business performance in Nigeria, conducting a survey across all geopolitical zones. They identified and ranked 12 underlying factors contributing to project failure and abandonment, including corruption, bureaucracy, inadequate project planning, and poor communication. While the findings were insightful, the study was constrained by a limited conceptual approach



significant methodological gaps due to the small sample size. More research is necessary to deepen the understanding of the relationships between these factors and to enhance the theoretical framework. Additionally, the research methodology used in the study had flaws and limitations that need to be addressed in future studies.

Abdulkadir *et al.* (2020) explored cost escalation in construction projects in North-Eastern Nigeria from a professional perspective. The study identified market instability, fluctuations in the prices of building materials and labor, and financial challenges as the most significant factors affecting construction costs. Despite the informative nature of the findings, the study was limited by the small number of surveys administered. Further research is necessary to better understand the relationships between the explored concepts and to refine the theoretical framework, highlighting gaps in the study's scope and conceptual approach.

In 2021, a substantial amount of research focused on project failure in Nigeria. For instance, Okoro (2021) investigated the state's influence on access to land and project implementation for federal government construction projects in South-South Nigeria, covering the period from 2006 to 2016. The study found that land accessibility issues significantly impacted project implementation. However, the study's limitation to a few states in the South-South region restricts the generalizability of the findings to other parts of Nigeria. Unegbu *et al.* (2021) conducted research to assess the relative importance and interconnections of project management approaches in the Nigerian construction industry, considering the country's diverse geopolitical zones. The findings suggested that respondents believed effective project management techniques significantly enhance project outcomes, as indicated by the high relative importance values. However, the study's conceptual approach was limited, and more research is needed to explore the relationship between the concepts and to improve the theoretical framework.

Oghomwen *et al.* (2022) explored factors affecting the performance of building construction projects in the Federal Capital Territory (FCT) Abuja, North Central Nigeria. They highlighted issues such as rising material costs, design changes, contract documentation conflicts, and limited resource availability as key challenges. While their findings contributed to the understanding of project failure in Nigeria, the study's focus on FCT-Abuja limits the generalizability of the results to other parts of the country.



Adagba *et al.* (2023) used the Relative Importance Index to investigate the causes of building project failure and abandonment in Kaduna State, Nigeria. The study provided valuable insights for professionals, policymakers, and the public about the factors leading to these issues and served as a resource for future research. However, its focus on Kaduna in Nigeria's North West region limits the applicability of the findings to other areas of the country. Unegbu *et al.* (2023) reviewed literature on the performance of construction projects across all geopolitical zones in Nigeria. Their comprehensive examination of challenges and solutions in the Nigerian construction industry offered valuable guidance to legislators, construction professionals, and other stakeholders on improving project performance. Despite these contributions, the study was deemed inadequate due to its lack of a comprehensive conceptual framework and significant empirical gaps, indicating a need for more research to clarify the relationships between the topics discussed.

## RESEARCH METHODOLOGY

### Study Location

The study was conducted in Minna and Bida (i.e., two important towns located in Niger state, Nigeria (Figure 1a). Minna and Bida (Figure 1b) are within the North-Central geopolitical zone of the country. Minna is the capital city of Niger State and is situated in the west-central part of Nigeria. It lies approximately between latitudes  $9^{\circ}30'$  and  $10^{\circ}10'$  North, and longitudes  $6^{\circ}30'$  and  $7^{\circ}20'$  East. It is well-connected by road and rail, serving as a transportation hub in the region. Minna city is approximately 140 kilometers northeast of Abuja, the Federal Capital Territory, making it relatively close to the political center of Nigeria.



Figure 1a: Map of Nigeria showing Niger State

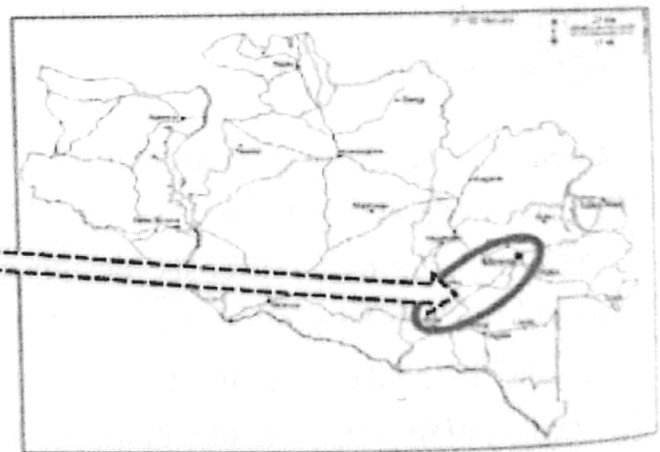


Figure 1b: Map of Niger State showing Minna and Bida



Bida is located in the southern part of Niger State, about 90 kilometers southwest of Minna. The town lies between latitudes  $9^{\circ}04'$  and  $9^{\circ}10'$  North, and longitudes  $6^{\circ}00'$  and  $6^{\circ}10'$  East. Minna and Bida are located approximately 90 kilometers apart, with a well-paved road connecting the two towns. This route is frequently used for transportation and trade between the two locations. Both towns serve as significant economic and administrative centers in Niger State, with Minna being the state capital and Bida being a major cultural and commercial hub.

### **Study Population and Sampling Technique**

Given the specific nature of this study, only built environment professionals (BEPs) in the building and construction industries were considered suitable to provide the necessary insights. The study population included experienced professionals such as architects, builders, engineers, and quantity surveyors. A non-probability sampling method was employed for this study due to the lack of a sampling frame from which to draw samples. Specifically, "purposive sampling," a non-probability technique, was chosen because it is effective when a knowledgeable insider is needed to explore a specific field (Campbell *et al.*, 20). The respondents were selected from professionals in Niger State, located in Nigeria's North Central geopolitical zone, using systematic sampling techniques from a list of BEPs in the study area. The primary instrument for data collection was a questionnaire, chosen for its efficiency and effectiveness in gathering information on the underlying causes of construction project failures in Nigeria. The questionnaire was developed based on a review of related literature and was pre-tested through a pilot study involving 16 respondents to ensure clarity. The final questionnaire was divided into four sections, mostly using a five-point Likert scale for responses:

**Section A:** Collected background information about the respondents, including educational qualifications, professional certifications, years of experience, and areas of specialization.

**Section B:** Included four questions related to the respondents' main sources of building project management experience, types of projects handled, the average number of projects, and their estimated costs over the last five years.

**Section C:** Focused on the respondents' classification of projects.

**Section D:** Gathered information on factors that influenced the respondents' project success rates, divided into three parts: planning factors, human factors, and implementation factors.



### **Data Collection and Analysis Method**

To enhance the reliability of the research, both primary and secondary data were collected. Primary data were obtained through questionnaires distributed to those involved in public building projects in Nigeria. The researcher developed the questionnaire and distributed it using a convenience sampling method, with consent obtained from respondents through a consent form that explained the study's objectives. Distribution methods included emails, personal messages, and social media posts, ensuring privacy and anonymity for respondents. Respondents were also encouraged to share the questionnaire with their networks to extend the reach beyond the researcher's immediate contacts. Secondary data were gathered from a range of academic sources including relevant government websites, books from local libraries and electronic databases, journals, research articles, and previously published papers.

The study primarily involved quantitative data, which was analyzed using both descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) software was employed for this analysis. Data from the survey questionnaires were entered into SPSS and examined using descriptive statistics, such as frequency distribution tables and cumulative percentages. To assist decision-makers and policymakers in public project management, it was crucial to identify prevalent factors. For this purpose, the Relative Significance Index or Index of Relative Importance was used, as it is a well-established method in research. The importance levels were ranked based on arithmetic mean scores derived from Likert scales ranging from 1 to 5. In the analysis, a lower mean value indicated a lower level of importance or severity, which was used to establish a rank order of these factors.

### **Reliability and Validity of Data**

Concerns about reliability were addressed during the development of the research questions and evaluation of the instrument. The surveys were piloted and pre-tested via email to identify and correct any issues related to design features, such as phrasing



sequencing. The pilot test was conducted with a sample similar to the study population to ensure that the questions were clear, could be answered within the allotted time, and provided useful data. To ensure the reliability of the instrument, the questionnaire was tested on 16 professionals in the built environment who were not part of the main study sample. Reliability was assessed using Cronbach's alpha, calculated with the SPSS 22 statistical package. The scales showed acceptable values, with an overall Cronbach's alpha of 0.950, which is considered excellent compared to the minimum acceptable alpha value of 0.60 for new scales. Content validity was confirmed through a thorough literature review and feedback from academicians and practitioners before administering the questionnaire. Factor analysis was used to test construct validity. The Cronbach's alpha scores indicated high reliability for the questionnaire constructs, all exceeding the threshold of 0.7, demonstrating that the questionnaires were highly reliable and free from random errors.

## **RESULTS AND FINDINGS**

A total of 150 questionnaires were distributed. A total of 115 questionnaires were returned; representing a 77% response rate. This was considered adequate for the analysis carried out for this study.

### ***Background Characteristics of Respondents***

Table 1 presents the background characteristics of the respondents. Most participants have advanced degrees, with 36.3% holding a Master's degree, 23.9% having a Bachelor's degree, and 19.5% possessing an HND. Only a small percentage have Doctorate degrees (8.8%), OND education (7.1%), or secondary education (0.9%). This highly educated group provides a strong foundation for examining factors contributing to building project failures in Nigeria. Professionally, the majority are architects (36%), followed by engineers (21.1%), builders (10.5%), estate managers (8.8%), quantity surveyors (7.9%), and a small number of project managers (6.1%). This suggests that the insights are largely from technical and design experts, which might indicate gaps in project management expertise that could contribute to project failures (Figure 2).



**Table 1: Background profile of the respondents**

Characteristics	Percentage	Characteristics	Percentage
<b>Level of Education</b>		<b>Area of Specialization</b>	
GCE O/Level	.9	Architecture	36.0
OND	7.1	Building	10.5
HND	19.5	Engineering	21.1
Bachelor Degree	23.9	Estate Management	8.8
Master's Degree	36.3	Quantity Surveying	7.9
Doctorate Degree	8.8	Project Management	6.1
Others	3.5	Others	9.6
<b>Professional Association</b>		<b>Years of Experience</b>	
Association of Project Managers	13.5	1 - 5yrs	28.1
Nigeria Institute of Architects	30.8	6 - 10yrs	34.2
Nigeria Institute of Quantity Surveyors	5.8	11 - 15yrs	18.4
Nigeria Institute of Management	8.7	15- 19yrs	12.3
Others	41.3	20yrs and above	7.0
<b>Average Number of Building Projects Handled Over the Last 5yrs</b>		<b>Cost of Building Projects Managed Over the Last 5yrs</b>	
1 - 5yrs	27.7	1 - 5 million	18.8
6 - 10yrs	39.3	6 - 10 million	17.9
11 - 15yrs	17.9	11 - 15 million	15.2
15- 19yrs	5.4	15- 19 million	7.1
20yrs and above	9.8	20Million and above	41.1
<b>Course Taken in Project Management</b>		<b>Knowledge of Project Planning Techniques</b>	
Yes	74.0	Yes	82.6
No	26.0	No	17.4

Additionally, many respondents are members of professional organizations, including the Nigeria Institute of Architects (30.8%), the Association of Project Managers (13.5%), the Nigeria Institute of Management (8.7%), and the Nigeria Institute of Quantity Surveyors (5.8%). Furthermore, 71.9% of responders had over five years of experience, indicating a high level of professionalism. This strong experience and professional connection indicate that the respondents are well-qualified to provide reliable and accurate insights into the factors that contribute to construction project failures in Nigeria. The high participation of the architecture



and project management sectors suggests a balanced perspective on both the design implementation of construction projects, which confirms the conclusions.

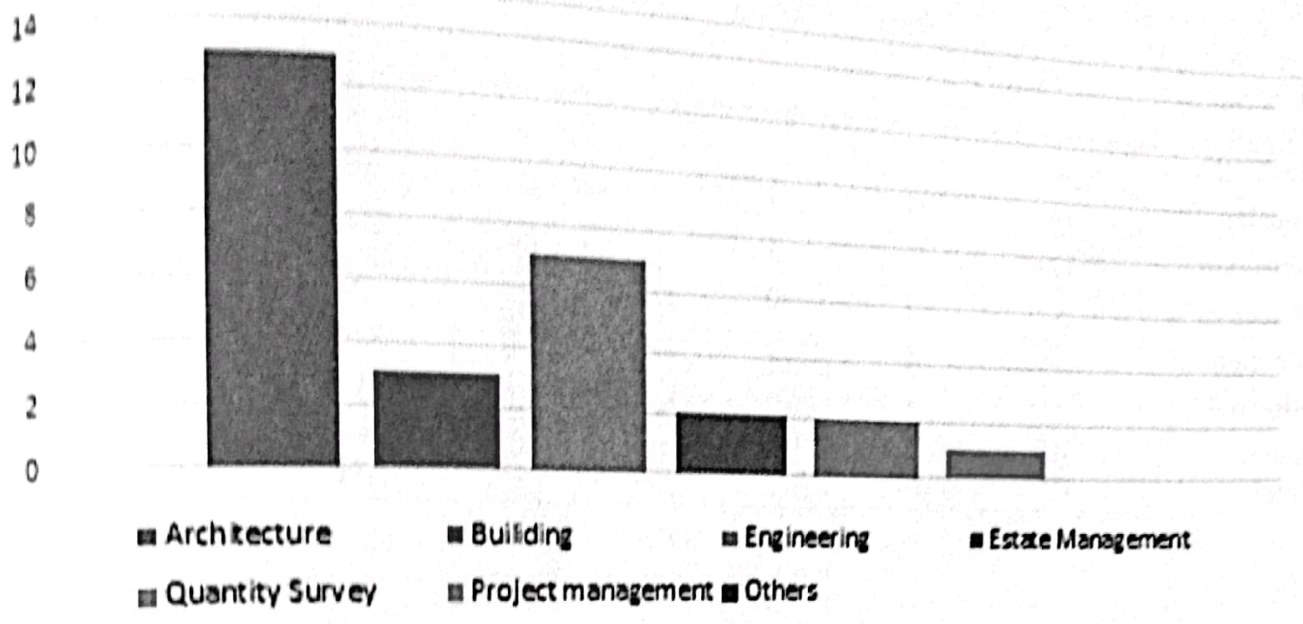


Figure 2: Respondent's area of specialization

### *Types and sources of building projects undertaken by respondents*

Table 2 shows that respondents' principal building projects are housing (37.5%), education (23.08%), and commercial (15.38%). The distribution of respondents' project experiences indicates they possess significant expertise in areas vital to social and economic infrastructure. Their extensive involvement in housing projects means their insights likely reflect the challenges and factors affecting residential development, which is crucial for addressing housing needs. Additionally, their experience with educational and commercial projects shows they are knowledgeable about the complexities and requirements of constructing facilities for educational institutions and businesses.



**Table 2: Types and sources of building projects undertaken by respondents**

Type of building projects	Sources of project				Total	Percentage
	Fed.	State	Local	Private org.		
Health Sector	1	2	2	0	5	4.81%
Housing	14	4	1	20	39	37.50%
Education	17	4	1	2	24	23.08%
Offices	5	2	0	2	9	8.65%
Commercial	3	4	2	7	16	15.38%
Industrial	1	1	0	1	3	2.88%
Others	0	2	1	5	8	7.69%
Total	41	19	7	37	104	100.00%

This broad range of project experience adds credibility to their views on construction project failures, as it encompasses various building types and associated issues. The data reveals that the majority of projects (39.42%) are at the federal level, followed by commercial organizations (35.60%), state level (18.27%), and local government level (6.73%). This distribution highlights that many respondents are engaged in large-scale, national projects. Consequently, their findings are likely to be particularly valuable for understanding the constraints and factors affecting major infrastructure and development projects on a national scale (Figure 3). The substantial involvement of private organizations (35.60%) in projects highlights the respondents' experience with market-driven construction, which often faces different challenges compared to public sector projects, such as stricter budget constraints and tighter deadlines. The engagement in state-level projects (18.27%) suggests a familiarity with regional regulatory and logistical issues that impact project performance. In contrast, the smaller proportion of local government projects (6.73%) indicates limited exposure to local government complexities, including reduced budgets and community-specific challenges. This broad range of project involvement across various governance levels and sectors equips respondents with a comprehensive understanding of the diverse factors affecting construction project failures in Nigeria. The varied scales and governance contexts of their projects enhance



their insights into the systemic issues influencing project outcomes.

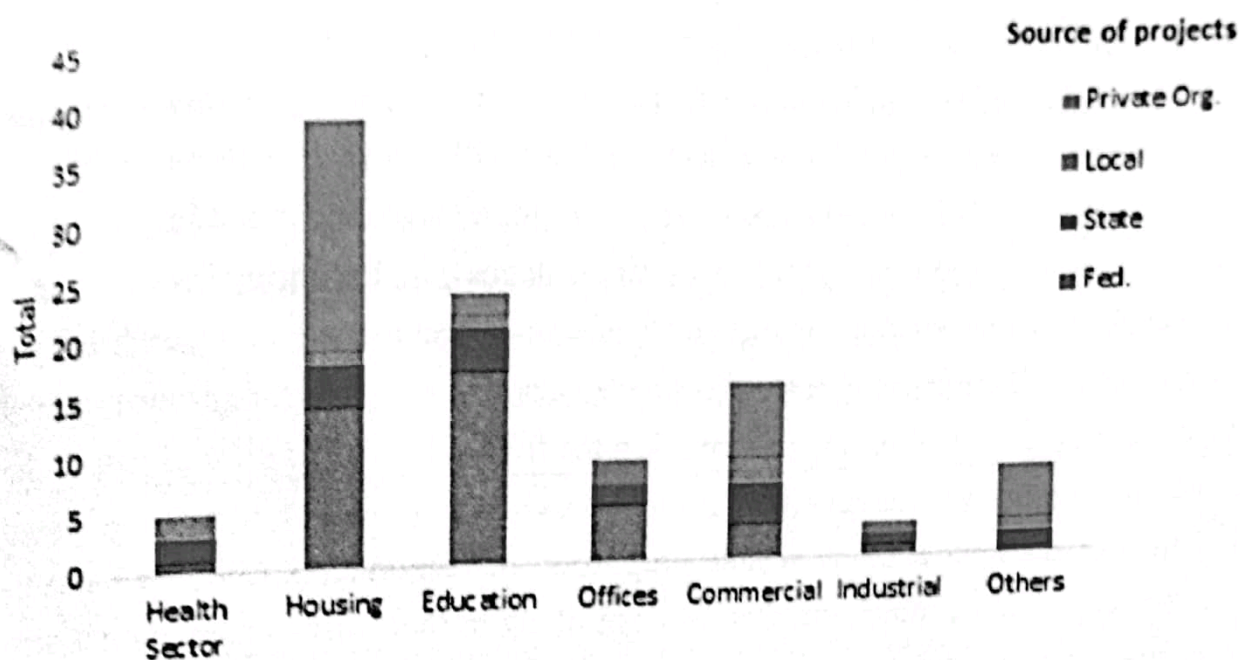


Figure 3: Types and sources of building projects

Table 3 details the respondents' experience based on the number of projects managed over the past five years. The majority (39.3%) have overseen projects for 6-10 years, followed by 27.7% with 1-5 years of experience, 17.9% with 11-15 years, 9.8% with 20 years and above, and 5.4% with 16-19 years of experience. This distribution reveals several key insights: (i) Prevalence of Mid-Level Experience: A significant portion of respondents (39.3%) have 6-10 years of project management experience, indicating that many are at a mid-career stage. These individuals likely possess a solid mix of practical experience and up-to-date knowledge of industry practices.

Table 3: Number of projects handled by the respondents

Average number of projects handled	Frequency	Percent
over 5vrs	31	27.7
1 - 5vrs	44	39.3
6 - 10vrs	20	17.9
11 - 15vrs	6	5.4
15- 19vrs	11	9.8
20vrs and above	112	100.0
Total		



- (ii) **Prevalence of Mid-Level Experience:** A significant portion of respondents (39.3%) have 6-10 years of project management experience, indicating that many are at a mid-career stage. These individuals likely possess a solid mix of practical experience and up-to-date knowledge of industry practices. (iii) **Diverse Experience Levels:** The range of experience among respondents spans from those with 1-5 years to those with over 20 years (Figure 4). This variety provides a comprehensive understanding of project challenges and solutions across different career stages. (iv) **Emerging Professionals:** A notable 27.7% of respondents are relatively new to project management, with 1-5 years of experience. Their insights may reflect recent academic learning, familiarity with the latest technologies, and initial challenges in the field. The distribution of respondents based on their project management expertise provides a number of interesting insights:
- (i) **Mid-Level Experience:** A sizable proportion of respondents (39.3%) have 6-10 years of experience, indicating that they are likely in their mid-career, with a strong combination of practical experience and current industry knowledge. (ii) **Wide Range of Experience Levels:** The data includes both novices (1-5 years) and highly seasoned experts (20 years or more). This diversity strengthens the study by offering insights from various professional stages.

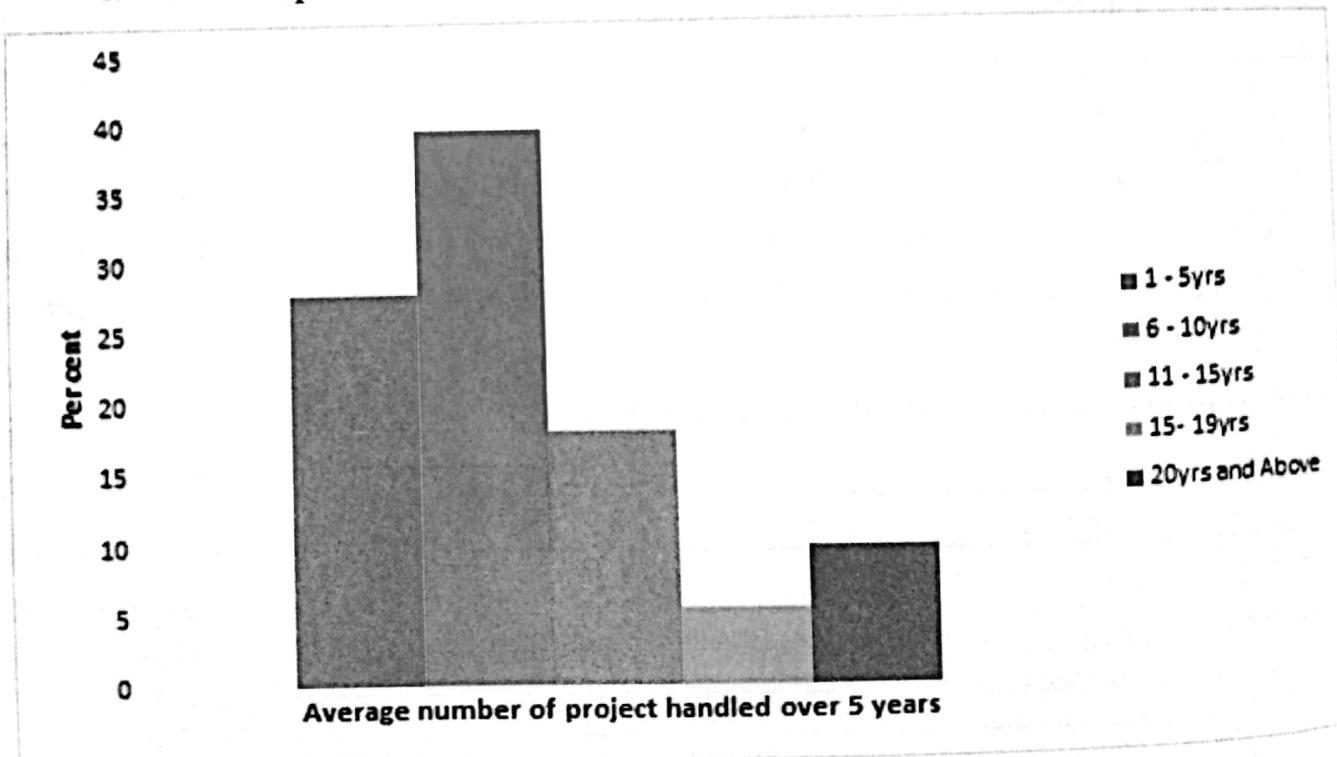


Figure 4: Number of projects handled by the respondents



(iii) **Emerging Professionals:** A significant proportion of respondents (27.7%) have 1-5 years of experience, indicating that they are in the early stages of their careers. Their feedback may reflect recent training and initial struggles in the industry. (iv) **Seasoned Experts:** The inclusion of respondents with 20 or more years of experience (9.8%) guarantees that long-term industry perspectives are included, providing essential historical background for current concerns. (v) **Potential gaps:** The comparatively modest proportion of responders with 16-19 years (5.4%) and 20 years or more experience (9.8%) may reflect a lack of grasp of long-term industry difficulties or historical trends. Overall, the respondents' diverse experience provides richness to the study, covering a wide spectrum of opinions from various professional phases and project obstacles.

### Insights from Project Value Distribution

Table 4 shows that nearly half of respondents (41%) had managed projects costing more than 20 million naira. This shows that many participants have prior experience with high-budget projects, which can provide valuable insights on managing large-scale financial resources in construction.

**Table 4: Building projects managed over the last five years**

	Frequency	Percent
Total cost of all the building projects managed over the last five years	21	18.8
1 - 5 million	20	17.9
6 - 10 million	17	15.2
11 - 15 million	8	7.1
15- 19 million	46	41.1
20Million and above	112	100.0
Total		

**Diverse Financial Range:** The distribution includes respondents who worked on projects with varying financial values: 18.8% for 1-5 million naira, 17.9% for 6-10 million naira, 15.2% for 11-15 million naira, and 7.1% for 15-19 million naira (Figure 5). This range implies that the study includes a wide range of project sizes, providing a balanced picture of the issues experienced at different scales of building projects. **Government Project Exposure:** The huge percentage of respondents who have managed projects worth more than 20 million naira implies extensive exposure to large government undertakings. This exposure suggests that their



responses are based on hands-on experience with public sector procurement processes, regulatory compliance, and the bureaucratic roadblocks that are usually associated with government-funded initiatives. **Insight Reliability:** Based on their extensive expertise with high-value projects, respondents are thought to be knowledgeable and capable of providing accurate insights into the factors that contribute to project failures. Their experience managing large budgets and complex project logistics makes their counsel particularly beneficial for identifying key obstacles and feasible solutions. **Financial Management Awareness:** Given their exposure to a wide range of project values, respondents are likely to be well-versed in construction financial management methods. This information is crucial for identifying financial mismanagement or funding issues that could lead to project failures. Overall, the dispersion of respondents' project values reflects their broad and diverse experience, which strengthens the reliability and depth of their views into the root causes of project failure in Nigeria. This diverse financial background allows for a full evaluation of both small and large-scale project challenges.

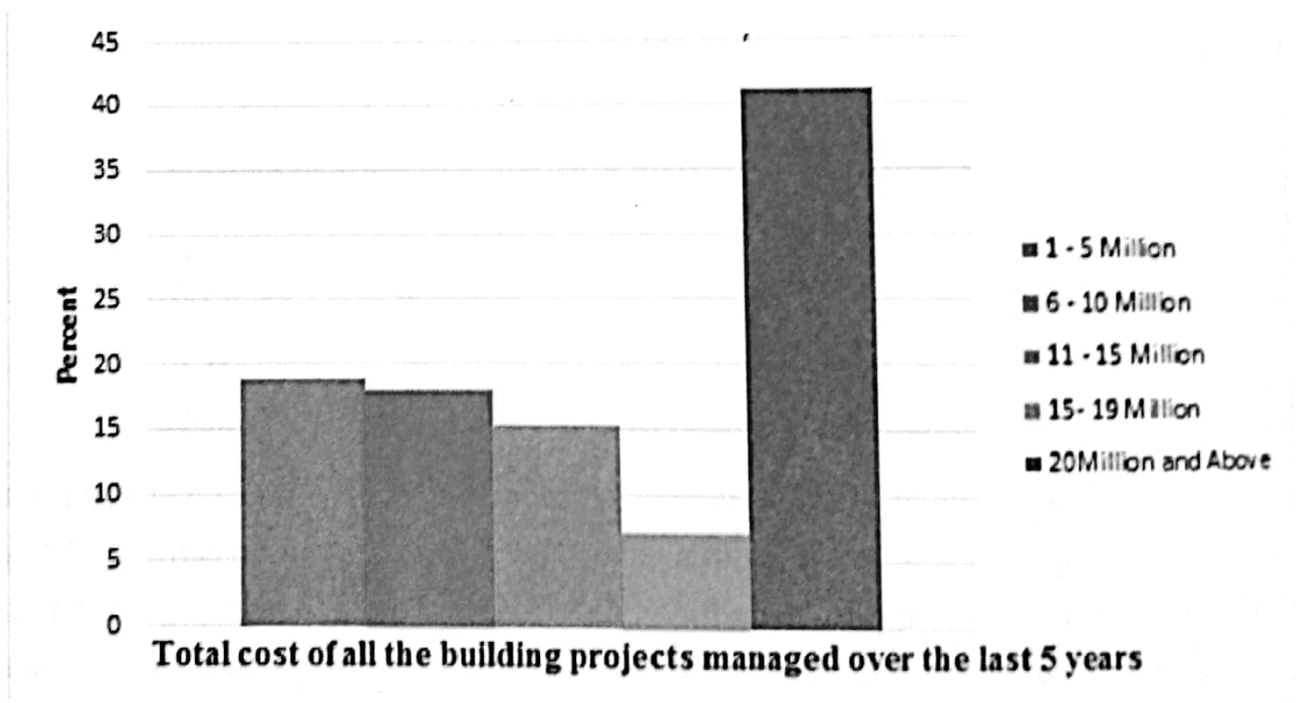


Figure 5: Cost of all building projects managed by respondents over the last five years



### *Barriers to effective implementation of project planning management techniques/tools*

Table 5 displays the range of respondents' assessments of barriers to effective implementation of project planning techniques/tools, providing critical insights: Barriers are of great importance. The bulk of the listed barriers have a high Relative Importance Index (RII) score ( $0.6 \leq \text{RII} < 1.8$ ), indicating that respondents regard these difficulties as significant challenges to efficient project planning. This demonstrates that there is broad agreement on the major hurdles that must be overcome in order to improve project success. Top-ranked barriers: The most major impediment is the frequency of budgetary changes and limitations resulting from government changes. This indicates that political instability and economic uncertainty are regarded as the greatest unfavourable factors influencing project planning. This insight underlines the need for more secure and predictable government policies and financing channels to improve project outcomes. Reordering of Priorities: The second-ranked barrier, reordering priorities or redirecting funds over time, highlights the need of changing governmental or organisational priorities, which can lead to budget reallocations and project delays or cancellations. This emphasises the significance of strong project commitment and constancy, even when external conditions change. Management and contractual issues: Management failures and effective contract agreements and awards were ranked third, raising major concerns regarding project management procedures and contractual arrangements. This demonstrates that strengthening managerial skills, contract formation, and compliance are critical areas of focus for project planning and execution. The only barrier with a low RII score ( $< 0.6$ ) is insufficient knowledge of appropriate project management procedures. This shows that, in comparison, respondents do not see a lack of grasp of project management methodologies as a serious issue. This could indicate that the specialists are generally well-trained but hampered by external and systemic obstacles.

The implications are as follows. The high ranking of budgetary changes and shifting priorities highlights the importance of political and financial stability for effective project management. Policies that ensure continuous and reliable funding and priorities can significantly improve project success. Focus on Management Techniques: The emphasis on management failures and contract issues suggests that particular improvements in project management approaches and contractual frameworks are required. These obstacles could be overcome with training, stricter



contract adherence, and solid management techniques. Because many barriers are highly rated, a comprehensive approach that tackles political, financial, managerial, and contractual challenges is essential for improving project planning and execution. Overall, the findings indicate that, while professionals are knowledgeable and competent, the external environment and systemic concerns provide the most important hurdles to effective project planning. Addressing these challenges through comprehensive policy and management reforms is crucial to boosting the success rate of construction projects.

**Table 5:** Barriers to effective implementation of project planning management techniques

	Barriers	Weighing frequency of response (f)					$\Sigma f$	$\Sigma fx$	$\bar{X}$	RII	Rank
		1	2	3	4	5					
a.	Presence of discrepancy between project design objectives and the implementation capacity of the Agency/Organization/Ministry		3	4	3	17	2	29	94	3.241 0.648	6 <sup>th</sup>
b.	Lack of continuous project appraisal		2	7	2	15	3	29	97	3.345 0.669	4 <sup>th</sup>
c.	Management lapse and effective contract agreements and awards		3	5	5	10	6	29	98	3.379 0.676	3 <sup>rd</sup>
d.	Limited knowledge in application of appropriate project management techniques		5	9	5	8	2	29	80	2.59 0.552	9 <sup>th</sup>
e.	Inadequate project planning which includes the cost and scheduling as well as method for successful implementation		4	8	4	8	5	29	89	3.069 0.614	8 <sup>th</sup>
f.	Lack of monitoring, evaluation and control mechanism to assess the progress of the project		4	4	6	9	6	29	96	3.310 0.662	5 <sup>th</sup>
g.	Lack of specific studies undertaken to make recommendations for project appraisal		3	6	9	6	5	29	91	3.138 0.628	7 <sup>th</sup>
h.	Frequent budgetary changes and constraints due to changes in government		2	1	5	12	9	29	112	3.862 0.772	1 <sup>st</sup>
i.	Reordering of priorities or diversion of funds as time progresses		3	3	6	7	10	29	104	3.586 0.717	2 <sup>nd</sup>



### Classification of projects undertaken within the last five years by respondents

Table 6 displays the distribution of respondents' experiences with project outcomes over the last five years, with several implications: The prevalence of successful projects: Projects classified as successful had the highest Relative Importance Index (RII) value of 0.662. This shows that a large proportion of respondents managed projects that met their objectives and were completed successfully. This demonstrates that, despite a variety of challenges, many projects achieve their goals, reflecting well on the respondents' abilities and the potential utility of current project management methods. Significant challenges: Challenged efforts, with a RII value of 0.655, trailed successful ones.

Table 6: Classification of projects undertaken within the last five years by respondents

Grade	Weighing Frequency of Response (X)					Σ F	Σ F / X	RII	Rank	
	5	4	3	2	1					
<b>Project success:</b>										
The project is completed on time, on -budget, fulfilled all functions and features as specified	9	32	17	48	8	114	356	3.12	0.62	1 <sup>st</sup>
<b>Project challenged:</b>										
The project is completed and operational but over-budget, over the time estimate, and offers fewer functions and features than originally specified.	6	40	15	44	9	114	352	3.08	0.61	2 <sup>nd</sup>
<b>Project impaired:</b>										
The project is cancelled and / or stopped before completion at some point during the developed cycle.	15	29	22	41	7	114	338	2.96	0.59	3 <sup>rd</sup>

This high grade within the same range ( $0.6 \leq \text{RII} < 0.8$ ) suggests that almost as many projects encounter major challenges that impede their progress, but they may still reach completion. These issues are likely to include delays, budget overruns, or scope changes, suggesting areas for improvement that might help enhance project success rates further. Impaired projects have a



lower rating (RII score of 0.574), indicating that fewer initiatives fail to meet their objectives or are abandoned. This lower prevalence suggests that project failures do occur, although they are less common than successful or challenged endeavours. This displays responders' resilience and problem-solving skills, allowing them to manage and eliminate difficulties before they cause project failure.

The consequences of these findings are the following: (i) **Concentrate on Increasing Success Rates:** The relatively high RII for successful projects indicates that existing project management procedures are adequate but might be improved. Continued investment in training, best practices, and advanced project management tools could increase the success rate even more. (ii) **Addressing Challenges:** The roughly equal RII for tough projects suggest that there is plenty of room for improvement. Common issues in these projects, such as resource constraints, communication breakdowns, or planning flaws, can be recognised and addressed by targeted interventions, minimising the number of problematic initiatives. (iii) **Learning from Failures:** While impaired projects are infrequent, their emergence underline the importance of carefully reviewing failure cases. Understanding the root causes of these failures may provide valuable insights for preventing future project impairments. (iv) **Balanced View of Project Health:** The distribution represents a balanced perspective on project health, with both successful and problematic projects represented about equally. These balancing highlights the need of having a dual focus: developing traits that contribute to success while also addressing and reducing issues that cause projects to be questioned or degraded. Overall, respondents' experiences suggest a mixed but positive outlook on project outcomes, with clear opportunities for improvement in addressing the elements that contribute to difficult and damaged projects.

### ***Factors Impacting Project Success***

The distribution of respondents' perceptions about factors influencing project success, as described in Tables 7 and 8, has several significant implications: Key impediments to success. Respondents classified the primary barriers to project success into three categories: planning, human, and execution difficulties. The major effect factors are: Human Factors: Payment delays to contractors caused by government bureaucracy were ranked first, highlighting the significant impact of administrative inefficiencies on project timelines and contractor



Performance. Planning Factors: A rise in the scope of work without a corresponding increase in project estimate appeared first, underlining the critical issue of scope creep and insufficient budgeting. Implementation Factors: Inadequate monitoring and/or poorly performed inspections were ranked first, underlining the importance of effective oversight and quality control.

Human factors ranked first overall, with all sub-factors receiving high RII values ( $0.6 \leq RII < 8$ ). This demonstrates that human resource variables such as contractor selection, experience, and payment delays are seen as the most important indicators of project success. The emphasis on human factors necessitates enhanced management systems, prompt payments, and the engagement of experienced and qualified contractors. Importance of Effective Planning: Planning elements came in second, with most sub-factors obtaining excellent RII ratings, with the exception of challenges such as changes in pre-contract consultants and improper application of plans, which received lower scores. This underlines the importance of robust and adaptable planning processes. It is critical for project success to keep initial cost and schedule estimates up to date with new information while also keeping accurate and realistic project scopes. Implementation challenges include: Implementation components were ranked third, indicating that, while significant, they have a slightly smaller impact than human and planning aspects. However, inadequate monitoring and inspections remain significant concerns. This highlights the significance of ongoing project oversight and adherence to quality standards throughout the project's lifecycle.

Table 7: Respondents submission on Factors Impacting Project Success

Factors	Weighing Frequency of response (f)					$\Sigma f$	$\Sigma fx$	$X_{\bar{}}$	RII	Rank
	1	2	3	4	5					
<b>Planning Factor</b>										
Poor project planning in terms of project requirements, materials, equipment, personnel and finance	3	5	7	8	6	29	88	3.03	0.606	7 <sup>th</sup>
Plans are not used correctly or used to guide the project forward, thus causing the project to fail	5	8	8	3	5	29	82	2.83	0.566	8 <sup>th</sup>



Initial cost and schedule estimate are not revised when more information becomes available as a project progress	3	5	3	9	9	29	103	3.55	0.710	3 <sup>rd</sup>
Major changes in the project requirements	2	5	9	9	4	29	95	3.28	0.656	6 <sup>th</sup>
Poor or ineffective project finance arrangement	2	5	7	6	9	29	102	3.52	0.704	4 <sup>th</sup>
Insufficient working capital	5	4	3	7	10	29	100	3.45	0.690	5 <sup>th</sup>
Escalation in total cost of project before completion time due to the economy and inflation	4	1	5	12	7	29	104	3.59	0.718	2 <sup>nd</sup>
Increase in the scope of work without increase in project estimate	3	1	4	12	9	29	110	3.79	0.758	1 <sup>st</sup>
Change in pre-contract consultants such as architect	9	2	4	7	6	29	83	2.86	0.572	9 <sup>th</sup>
<b>Human Factor</b>										
Challenges of delay in payment to contractors resulting from government bureaucracy	0	4	5	11	9	29	112	3.86	0.772	1 <sup>st</sup>
Selection and award of contractor based on lowest bidder and not on experience and competency	3	3	3	11	9	29	107	3.69	0.738	2 <sup>nd</sup>
Haphazard award of contracts without reference to funds availability	6	1	8	10	4	29	92	3.17	0.634	6 <sup>th</sup>
Contractor's incompetency leading to low performance	1	4	8	11	5	29	102	3.52	0.704	3 <sup>rd</sup>
Unrealistic Expectations	5	4	8	9	3	29	88	3.03	0.606	7 <sup>th</sup>
Poor or shoddy work by building professionals, consultants, etc.	4	6	4	9	6	29	94	3.24	0.648	5 <sup>th</sup>
Specification of costly imported materials	5	3	5	9	7	29	97	3.34	0.668	4 <sup>th</sup>
Increase in contract sums	5	3	6	10	5	29	94	3.24	0.648	5 <sup>th</sup>
<b>Implementation Factor</b>										
Haphazard completion of technically unsound project	6	6	6	6	5	29	85	2.93	0.586	6 <sup>th</sup>
Incorrect use of project methodology	5	8	3	11	2	29	90	3.10	0.620	5 <sup>th</sup>
Changing requirements and specifications	3	6	3	12	5	29	97	3.34	0.668	3 <sup>rd</sup>
Inadequate monitoring and/or poorly carryout inspections	4	2	3	11	9	29	106	3.66	0.732	1 <sup>st</sup>
Inadequate resources (e.g. equipment/tools, expertise, time, money and materials)	5	3	3	6	11	29	99	3.41	0.682	2 <sup>nd</sup>
Frequent changes in government	5	5	5	6	8	29	94	3.24	0.648	4 <sup>th</sup>

Addressing the Top Issues: The most crucial factors—payment delays, scope expansion without budget changes, and poor monitoring—highlight areas where quick improvement might yield significant benefits. To solve these obstacles, concrete steps include expeditious



government payment systems, ensuring accurate budgeting and scope management, and enhancing inspection protocols

Table 8: Ranking of factors that impact project success

Rank	Planning RII	Human RII	Implementation RII	Mean RII	Overall Rank
1 <sup>st</sup>	0.758	0.772	0.732	0.752	1 <sup>st</sup>
2 <sup>nd</sup>	0.718	0.738	0.682	0.713	2 <sup>nd</sup>
3 <sup>rd</sup>	0.710	0.704	0.668	0.697	3 <sup>rd</sup>
4 <sup>th</sup>	0.704	0.668	0.648	0.675	4 <sup>th</sup>
5 <sup>th</sup>	0.690	0.648	0.620	0.653	5 <sup>th</sup>

The broader implications include: (i) An emphasis on Human and Administrative Efficiency: Given the importance of human factors, enhancing administrative efficiency, ensuring timely contractor payments, and selecting qualified contractors are essential steps towards project success. (ii) Improve Planning Processes: Having extensive and adaptable planning processes that account for scope changes and economic concerns would help to avoid many of the planning issues identified. (iii) Enhance Monitoring and Inspection: Implementing tight monitoring and inspection methods can address numerous implementation challenges, ensuring that projects are completed to the required standards and timescales. Stakeholders may significantly improve the likelihood of project success, reduce delays, and optimise resource utilisation in construction projects by focussing on three key areas: administrative efficiency, precise planning, and effective implementation oversight.

## DISCUSSION OF FINDINGS

The findings derived from the obtained results is discussed in the light of objectives of this study.

**Objective 1: To examine the contextual factors contributing to construction project failures in Nigeria.**

This objective contributed to a better understanding of the complex relationship between building projects directed by experts and the common problem of construction project failures in Nigeria. This relationship is most likely linked to poor project management techniques.



which can manifest in improper scheduling, budgeting, and resource allocation, resulting in delays, cost overruns, and, eventually, project failure (Oyewobi *et al.*, 2020). While project management practices are clearly important, it is critical to recognise that many other factors contribute to the root causes of construction project failures in Nigeria.

***Objective 2: To assess the impact of poor project planning and management practices on construction project outcomes in Nigeria.***

To achieve objective two, the findings show that, for example, widespread corruption in the construction industry can encourage the use of substandard materials, insufficient oversight and the awarding of contracts to unqualified firms, all of which significantly increase the risk of project failure (Afolabi *et al.*, 2019). Furthermore, cases of inadequate or underfunding of projects from the start frequently result in shortcuts in construction or the use of inferior materials, lowering quality and increasing the chance of failure (Adenuga *et al.*, 2021). Furthermore, infrastructure and logistical challenges, such as limited access to quality materials, unreliable transportation networks, and a skilled labour shortage in certain regions of Nigeria, impede project completion and may contribute to project failure (Olanrewaju *et al.*, 2018). Furthermore, the scarcity of qualified construction professionals to manage projects exacerbates these issues. Poorly designed projects with unrealistic timeframes, finances, and poor risk assessments are more vulnerable to failure, emphasising the significance of precise planning and execution by skilled professionals (Oyewobi *et al.*, 2020). Furthermore, breakdowns in communication among project stakeholders, such as clients, contractors, and engineers, can lead to misconceptions, delays, and, eventually, project failure (Ajibade *et al.*, 2019).

***Objective 3: To explore strategies and interventions for mitigating the risk of construction project failures and enhancing project performance in Nigeria.***

According to the findings, disregard for regulations and standards, along with a failure to conform to building codes and safety regulations, poses a serious risk to building structural integrity, potentially resulting in collapse or safety concerns (Olanrewaju *et al.*, 2018). Construction experts must ensure rigorous adherence to these requirements in order to reduce hazards and maintain safety standards (Ajibade *et al.*, 2019). In conclusion, while poor project management practices undoubtedly contribute to construction project failures in Nigeria, it is



ical to acknowledge the multifaceted nature of the problem, which includes corruption, inefficient funding, infrastructure challenges, poor planning, communication breakdowns, and non-compliance with regulations. To address these underlying problems, all stakeholders in building projects must work together to improve project management techniques and maintain quality and safety standards.

## CONCLUSION

The purpose of this research is to investigate and analyse the underlying causes of construction project failures in Nigeria, with the goal of finding significant elements, patterns, and dynamics that influence project results. The primary problems studied were determining the causes of construction failure and abandonment, as well as the impact of such failure and abandonment on national development. According to the findings, some of the identified causes of construction project failure and abandonment were poor monitoring, poor planning, corruption, poor feasibility studies, partial commitment to the project by the proponent, faulty task definition, natural disaster, poor funding, cultural belief, political interference, fluctuations in material and labour prices, non-involvement of users (lack of citizen participation), planning regulation, change in scope of the project. Furthermore, some of the identified consequences of abandonment and failure of public sector construction projects included an increase in the cost of assessing social amenities in other areas where they are available as well as obtaining them from private establishments; a decrease in the value of nearby properties; nuisance; environmental decay; and littering. Furthermore, research found that socioeconomic, political, and institutional factors contribute considerably to construction project failures in Nigeria by creating a complicated and difficult operating environment that exacerbates project risks and vulnerabilities. These factors influence project success. To summarise, the interplay of socioeconomic, political, and institutional dynamics in Nigeria creates a challenging environment for construction projects, contributing to project failures through economic insecurity, policy uncertainty, corruption, weak regulatory frameworks, capacity constraints, and stakeholder coordination issues. To improve project outcomes and achieve sustainable development goals, complete reforms must be adopted, including strengthening governance systems, increasing regulatory compliance, promoting transparency and accountability, and encouraging stakeholder participation.



## RECOMMENDATIONS

Mitigating the risk of construction project failures and enhancing project performance in Nigeria requires a multifaceted approach that encompasses project design, implementation and management. The following suggestions are provided as strategies and actions to accomplish this.

- **Effective Project Planning:** Early identification of potential risks and impediments is crucial for successful project completion. This includes conducting feasibility studies, risk assessments, and thorough project planning to anticipate and manage potential issues.
- **Stakeholder Engagement and Collaboration:** Involving stakeholders, including government agencies, local communities, contractors, consultants, and end users, enhances transparency, accountability, and buy-in throughout the project life cycle. Collaboration among stakeholders creates shared goals, reduces conflict, and enhances project outcomes.
- **Investing in training and development** for construction professionals, including engineers, project managers, and craftspeople, improves technical expertise and project delivery. This can be accomplished through vocational education, certification programs, and on-the-job mentoring.
- **Reforming and enforcing regulations** improve construction quality, safety, and sustainability. Effective regulation encourages adherence to best practices, lowers substandard building, and increases public trust in the built environment.
- **Technology Adoption and Innovation:** Implementing digital technologies such as BIM, drones, and project management software enhances project workflows, collaboration, and decision-making processes. Building material, method, and process innovation improves efficiency, saves costs, and mitigates project risks.
- **Implementing effective risk management methods**, including identification, evaluation, mitigation, and monitoring, can enhance proactive risk management for projects.
- **Developing contingency plans and reaction strategies** for unexpected interruptions such as weather, supply chain disruptions, and workforce shortages can help to avoid project delays and cost overruns.



Ensuring enough project funding, budgetary control, and transparency can prevent financial mismanagement and project abandonment. Transparent procurement, contract management, and financial reporting increase accountability while reducing the risk of corruption and fraud.

**Community Engagement and Social Responsibility:** Integrating community concerns and requirements into project planning and design improves social acceptance and reduces resistance to construction activities. Implementing social responsibility initiatives, such as job creation, skill training, and community development projects, fosters positive relationships and enhances project sustainability.

**Quality Assurance and Control:** Implementing rigorous inspections, testing, and certification ensures that quality standards and criteria are satisfied. Maintaining quality throughout the building process reduces rework, faults, and conflicts, leading to better project outcomes.

**Continuous Monitoring and Evaluation:** Tracking project progress, performance indicators, and crucial milestones enables timely intervention and remedial action. Regular project reviews, performance assessments, and lessons learnt activities enable continuous improvement and knowledge sharing across projects.

By applying these recommendations and taking relevant actions, stakeholders in Nigeria can lower the likelihood of construction project failures while also improving project performance, thereby contributing to long-term development and infrastructure provision.



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