

An Assessment of Risk Management Factors Delaying Construction Project in Nigeria



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ABSTRACT: Risk management is a field that exists within the subject area of project management deals with the identification, monitoring and mitigation of risks. It is seen as the effect of uncertainty on objectives so this process serves as an optimization of the project delivery process to ensure that the project objectives are achieved. Risk results from a variety of factors like design problems, technological complexity and lack of experienced personnel. Managing these risks involves contemplating actions or measures. The study aimed at assessing risk management factors delaying construction project in Nigeria. The objectives were to examine the factors that influence the development of risk management in the construction industry and identify the level of knowledge, experience and barrier to risk management practice. The research approach adopted for this study was quantitative design. To cover the study area effectively, a field survey was utilized in form of a structured questionnaires for the major study population and anchored with semi-structured interviews for the secondary population and other relevant secondary data. 70 Professional Project Managers were sampled from different construction firm. Hence, 70 questionnaires were administered while 40 questionnaires were properly filled and returned for collation represents 57.1% response rate. Statistical tools was used for the study. The result confirms showed that Change in climactic condition is the major factor that influences the development of risk management in Nigerian construction industry. Result also suggests that majority of the respondents upheld the relevance of risk management practice in project management. The implication is that most though Professional Project Managers understood the relevance of risk management in the construction industry, they should always make provisions for uncertainties through effective risk management strategies.

KEYWORDS: Risk, Risk management, Professional project managers, project schedule, Construction industry.

I. INTRODUCTION

The integration of risk management practices with effective project management has become more commonplace and essential in the delivery of project objectives. According to the Project Management Body of Knowledge guide (2019), risk can be described as an uncertain event or situation which would have an impact on a projects ability to achieve specific set objectives. The uncertainty of this event during the project lifecycle could have positive or negative implications as regards to achieving project success according to the success factor criteria and satisfying the intended objectives (PMBOK, 2019) which is why the project managers who are accountable for the delivery of these objectives should become adept at initiating, planning, executing, monitoring, controlling and closing the project. This overall project management involves risk management which is defined as the process that allows individual risk events and overall risk to be understood and managed proactively, optimizing success by minimizing threats and maximizing opportunities and outcomes" (PMBOK, 2019). Poor management of uncertainty in most projects lead to problems such as project abandonment within the Nigerian construction industry (Awodele, 2009) and projects failing to meet their targets.

The Problem

The nature of construction projects means that risk can be generated from a variety of different sources as a result of the interests and stakeholders who are involved among other factors. Poorly implemented risk management can cause quality issues, time overrun and excess costs within construction projects; so it is necessary and cost-effective for these risks to be addressed in a proper and timely manner. However, the attitude within the Nigerian construction industry where there can be general apathy towards risk management knowledge and practice among the companies can attest to the fact there is a lack of systematic

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implementation of risk management. In trying to profound solution, the study present information on empirical study on risk management factors in delaying construction project in Nigeria.

Objective of the Study

1. To examine the factors that influences the development of risk management in the construction industry of the study area.
2. To identify the level of knowledge areas or experience, barrier to risk management practice and how risks increase delays during a construction project.

Scope of the Study

The scope of the study was limited to Enugu metropolis due to the recent boom in construction activities in the state.

II. EMPIRICAL REVIEW

The construction industry on its part, provide many employment opportunities within the field of building, engineering, architectural and private industries. It requires the effort of different firms, experience contractors, architects and engineers, professionals like structural engineers and quantity surveyors, suppliers and manufacturers of equipment.

Risk within the construction industry is understood to be a mixture of activities that has an effect on project in relation to time of completion, project cost, scope and quality of works. Risks in the construction projects can be determinants of the total costs of the project and their distribution has significant effect on project financial plan. Construction risks can be technical, management or socio-political aspects or even natural disasters. Some risks are easily identified but still unforeseen (Odeyinka, 2007).

According to Dada (2003) most contractors in the developing countries lack experience and knowledge to effectively contain with risk related cases. In as much as they are not familiar with risk factors inherent in construction projects, the consequences becomes obvious thus leading to failure of such projects. Omotosho (2011), opined that there is an estimate of about 11, 886 publicly financed projects that have been abandoned for the past four decades across the country. The findings of the study by Omotosho (2011) attributed the causes of these abandoned projects to corruption, lack of funding and most importantly, poor attitude to risk management processes and practices in construction projects. Dada (2003) further opined that the rate of abandonment, cost and schedule overrun, as well as scope creep in construction projects which continue to soar projects. This will continue to soar until risk management practices are recognized as an integral component of project success and subsequently implemented accordingly.

By analyzing the influence, one can make better predications and control the schedule as well as ensure that projects are completed successfully. This research is focused on the risk management issues in construction projects. Therefore, the scope of this work is narrowed down to studying the impacts and effects of risk issues on project schedule, cost, scope and quality parameters. According to Jagboro (2007) clients engage other consultants before the project managers in 39% and project managers before other consultants in 23% on most projects which suggests that there could be an inadequate involvement of Project managers as one of the factors hindering the analysis of risks before the project commencement. Another issue with risk analysis within the construction industry is that knowledgeable professionals are needed to analyze the potential risks, monitor and control the risks from the project inception to the project closeout. It is obligatory at this stage to look at the extent and frequency of use of risk analyses techniques within the Nigerian construction industry.

The Nigeria construction industry does not use formal risk analysis and management techniques which are important to construction projects to minimize time and cost of projects and enhance profitability due to lack of knowledge. Risk management of construction projects gives the most emphasis to environmental, economic and social issues. In the Nigeria construction industry, a risk management index has not been developed prior to that of Adakole (2013) who was able to establish a risk management index of 0.5304, for Nigeria, which suggests that the construction industry in Nigeria are exposed to 53.04% risk. Hence, he suggested that index needs regular updating to justify the index usefulness within the uncertain environment of the industry. This helped in identifying some of the risk factors that had a high probability of occurrence from their research and informed the participants on risk categories with a high degree of occurrence within the construction industry in Nigeria and provided a foundation for the right approach in adopting risk management practice. This study will help the construction industry's professionals explore the areas of knowledge or experience that will help in managing project risks effectively especially knowledge on cost management, resource management, quality management, time management and scope management that will ensure managing project risks effectively.

III. METHODOLOGY

The research approach adopted for this study was quantitative design. To cover the study area effectively, a field survey was utilized in form of a structured questionnaires for the major study population and anchored with semi-structured interviews for the secondary population and other relevant secondary data. The study sampled 70 Professional Project Managers from different construction firm across Enugu and Abuja. Hence, 70 questionnaires were administered to Professional Project Managers. However, 40 questionnaires were properly filled and returned for collation represents 57.1% response rate. This response rate was considered enough by the researcher. Quantitative method involving some statistical tools was used for the study.

IV. RESULTS AND DISCUSSION

In this section, an analysis of the distribution and collection of questionnaire distributed were presented in the following Tables:

Table 1. Distribution and Return of Questionnaire Administered on Professional Project Managers

Class of Respondent	Sample Size/Number Distributed	Number returned/retrieved	Number not returned or improperly filled	Percentage of total number distributed and returned/retrieved	Percentage not returned or improperly filled	Total
Professional Project Managers	70	40	30	57.1%	42.9%	100%

The Table 1 shows questionnaire distribution and retrieval from professional project managers in respect of their role in dealing with risk in the process of project delivery. The population sample size which was the total number of questionnaire distributed was 70. Out of which only 40 were returned/retrieved, representing 57.1% while 30 questionnaire distributed representing 42.9% that were not properly filled were not returned.

Table 2. Respondents Distribution by Role

S/N	Description	Frequency	Percentage
1	Project Supervisor	7	17.5%
2	Architect	6	15%
3	Engineer	8	20%
4	Project Manager	9	22.5%
5	Others	10	25%
	Total	40	100

The Table 2 shows the role of respondents. 7 respondents representing 17.5% of the population are Project Supervisors, 6 respondents representing 15% of the population are Architects, 8 respondents representing 20% of the population are Engineers, 9 respondents representing 22.5% of the population are Project Managers, while 10 respondents representing 25% of the population said they play other roles. From the table, it was shown that most respondents play other roles.

Table 3. Ranking of Factors that Influences the Development of Risk Management in the Construction Industry of the Study Area.

S/N	Description	Not likely	Least likely	Less likely	Possible	Most likely	N	FX	\bar{x}	Ranking
		X	X	X	X	X				
1	Change in government policies and regulations analysis/forces	4	7	3	4	22	40	87	2.18	6

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2	Competition from other companies	7	5	12	9	7	40	116	2.90	3
3	The attitude of contractors	9	8	4	11	8	40	119	2.98	2
4	Cost of risk management implementation	4	12	7	8	9	40	114	2.85	4
5	Availability of knowledge and expertise	5	6	4	15	10	40	101	2.53	5
6	Change in climactic condition	11	8	7	10	4	40	132	3.3	1
	Total	40	46	37	57	60			2.79	

The Table 3 shows the mean mark calculated from the response of the respondents on ranking of factors that influences the development of risk management in Nigerian construction industry. Change in climactic condition was rated highest with a weighted mean score of 3.3 while Change in government policies and regulations the other hand was the least rated by the respondents having a weighted mean score of 2.18. This result confirms that Change in climactic condition is the major factor that influences the development of risk management in Nigerian construction industry.

Table 4. Level of Knowledge Areas or Experience, Barrier to Risk Management Practice and How Risks Increase Delays During a Construction Project.

	knowledge areas or experience that can help to identify and manage construction risks more effectively	The extent the following act as barrier to risk management practice in the Nigerian construction industry	The extent the following risks increase delays during a construction project
N Valid	40	40	40
Missing	0	0	0
Mean	2.59	2.53	2.27
Median	3.00	3.00	3.00
Std. Deviation	5	5	5
Variance	1.386	1.317	1.274
	1.920	1.734.	1.622

Table 4 shows that the mean, median and mode can be approximated to 5, which implies that the sampled population has an average knowledge, understanding of the barriers to risk management and risks that increases delays during a construction project in respondents' professional works. The result also suggests that majority of the respondents upheld the relevance of risk management practice in project management.

V. FINDINGS AND IMPLICATIONS

The result confirms showed that Change in climactic condition is the major factor that influences the development of risk management in Nigerian construction industry. The result also suggests that majority of the respondents upheld the relevance of

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risk management practice in project management. The implication is that most though Professional Project Managers understood the relevance of risk management in the construction industry, they should always make provisions for uncertainties through effective risk management strategies.

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