



# **CONCEPTUAL FRAMEWORK FOR CONSTRUCTION PROCUREMENT RISKS MANAGEMENT IN NIGERIAN TERTIARY INSTITUTIONS**

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## **ABSTRACT**

The procurement system practiced by public tertiary institutions in Nigeria is bedevilled with problems of mismanagement and corruption. These institutions are part of government Ministries, Departments and Agencies (MDAs) responsible for implementing the Procurement Act under the monitoring and supervision of the Bureau for Public Procurement (BPP). One of the challenges is the failure to determine the risks limiting project delivery success. These risk factors can cause a significant increase in the procurement cost leading to increase in the overall project cost, time and poor quality. The existing procurement risks management frameworks failed to consider the 9 essential steps highlighted by the BPP and failed to provide linkages between procurement risk management and procurement process. Equally, some key aspects of the 9 essential steps used as guidelines by most tertiary institutions, like appropriate market surveys, extensive feasibility and viability studies, fund sourcing/cash flow analysis, selection of procurement routes/options, and contract management plans, are most times being compromised by tertiary institutions in Nigeria. These problems attributed to major risks in procurement management process of these institutions. Thus, this research aimed to develop a conceptual framework for construction procurement risks management in Nigerian Tertiary institutions. The research adopted a desktop methodology, by conducting a thorough literature search on the existing procurement management frameworks, which informed the development of the conceptual framework for effective procurement risks management in Nigerian tertiary institutions. The conceptual framework revealed that risks management practices must be effective throughout the procurement process (the 9 essential steps) for effective procurement risks management, which will affect project objectives of meeting with time, cost, quality, environment and safety. It is recommended that the conceptual framework should be adopted for procurement risks management in tertiary institution to improving project delivery.

**Keywords:** conceptual framework, construction procurement, public tertiary, institutions, risk factors and risks management.

## **INTRODUCTION**

Procurement systems have evolved globally with innovations and improvements on service delivery. However, the systems are given little acceptance in some developing countries of the world (Adamu *et al.*, 2017). Governments all over the world invest huge sums of money on public procurement project of various types in the different sectors of their economies. Such procurement

may be in form of construction projects, goods, and services (PPDC, 2012). Thus, Ebenezer *et al.* (2019) reported that the results of Public Procurement exercise accounts for 15 to 30% of the GDP of any nation, and beside being responsible for 10 to 25% lost in some cases up to 40 to 50% of contract values. In spite of these statistics, procurement function has not been given the recognition it deserves in developing economies, most especially in the public entities, regardless of the efforts by the partners like the World Bank, the International Trade Organisation, the United Nations Conference on Trade and Development, the World Trade Organisation among others (Musa *et al.*, 2014; Ilyas *et al.*, 2018).

Challenges in procurement planning and services delivery in public sector are currently an issue not only in Africa but also in other part of the world (Kariuki and Wabala, 2021). Mukura *et al.* (2016) contend that poor construction procurement planning has been one of the major obstacles to the economic development of Africa and it has been clear that a number of African countries have not paid adequate attention to the proper management of procurement resources. Anane *et al.* (2019) added that procurement functions of most African countries do not fully comply to set procurement planning practices and performance procedures, resulting in irregular and subjective decisions that have had costly consequences especially poor service delivery in many counties.

In Nigeria, the Public Procurement Act (2007) applies to all the processes required in acquiring, purchasing goods, works and services, needed in running Government Ministries, Departments and Agencies (Bamidele, 2020). However, the procurement management practices adopted by most public tertiary institutions in Nigeria are not in full compliance with the current Public Procurement Act of 2007 (Oso, 2017). The procurement process of construction projects procured in public tertiary institutions is often confronted with inherent risks to include conflict of interest, ineffective project technical feasibility, lack of commitment to transparency, unavailability of indices for bids and costs, contractors' delayed payments for completed work, contractors' low managerial and technological ability, conspiracy amongst bidders, splitting of contract, inadequate training of procurement staff, lack of competition among bidders, over-estimated quantities of work items, Un confidential tender evaluation process, discrimination of tenderers, unequal treatment of tenders, low procurement competence, Use of inappropriate procurement strategy, and inconsistency of government policies, among others (Ewa, 2013; Uromi, 2014; Oso, 2017; Bamidele, 2020).

Tipili and Ibrahim (2015) noted that these are major risk factors preventing public organisations from delivering innovative projects in terms of cost, time and quality. Chepkesis and Keitany (2018) added that the consequences of risk factors is well-known on poor procurement procedures, which resulted to loss of time, money, conflict of interest of public servant and unfair intercom petition in ineffective advertisement. Thus, Dahiru and Bashir (2015) suggested effective risk control, and risk reduction as very important in any procurement management system. Waziri and Isa (2017) noted that management of risks in public procurement cannot be successful without a detailed understanding of the main categories of the risks, as the lack of

understanding would lead to poor risks assessment and monitoring, which would have negative impact on time, cost and quality objectives of a project. It is against this backdrop, that this research focuses on construction procurement risk management in tertiary institution in Nigeria.

Public tertiary institutions in Nigeria are part of government Ministries, Departments and Agencies (MDAs) expected to implement PPA, 2007 in all their procurement activities. With Bureau of Public Procurement (BPP) as a regulatory authority for the monitoring and implementation of the Act (Ebenezer *et al.*, 2019; Bamidele *et al.*, 2019). However, the procurement of construction projects in these institutions are faced with risks of mismanagement, fraudulent practices, inefficiencies, corruption, among others which affect the delivery of construction projects (Bamidele, 2020). Unfortunately, these risks and their management strategies are given less attention in procurement process of most tertiary institutions in Nigeria and thus, some of the projects are being delayed unnecessarily, and having impact on cost, time and quality objectives of the projects (Emeka, 2016; Bamidele, 2020). Abdul-Mannan-Hussain *et al.* (2017) added that ineffective management of risks factors would lead to dispute, claims, litigation and hence having an impact on the contracting parties (client, contractors and consultants).

The BPP requires that all public construction procurement by government agencies in Nigeria be executed in line with the 9 essential steps, which include efficient procurement plan driven by need assessment, budgetary appropriation, advertisement, transparent prequalification, bid submission, bid opening, bid evaluation, (technical and financial), tender board/Federal Executive Council (FEC) approval, and contract execution (BPP, 2012; Emeka, 2016). Additionally, the key aspects of the 9 essential steps (for instance, appropriate market surveys, extensive feasibility and viability studies, fund sourcing/cash flow analysis, selection of procurement routes/options, and contract management plans), are mostly being compromised by tertiary institutions in Nigeria (Bamidele *et al.*, 2019; Bamidele, 2020; Ezeanyim *et al.*, 2020). These problems attributed to risks in procurement process of these institutions, which is affecting the delivery of construction projects (Bamidele, 2020).

The foreign frameworks on procurements management including those of Flanagan and Norman (1993); Scapper *et al.* (2006) and Asian Development Bank (2018) could not be domesticated in Nigeria because they failed to consider the 9 essential steps mandated by the BPP for execution of procurement exercise in Nigeria, and failed to provide linkages between procurement risks management and procurement process. Moreover, the existing frameworks in Nigeria including those of Odimadon and Oduoza (2013), Abdul-Mamman-Hussain *et al.* (2017) and Sarawa and Masud (2019) also failed to consider the 9 essential steps which negatively affect procurement need and manifested through the occurrence of risks which is affecting the delivery of construction projects. Hence, this research aims to develop a conceptual framework for construction procurement risks management in Tertiary institutions in Nigeria.

## **LITERATURE REVIEW**

### **Existing risks management frameworks and procurement management frameworks**

The overall goal of the risk management process is to maximise the opportunities and minimise the consequences of a risk event (Imran, 2017). Odimabon and Oduoza (2013) developed framework for risk assessment on building projects in construction firms. The framework identified and grouped risks in to the following: physical risk, environmental risk, design risk, logistic risk, financial risk, construction risk, political risk, and management risk. Risk assessment, risk analysis, risk mitigation and risk control. The framework concentrated on risks management in building construction project, with no consideration to procurement process as highlighted by BPP (BPP, 2012). Equally, the framework failed to provide linkages between procurement process and risk management

Moreover, Schapper *et al.* (2006) developed and grouped procurement management framework in to three stages, namely, strategic management, process management, and performance management stage. The strategic management stage concentrated on a broader reform dealing with process re-engineering, out sourcing and restructuring. This involves centralisation of contract design and documentation, specification and evaluation, political agenda, and regulation of process such as policy. The process management stage deals with the devolution of contract processes, mostly consistent with smaller organisations requiring conformance with regulation and fair dealings. While performance management stage is consistent with the de-centralisation of contract specification, evaluation and regulation. This involves operational organisations dealing with achievement of efficiency effectiveness and value for money. The framework failed to capture risk management process. According to Dahiru and Bashir (2015), Odeyinka and Dada (2016) and Gyamfi *et al.* (2016) risk management is process of identification, assessment, evaluation, control and response to risks.

### **Procurement risk management framework**

The African Development Bank framework (2018) on procurement risk management was developed with the aim to minimise the impacts of possible adverse events on project financed by ADB loan or grant, or by ADB-administered funds. The framework considers risks and its management at different project stages. Project conceptualization, project planning, and project implementation. The risks management process discussed include identification, assessment, and management of risk at the project level. However, since the framework is a foreign one, it failed to consider procurement process as highlighted by BPP in Nigeria.

### **Gap to be filled by the study**

It can be seen that the existing procurement risks management frameworks highlighted above failed to consider the 9 essential steps highlighted by the BPP and failed to provide linkages between procurement risk management and procurement process. These problems attributed to major risks in procurement management process of these institutions. Thus, this research aims to

aims to develop a conceptual framework for construction procurement risks management in Tertiary institutions in Nigeria.

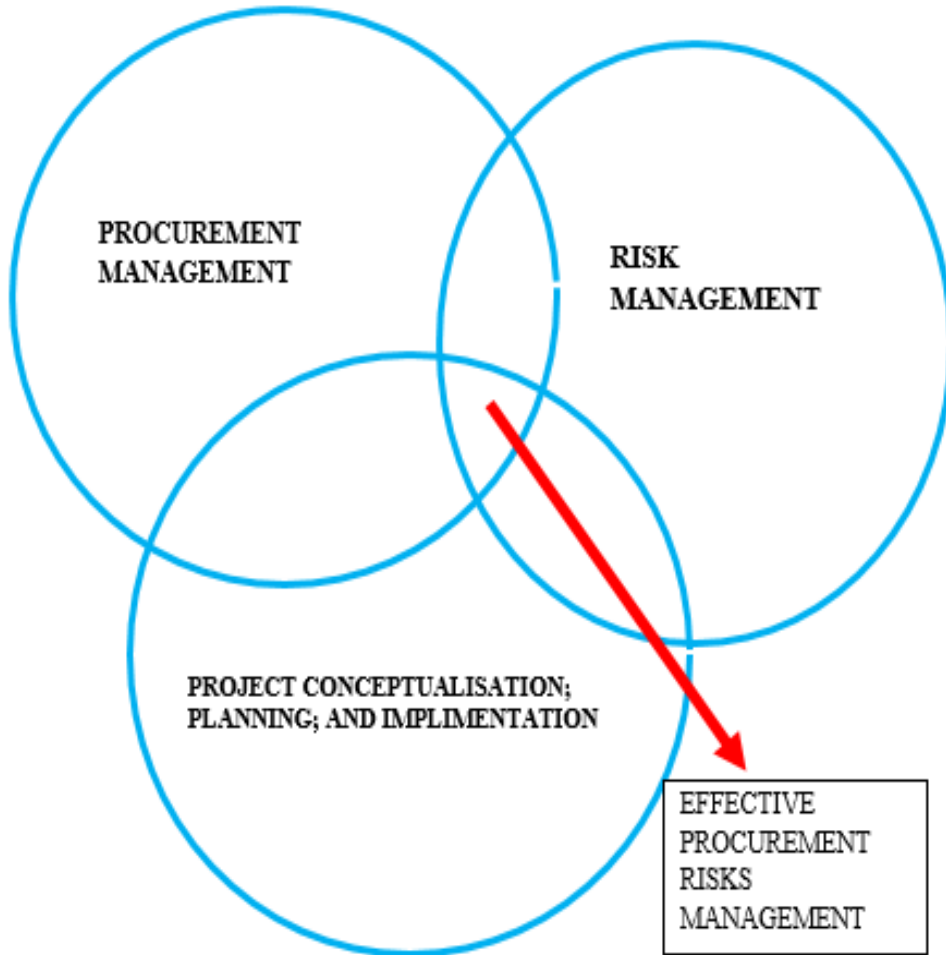
## **RESEARCH METHODOLOGY**

This research adopted the desktop research methodology by conducting a thorough literature search on existing frameworks relating to risks, risk management and procurement management which form basis for development of the theoretical framework for procurement risk management, which informs the development of the conceptual framework for the research.

## **RESULTS AND DISCUSSION**

### **THEORETICAL FRAMEWORK OF EFFECTIVE CONSTRUCTION PROCUREMENT RISKS MANAGEMENT**

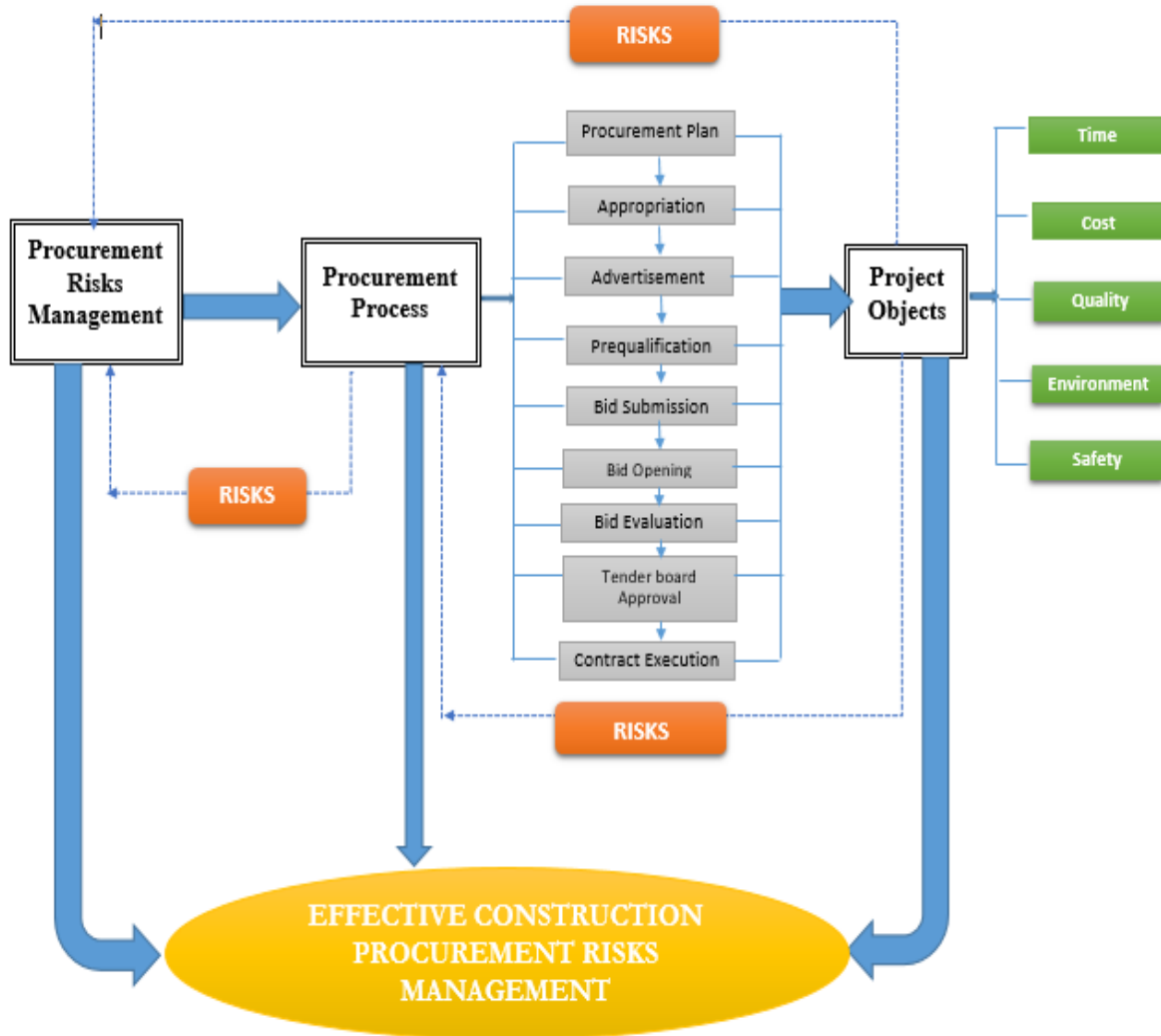
Referring to the literature review section of this research, the procurement management stage, risk management process and project conceptualisation, project planning, and project implementation intersect with one another. This intersection point forms the position of the theoretical framework of the study. Figure 1 shows that, to achieve an effective procurement risks management in construction projects, projects must be effectively conceptualised from planning stage through to implementation stage of the project. This must be interlinked with effective procurement management which must involve effective management of risks. However, the frameworks failed to consider procurement process to follow in order to achieve an effective management. These processes are those included in the BPP.



**Figure 1: Existing procurement risk management process**  
Source: (Researchers' construct, 2021; Adapted from existing literature)

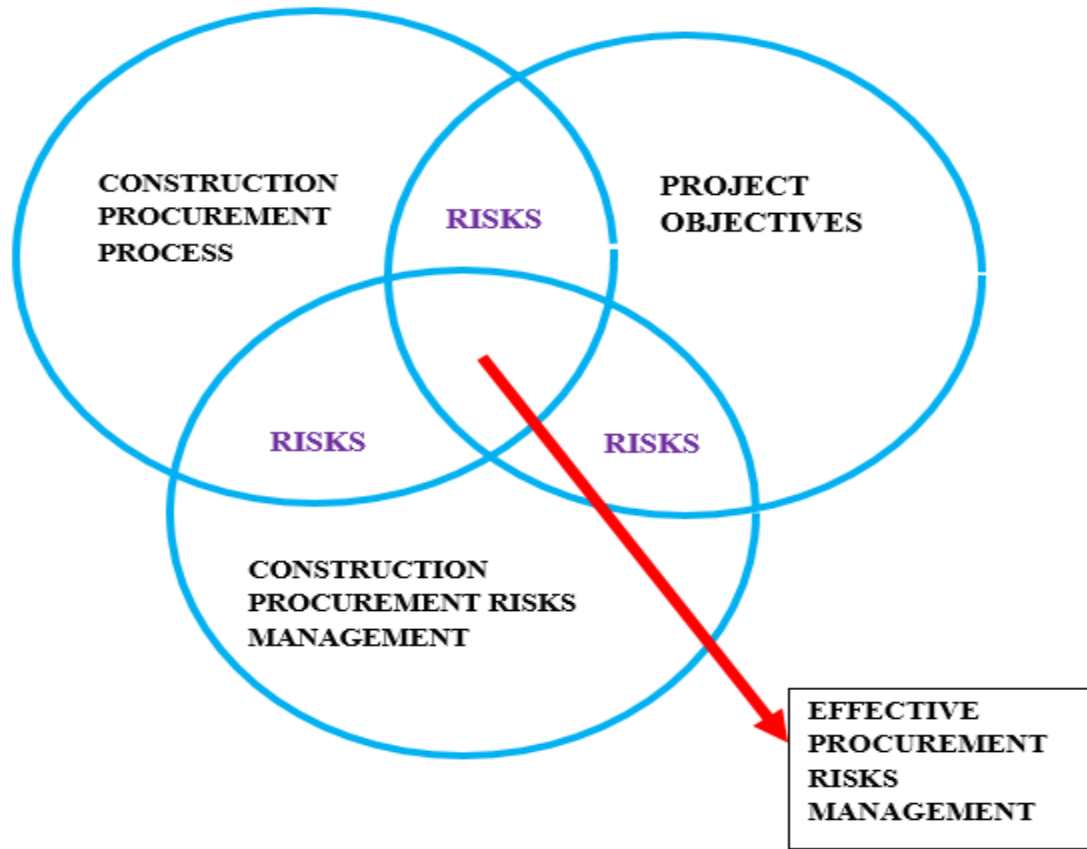
## **CONCEPTUALISATION OF CONSTRUCTION PROCUREMENT RISKS MANAGEMENT**

Figure 2 shows the conceptual framework of effective procurement risks management in the Nigerian tertiary institutions. The framework shows that, to achieve effective procurement risks management in any construction project, procurement risks management system must be effective all through the procurement process. This would in turn, affect the project objectives of meeting with time, cost, quality, environment and safety. If these issues are not properly managed, the entire procurement system would then result into risks as shown on the broken lines in Figure 2.



**Figure 2: Conceptual framework of effective construction procurement risks management**

The discussions in Figure 2 are further summarised in Venn diagram as shown in Figure 3. The risks factors are shown in the intersection between construction procurement process and project objectives, and construction procurement risks management.



**Figure 3: Summary of conceptual framework for effective procurement risk management**

**Source:** (Researchers' construct, 2021)

## CONCLUSION

The procurement of construction projects in Nigerian public tertiary institutions are faced with lots of risks, which affect the delivery of construction projects. The BPP requires that all public construction procurement by government agencies in Nigeria be executed in line with the 9 essential steps. The existing frameworks on procurements management could not be applied in Nigeria because they failed to consider the 9 essential steps mandated by the BPP for execution of procurement exercise in Nigeria, and failed to provide linkages between procurement risks management and procurement process. Thus, this research developed a conceptual framework along the procurement process as highlighted by the BPP through a desktop methodology. The conceptual framework revealed that risks management practices must be effective throughout the procurement process (the 9 essential steps) for effective procurement risks management, which will affect project objectives of meeting with time, cost, quality, environment and safety. It is recommended that construction procurement personnel at all levels of government including intervention bodies may find this study relevant for achieving effective project delivery.



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