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Assessment of Factors Affecting Contractors Tendering Success for Construction Projects in North-Central Nigeria

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Abstract

The challenge of construction tendering process is a common theme in developing countries especially Nigeria. Tendering process is often tedious, multitasking and complex. Contractors have the responsibility of tendering appropriately for construction projects; and clients as well as consultants have a duty to create an enabling platform for a successful tendering process. This study examines the factors affecting contractors tendering success for construction projects in North-Central Nigeria with an aim to harmonizing the perception of the construction professionals. Semi-structured questionnaires comprising of fifty-five (55) questions retrieved from literature were categorized into six (6) groups which are project characteristics, business benefits, capabilities, bidding situation, client related factors and external environment related factors. The data were retrieved from 299 respondents out of 384 respondents requisite for this study. Frequency, Percentile and Mean Index Score (MIS) were used to analyze the responses. Results indicated a level of agreement among the stakeholders on the top eleven (11) contractors tendering success factors and concludes that expansion of organization expertise, tendering capabilities, flexibility for changes and variations, number of competitors, project difficulties, design constructability, project methodology, tender document detailing, client reputation, involvement of other parties and political consideration to be the top factors affecting contractors tendering success. The practical implication of this is that, there is a broader understanding of the topmost factors affecting contractors tendering success among the stakeholders within the North-Central region of Nigeria. The study recommended that reasonably sufficient time should be given to examine project characteristic in order for the contractors to assess their suitability for every construction projects they intend to tender for. Furthermore, construction design approach, bidding process and project methodology should be properly delineated to all the stakeholders by the client to eliminate vagueness in the tendering process and subsequently, project delivery process.

Keywords: Contractors tendering, success factors, construction projects, North-Central Nigeria

1.0 INTRODUCTION

Construction sector accommodates a host of complex, multiple and interrelated activities comprising of considerable varieties of operational skills and conditions from one project to the other. According to Al-Sabah and Abdulrahim (2021), the construction sector is characterised by the leading and most influential industries in world and is a major player in the world economic growth. Tendering is a major aspect of construction project that is fundamental to the project outcome especially in Nigeria. As outlined by Odusami & Onukwube (2008), tendering is the process of inviting suppliers or contractors to submit tender for the supply, execution and procurement of a given project. Likewise, Onifade (2011) states it to be the bringing together of varieties of contractors or suppliers for the same construction project in the construction contract market. The process of tendering in Nigeria is tedious, inefficient and is hardly done right, and is therefore affected by several factors which often ensue to unqualified tenders being awarded, outright cancellation of the process or sometimes, repetition of the process (Skitmore & Picken, 2000). Oyeyipo et al. (2016) contend that client's financial aptitude, construction materials availability, political consideration are some of the factors affecting contractors tendering success in Nigeria. The damages caused by an unsuccessful and challenging tendering process in developing nations, led to numerous small and medium construction firms ceasing to exist within the first five years of their existence as a result of unsuccessful tendering process (Aje et al., 2016). This makes their finances to become less and as such becomes unsustainable leading to staff retrenchment and subsequent closure of firms.

Several countries also experiences challenges in tendering process which has caused restrictions to project award and subsequently construction project success. In New Zealand, Ji et al. (2014) suggest that insufficient tender documentation, construction design complexity and inadequate project information as fundamental to contractors tendering success. Similarly, Enshassi et al. (2013) posit that contractors' ability to achieve successful tendering is influenced by project complexity, communication ineffectiveness and contractual

obligation as the major factors in Gaza strip while the least of these factors are materials availability, project duration and financial situation of the contractor. Furthermore, Alsaedi et al. (2019) assert that company's strength, job type and job size are some of the factors affecting contractors tendering success in Saudi Arabia. Alghonamy (2015) also agrees that design complexity, lowest price, improper planning, and period between design and execution are some of the factors affecting the success of the tendering process. Ibrahim and Elshwadfy (2021) see vague drawings, skill level and experience of estimator, specification and project documentation, cost information completeness (accuracy, details and quality), materials (availability, prices, imports and quality) as well as the experience acquired from similar project as the top factors affecting contractors success in Jordan.

Consequently, tendering process in Nigeria almost always have an emphatic influence on the operation of the construction firms in both short and long terms which can sway the performances of the construction firms. Strategic decision of any construction firm is instituted by the tendering phase which is normally the first phase of any project undertakings (Jarkas et al., 2014). This decision is crucial to contractors progress and survival (Yan et al., 2018), in the Nigerian construction sector owing to the increasing level and number of competitors vying for a particular project. On the side of the contractor, inappropriate or incomplete tender documents, indecision as to their capabilities, inconsistent market prices of materials, experiences ensuing from previous projects, contractor's perception of client and political factors were perceived by Mahamid (2016) as factors affecting contractors tendering success. Olatunji et al. (2017) agree with Alumbugu et al. (2014) that revealed that consultant's interpretation of project specifications, previous relationship between the intending bidders and clients, availability of other projects at the time of bidding, technological complexities of the project under consideration and prequalification requirements are the influencing factors in contractor's decision to tender from consultants perspective. Furthermore, client's perception of projects and contractors, previous experiences, competencies of procurement staff and political consideration are the factors influencing clients' decision during tendering process. Ultimately, there is little harmony between the stakeholders (client, consultants and contractors) as to the top most factors affecting tendering success. Taking into consideration the divergent perception of the construction stakeholders on the factors affecting contractors tendering success, this study will therefore, assess the factors affecting contractors tendering success in construction projects with the view to harmonizing the perception of the construction stakeholders in North-Central Nigeria. Objective-wise, the present study is designed to:

1. Identify the factors hindering construction contractors tendering success in North-Central Nigeria construction projects;
2. Evaluate the level of significance of these factors; and,
3. Provide ways of improving contractors tendering success in North-Central Nigeria construction projects.

2.0 LITERATURE REVIEW

2.1 Tendering Process

Tendering, according to Faizal (2010), entails the situation of when the contract type that is requisite for a specific project has been realized and the focus is now on the contractors' selection. The adopted technique in choosing and accepting a tender is based on some measures which encompass project nature, least tender evaluated, client wishes and reasonably accepted time of completion. Similarly, the procurement process in construction is made up of sequence of actions or operations used in attaining the anticipated targets of construction project procurement (Anyadike, 2000; Harris & McCaffer, 2005). The process of tendering comprises the following actions (Anyadike, 2000; Harris & McCaffer, 2005):

1. **Tendering Planning**
   This is the first phase of the tendering cycle which basically entails identification of requirements. Therefore, procurement process starts with the recognition of needs (goods, works and services), which could be for the entire year (Shonhe & Bayat, 2017).

2. **Procurement Set-up and Solicitation**
   This phase requires individual procurement setup and imploration of tenders. It makes up the period of bringing about service or product provisions. This enhances the need for the communication of requirement and typifies suitable procurement method for the implementation of the project (Shaw, 2010). Source of funding and estimation of budget for the project is also part of this stage.

3. **Contractor Solicitation**
   Here, advertisement is made based on inviting potential tenders to submit tender for the project. Tender evaluation criteria are explicitly stated in the tender document and enough time is allowed for the tenders to complete and submit their tender (Bainson, 2018).

4. **Bid Appraisal**
   The submitted bids are usually opened at a fixed time and date, and afterwards, appraisal is made based on the condition initially stated. This is crucial to contractor's selection and award of contracts as assessment of the submitted tenders are done at this stage (Shonhe & Bayat, 2017).

5. **Documenting, Selection and Negotiation**
   A brief report is ready for record keeping purposes after the appraisal and centred on their decision; a contractor is selected to carry out the project mostly based on the least bid accepted (Shaw, 2010). Prior to project commencement and during contract formation, the least evaluated tender is chosen for negotiation.

6. Contract Preparation

The client goes into contracting with the successful contractor. Here, preparation of contract documents are done and evidently posit each party's rights and obligations (Shonhe & Bayat, 2017). The selected contractor to handle the contract process ensures the attainment of the aim of the procurement process which is basically on the success of the project. At this stage, the means of payment and structure of progress payment (terms of contracts or agreement) is stated at this stage and the contractor goes into action.

7. Project Execution and Delivery

The project is carried out by the project team in accordance with the guidelines and templates provided during the contract preparation process. Project monitoring and evaluation, work package scheduling as well as progress payment are mostly applied at this stage.

8. Assessment and Approval

Once the project is completed, it is inspected by the designated professionals who report the quality of work to the client whether it conforms to the required specifications or not (Bainson, 2018). Once the confirmation is made, then procedure for final payment begins.

9. Final Payment

Final payments are made by the client to the contractor depending on the terms of the contract agreement.

10. Post-Mortem Analysis

This is done to assess the process performance, ascertain the efficiency and effectiveness of the process. It also ensures that every issue involving the project as well as the project itself is appraised and lessons are learnt for future use.

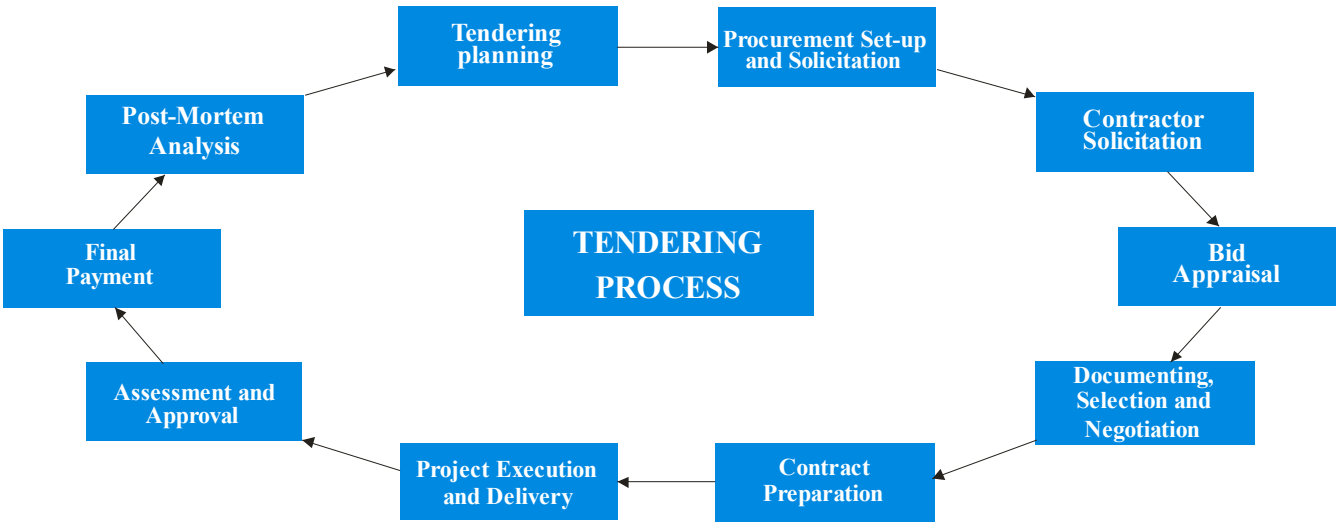

Figure 1 Tendering process
(Source: Modified by authors and adapted from Shonhe & Bayat, 2017)

2.2 Factors Affecting Contractors' Decision to Tender for Construction Projects

Tendering provides a competitive way of getting contract award (Kog & Yaman, 2016). Open tendering system is the most used tendering system while carrying out construction procurement tendering (Bohari et al., 2021). According to Kog and Yaman (2016), there are fundamental tendering procedures which are open, negotiation and selective tendering. These systems provide efficiency and ensure value for money is attained. But tendering processes are in many cases tedious and complex as many responsibilities are involved requiring the participation of individuals and groups with varying targets and priorities (Jarkas, 2017). Varieties of contractors have varieties of reasons and objectives to tender for construction projects (Loosemore & Richard, 2015), but principally on profit-making (de Araújo et al., 2017). However, tenders are mostly awarded to the lowest bidder (Loosemore & Richard, 2015). Instances are that an accurate decision made by the contractor to tender make his chances of success to be higher based on the maximum use of his financial capabilities as well as his administrative and technical expertise (Bohari et al., 2021). Contractors decision to tender are affected by several factors which are considered to be tendering skills and devising buyer engagement strategies as well as pricing strategies, as typified by the study of Urquhart et al. (2017), are integral to contractors decision to tender. Olatunji et al. (2017) opine that previous relationship with prospective client, consultant's project requirement interpretation, availability of other projects at the time of tendering, complexities arising from technological advancement and the requirement for pre-qualification are the factors affecting contractors tendering success. Similarly,

materials availability, profit level and labour productivity are crucial to contractors tendering success (Aje et al., 2016). In consonance, Bagies and Fortune (2006), Olatunji et al. (2017) and Biruk et al. (2017) posit that construction project size, difficulty levels, procurement method types, project location, condition of site, special requirements of project, relationship with previous project, company's reputation, business continuity, materials availability and growth in organization expertise as integral to contractors tendering success. Flynn and Davis (2017) assert that tender document price, tender submission, previous experience from similar projects, pre-qualification, completeness of document and other tenderers' strength as essential to contractors success of a construction project award.

Table 1 Summary of tendering success factors
(Source: Bohari et al., 2021)

Tendering Success Influencing Factors			
S/N	**Categories**	**Subcategories**	**References**
1.	Project Characteristics	Size of the project Degree of difficulties Type of procurement methods Location Overhead cost Site condition Project special requirements Availability of materials	Bagies and Fortune (2006); Biruk et al. (2017); Olatunji et al. (2017)
2.	Business Benefits	Company reputation Continuity of business Relationship with previous project Expansion of organization expertise	Biruk et al. (2017); Olatunji et al. (2017)
3.	Capabilities	Technical capabilities for the project People capabilities Tendering capabilities Technology complexity Procedural capabilities	Biruk et al. (2017); Flynn and Davis (2017); Olatunji et al. (2017)
4.	Bidding Situation	Tender submission Tender document price Pre-qualification Previous experience with similar projects Other tenderers' strength Completeness of document	Bagies and Fortune (2006); Biruk et al. (2017); Olatunji et al. (2017)

2.3 Theoretical Review

Gray (2010) sees theory as the formation of the association concerning things. Thus, it is essential for every study to be guided by some theories which can assist the researcher in realizing the research aim. The study is however, underpinned by the following theories:

2.3.1 Resource-Based Theory and Procurement

Initially introduced in 1959 and developed by Penrose, the aim of the resource-based theory is principally on the need for businesses and firms to achieve competitive advantage through the use of assessable physical and non-physical resources deposited in their organization (Tuvi & Noor, 2021). It is strategically based on the application of methods applicable in supporting the will of an organization to attain competitive power (Goh & Loosemore, 2017). It is obvious that tendering is fundamental to contract award and challenges continues to arise from the process (Qazi et al., 2021). It is the philosophical belief of this theory that competitive advantage of the contractors must be achieved when applying or putting to use all resources of the organization (Mahoney, 2015). This requires the continuous improvement of the skills set of the organization's staff in order to properly plan for tendering process. However, without such, it could easily result into unsuccessful tendering by the contractor. This is related to this study in the area of better performances of the contractors in tendering process as this study sought to establish those tendering success factors, analyze them and provide improvement measures in order for the firms to achieve competitive advantage through successful tendering process.

2.3.2 Dynamic Capabilities Theory

Proposed by Helfat et al. (2007, p. 1), dynamic capabilities theory is defined as "the capacity of an organization to purposefully create, extend and modify its resource base" in order to gain an economic value considerably higher than its counterparts. Tuvi & Noor (2021), postulate that dynamic capabilities are often seen as a tool for resource conversion into better-quality performances. Teece (2017) opines that dynamic capabilities form the basis for enterprise-level competitive advantage particularly in a period of continuous and constant technological changes. Furthermore, dynamic capabilities are fundamental to sustaining superior performances of an enterprise in an increasingly dynamic environment (Tuvi & Noor, 2021). This relates to the objectives of the study such that improved contractors tendering performances ensuing from their resource improvement and internal growth are required to continually win tenders. In a highly dynamic and challenging environment such as the north-central region of Nigeria, there is need for better-quality tendering performances tenable from the contractors most especially, as well as the clients and consultants who significantly make up the large chunk of the tendering process.

2.4 Conceptual Framework

This study examines tendering success factors prevalent for contractors successful tendering for construction projects. It is a known fact that the fundamental aim of any project tendering process is for the successful award of contracts and subsequently, successful completion of projects on time, cost and scope. This study identified these factors from literature and used them to practically retrieve information from the selected construction professionals within the north-central region of Nigeria. Resource-based theory and procurement as well as dynamic capabilities theory influence the direction of this study through the flow from their level of significance to the improvement factors to promote firm's strategic application of the top ranked factors in attaining competitive tendering advantage which are integral to the success of contractors tendering process and subsequently, the success of the project. The selected data were analyzed and the level of significance established for improvement purposes of tendering success for contractors, clients and consultants. The connection between these theories is emphasized clearly by their scope on continuous improvement of firms' capability to tender successfully which they can use to achieve competitive advantage and growth. Therefore, the flow of the study is depicted by the construct in Figure 2.

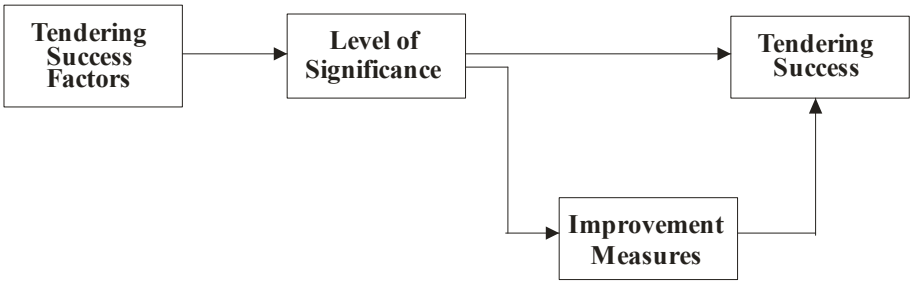

Figure 2 Model developed for the study
(Source: Author's construct)

2.5 Empirical Studies of Related Literature

Obodo et al. (2021) evaluate the factors affecting contractors tender for project construction in Awka, Nigeria. Out of 400 small-scale indigenous contractors and other experts in construction industry, a total sample of 250 construction professionals was used. Data were retrieved through questionnaires and analysed using ANOVA (analysis of variance), regression analysis and descriptive statistics to examine the relationship between the factors influencing the construction project (competition and company's strength) and the contractor's decision to tender. The study revealed that competition, company's strength and project risk all positively influence the determination of the indigenous contractor's inclination to tender for awards. Similarly, Agbeze (2019) examines the project procurement management practices at the Ghanaian Ministry of Energy with the objectives of ascertaining the procurement management practices practiced at the Ministry of Energy for rural electrification/SHEP project, assessing the factors influencing the choice of procurement management system and determining the effects of procurement management practices on the rural electrification/SHEP project outcome. 63 questionnaires were returned out of the 78 sent out to construction procurement professionals identified which represents a response rate of 80 percent. With an RII of 0.922 which is sky high, the study exposed that competitive procurement practice is the most practiced under the SHEP. Similarly, Hanák et al. (2021) examine contractor's ability to prepare competitive tender for construction tender in Czech Republic. Structured questionnaires were used to seek out the experiences and opinions of the contractors with a total of 150 responses out of the 400 that were solicited for. The analysis was done using Relative Important Index (RII). The study indicated that cost-pricing is what Czech contractors based their multi-criteria bidding strategy on while giving consideration to other areas such as tender attractiveness and risk. Re & Osita (2021) assess the procurement systems for real estate's project success with emphasis on procurement system identification that were frequented in the Onitsha metropolis as well as the links between systems of procurement and the success of real estate project. With a total of 140 stakeholders engaged and descriptive analytical methods applied, the study showed that the best known and widely used tendering system in Onitsha is the traditional procurement system followed by design and build procurement system while cost optimization and project objectives were ranked first and second respectively as the most considered factors in the choice of a specific real estate procurement system and further results depicted procurement system to positively affects project success.

3.0 METHODOLOGY

3.1 Research Population

A study population is normally a large group of individuals or objects which is the foremost focus of a scientific inquiry. In consonance, Kolo (2003) sees population to be a group of people having similar features required by a researcher. This means that for the purpose of this study, the target population is comprised of Procurement Officers, Project Managers, Engineers, Quantity Surveyors, Builders and Architects domiciled within the Clients, Consultants and Contractors Organizations in the north-central region of Nigeria.

3.2 Sampling Frame

The sampling frame comprises of the designated construction professionals in the north-central region of the country. However, there is infinite number of the construction professionals in the locality.

3.3 Sample Size

The sample size refers to the number of participants chosen from the population to be a representative of the whole (Saunders et al., 2009). Cochran's (1977) sample size formula is adopted to determine the sample size of this study. This is because the population size of a survey of this nature cannot be ascertained due to the infinite number of the construction professionals. Taking p as 0.5, e as 0.05 and a 95 % confidence level gives us Z values of 1.96, from the Z table. This is evidenced in Yusuf and Diugwu (2021) and Deinne (2021).

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where e = precision level (i.e. the margin of error),
p = the proportion of the population which has the attribute in question,
$q = 1 - p$

Thus, $n_0 = \frac{1.96^2(0.5*0.5)}{0.05^2}$

$n_0 = \mathbf{384}$

Therefore, the sample size for this study is **384** respondents.

3.4 Method of Data Collection and Analysis

Data collection plays a crucial role in any study, all of which fall into two categories, for instance primary and secondary data (Douglas, 2015). As the name suggests, primary data was employed for this study and gotten from the administration of well-structured questionnaires. Respondents are made up of construction practitioners such as Procurement Officers, Project Managers, Engineers, Quantity Surveyors, Builders and Architects. This study employs a 5-point Likert scale ranging from 1 to 5 as suggested by Enshassi et al. (2009). The scale encompasses "5 = Extremely Significant", "4 = Very Significant", "3 = Moderately Significant", "2 = Slightly Significant" and "1 = Not Significant" respectively. Mean Item Score (MIS) was applied for the analysis of the retrieved data. The formula for MIS is:

$$\text{MIS} = \frac{\Sigma W}{N}$$

Where: Σ = Summation, W = Weight, and N = Total number of respondents.

4.0 RESULTS AND DISCUSSION

4.1 Demography of Respondents

The sample size of the study comprises 384 respondents out of which 299 responses were retrieved which represent about 78 percent. Out of the 299 respondents, 199 were males and 100 were females which denote 66.6 and 33.4 percent response rate individually as shown in table 2. The age bracket of respondents with the highest responses (104) is from 30 to 40 years which denotes 34.8 percent of the respondents. This is followed by 41-50 years (75), 51-60 years (65), 20-30 years (44) and above 60 years (11) which represents 25.1, 21.7, 14.7 and 3.7 percent response rate correspondingly. Most of the respondents have First degree (108) and Higher National Diploma (107) which represents 36.1 and 35.8 percent response rate respectively. Others have National Diploma (42), Master's Degree (31) and PhD (11) which indicates 14, 10.4 and 3.7 percent representatives correspondingly. The respondents put the number of workers in their organizations (from the highest to the lowest) to be from 1-10 (183), 11-20 (65) and 21-30 (51) which indicates 61.2, 21.7 and 17.1 percent respectively. This means that outside of the laborers which are hired on a periodic basis, firms have these stated numbers of staff. In terms of tendering experience, respondents have at least one year experience in tendering process. The types of organizations involved are Clients, Consultants and Contractors Organizations which comprises of 89, 80, and 130 respondents which indicates 29.8, 26.8 and 43.5 percent individually. The targeted experts are the Procurement Officers of firms as well as Project Managers, Engineers, Quantity Surveyors, Builders and Architects with responses of 128, 83, 41, 8, 17 and 22 respectively, which connote to 42.8, 27.8, 13.7, 2.7, 5.7 and 7.4 percent correspondingly. Kothari (2004) suggests that a response rate of 50 percent is considered average, 60 to 70 percent is considered acceptable, whereas, a response rate beyond 70 percent is measured excellent. Therefore, this study response rate of 78 percent is considered adequate for the analysis and drawing of conclusion.

Table 2 Respondent's demography
(Source: Field survey)

	Frequency	Valid Percent	Cumulative Percent
Gender			
Male	199	66.6	66.6
Female	100	33.4	100.0
Total	299	100.0	
Age			
20-30 years	44	14.7	14.7
31-40 years	104	34.8	49.5
41-50 years	75	25.1	74.6
51-60 years	65	21.7	96.3
Above 60 years	11	3.7	100.0
Total	299	100.0	
Level of Education			
National Diploma	42	14.0	14.0
Higher National Diploma	107	35.8	49.8
First Degree	108	36.1	86.0
Master's Degree	31	10.4	96.3
PhD	11	3.7	100.0
Total	299	100.0	
Numbers of Employee			
1-10	183	61.2	61.2
11-20	65	21.7	82.9
21-30	51	17.1	100.0
Total	299	100.0	
Experience in Tendering			
Yes	299	299	100.0
No	0	0	0.00
Type of Organization			
Clients Organization	89	29.8	29.8
Consultants Organization	80	26.8	56.5
Contractors Organization	130	43.5	100.0
Total	299	100.0	
Profession of Respondents			
Procurement Officers	128	42.8	70.6
Project Managers	83	27.8	27.8
Engineers	41	13.7	84.3
Quantity Surveyors	8	2.7	87.0
Builders	17	5.7	92.6
Architects	22	7.4	100.0
Total	299	100.0	

4.2 Descriptive Statistics

4.2.1 Evaluation of the Identified Factors Significance Level (Project Characteristics)

Table 3 depicts the significance level for the established contractors tendering success factors (project characteristics) have on the success of contract awards. The factors ranked 1st are 'project level of difficulties' and 'constructability of design' with both having scores of 4.90 each. This is in line with the studies of Ye et al. (2013), Ji & Domingo (2014) and Gamil & Rahman (2020), which similarly rank these factors very high in their respective studies. Next is 'project methodology' and 'project size' with scores of 4.84 and 4.81, and ranked 3rd and 4th respectively. Succeeding these factors are 'method of funding' and 'project available resources' with scores of 4.64 each ranked together 5th by the respondents. Also, 'project expected performance', 'materials accessibility', 'modality for project payment' as well as 'project location' and 'site condition' are ranked 7th, 8th, 9th as well as 10th and 11th as seen by the construction professionals with scores of 4.61, 4.52, 4.35 as well as 4.20 and 4.15 correspondingly. These factors are seen by the construction professionals as having moderate to slight significance on contractors tendering success as most project they tender for are situated within their jurisdiction. In the end, overhead cost (4.08) ranked 12th is seen by large contractors as being slightly significant in tendering for construction projects. Likewise, project quality level (3.95), procurement level (3.76) and project special requirements (3.20) ranked 13th, 14th and 15th respectively by the construction professionals.

Table 3 Descriptive statistics for project characteristics
(Source: Author's field survey)

S/N	Project Characteristics	MIS	SD	Subcategory Rank
1.	Project Difficulties Level	4.90	0.427	1
2.	Constructability of Design	4.90	0.427	1
3.	Project Methodology	4.84	0.371	3
4.	Project Size	4.81	0.846	4
5.	Methods of Funding	4.64	0.482	5
6.	Project Available Resources	4.64	0.482	5
7.	Project Expected Performance	4.61	0.489	7
8.	Materials Accessibility	4.52	0.501	8
9.	Modality for Project Payment	4.35	0.714	9
10.	Location of Project	4.20	0.664	10
11.	Condition of the Site	4.15	0.832	11
12.	Overhead Cost	4.08	0.410	12
13.	Project Quality Level	3.95	0.797	13
14.	Procurement Level	3.76	0.661	14
15.	Project Special Requirements	3.20	1.076	15

4.2.2 Evaluation of the Identified Factors Significance Level (Business Benefits)

From Table 4, the continued 'expansion of organization expertise' in the areas of bidding and construction work is positioned the 1st factor in the group as the most significant to contractors chances of tendering success with a score of 5.0 which connotes that all the respondents selected it as extremely significant, as the capabilities of project consultants and design teams are necessary for the success of the construction projects (Chinyio & Olomolaiye, 2010). This is followed by 'company's reputation' (4.61), 'relationship with previous project clients' (4.31) and 'business longevity' (4.31) ranked 2nd, 3rd and 4th respectively. Consequently, these factors are seen to be very significant in contractors tendering success.

Table 4 Descriptive statistics for business benefits
(Source: Author's field survey)

S/N	Business Benefits	MIS	SD	Subcategory Rank
16.	Expansion of Organization Expertise	5.00	0.000	1
17.	Reputation of the Company	4.61	0.489	2
18.	Relationship with Previous Project Clients	4.31	0.737	3
19.	Business Longevity	3.95	0.797	4

4.2.3 Evaluation of the Identified Factors Significance Level (Capabilities)

Table 5 shows contractor's capability to tender and successfully complete construction projects. Most of the respondents selected 'tendering capabilities' as being the most significant factor for contractors tendering success and ranked 1st with a score of 5.00 which signifies that no matter how good a contractor might be, it is of utmost importance for him to know the nitty-gritties of tendering, in order not to hamper his chances of success. Furthermore, procedure capability, contractor's technical aptitude, technology complexity and staff capabilities are ranked 2nd, 3rd, 4th and 5th with scores of 4.79, 4.66, 4.61 and 4.33 correspondingly and seen as similarly very significant.

Table 5 Descriptive statistics for capabilities
(Source: Author's field survey)

S/N	Capabilities	MIS	SD	Subcategory Rank
20.	Tendering Capabilities	5.00	0.000	1
21.	Procedural Capabilities	4.79	0.408	2
22.	Technical Aptitudes for the Project	4.66	0.476	3
23.	Technology Complexity	4.61	0.489	4
24.	Staff Capabilities	4.33	0.742	5

4.2.4 Evaluation of the Identified Factors Significance Level (Bidding Situation)

Table 6 shows the bidding situation impacting contractors tendering success. 'Detailed tendering document' is seen as having the highest significance level with a score of 4.84 and ranked 1st. This corresponds to Bohari et al. (2021), as they emphasize the need for detailed and high profile tender submission as low quality tender hampers contractor's chances. This is followed by submission of tender having the 2nd

most significant level which indicates that detailed tendering document and its submission is vital to contractor's chances of winning tenders. Others include 'previous experience of similar project', and 'other tender's strength', ranked together 3rd with scores of 4.34 each. This is followed by 'pre-qualification' and 'prices of tender documents' which is being moderate to slightly significant with mean index of 3.99 and 3.99, and ranked 5th and 6th respectively which depicts that tendering prices are insignificant to most contractors.

Table 6 Descriptive statistics for bidding situation
(Source: Author's field survey)

S/N	Bidding Situation	MIS	SD	Subcategory Rank
25.	Tender Document Detailing	4.84	0.371	1
26.	Submission of Tender	4.68	0.466	2
27.	Previous Experience of Similar Projects	4.34	0.474	3
28.	Other Tenders' Strength	4.34	0.474	3
29.	Pre-qualification	3.99	0.827	5
30.	Prices of Tender Documents	2.04	1.433	6

4.2.5 Evaluation of the Identified Factors Significance Level (Factors Related to Clients)

Table 7 shows the significance level for client related factors hampering contractors tendering success. Respondents posit that 'flexibility for changes and variations' have the highest level of significance on tendering success and ranked 1st with a score of 5.0 and in consonance with the study of Kissi et al. (2017) in Ghana. This is followed by 'client reputation', 'client having competent procurement personnel' and 'culture & nature of clients' as very significant and ranked 2nd, 3rd and 4th with scores of 4.84, 4.79 and 4.66 respectively. Furthermore, 'client accountability', 'client financial aptitude', 'client trust in other parties', 'degree of desired client participation' and 'clients procurement method savvy' ranked from 5th to 9th with scores of 4.64, 4.61, 4.56, 4.13 and 3.82 correspondingly. Thus, it is in opposition to Bakr (2019), who identified the most significant factors affecting tendering success to be level of experience of the estimation team, client's financial capabilities and the experience of the project team in that order.

Table 7 Descriptive statistics for client related factors
(Source: Author's field survey)

S/N	Client Related Factors	Mean	SD	Subcategory Rank
31.	Flexibility for Changes and Variations	5.00	0.000	1
31.	Reputation of Client	4.84	0.371	2
33.	Obtainability of Competent Procurement Personnel	4.79	0.408	3
34.	Culture and Nature of Clients	4.66	0.476	4
35.	Accountability	4.64	0.482	5
36.	Financial Aptitude of the Client	4.61	0.489	6
37.	Trust of Clients in Other Parties	4.56	0.498	7
38.	The Degree of Desired Client Participation	4.13	0.334	8
39.	Procurement Method's Savvy of the Client	3.82	0.827	9

4.2.6 Evaluation of the Identified Factors Significance Level (Factors Related to the External Environment)

Table 8 shows contractors tendering success related factors to the environment. The study shows that the factor which is chosen to be the most significant by the respondents in North-Central Nigeria is the 'Number of competitor' with a score of 4.91 and ranked 1st, which is in consonance with Ng et al. (2000) who sees the number of competitors as affecting contractor's tendering chances. This is closely followed by 'involvement of other parties, political consideration and technology' and ranked together 2nd. 'Economic condition' of the country as well as the awarding parties also affects the ability of the contractors to get awarded as both are ranked 5th by the construction professionals. Others are 'integration of shareholders and environmental impact' ranked 6th together. 'Market competitiveness and materials availability' are ranked 8th and 9th correspondingly by the respondents. This is because materials although competitive, are readily available for the usage of these construction experts on site. Commercial condition is a similar factor to economic condition and is ranked 10th with a score of 4.49 by the respondent as factor influencing the success of the contractors in tendering. Also, 'social factors, market structure, procurement strategy, procurement system handiness locally, legal challenges and weaker condition' with scores of 4.35, 4.29, 4.15, 4.13, 4.02 and 3.68 are correspondingly ranked 11th, 12th, 13th, 14th, 15th and 16th as chosen by the construction professionals.

Table 8 Descriptive statistics for external environment related factors
(Source: Author's field survey)

S/N	External Environment Related Factors	MIS	SD	Subcategory Rank
40.	Number of Competitors	4.91	0.423	1
41	Involvement of Other Parties /Role/Participation	4.84	0.371	2
42	Political Consideration	4.84	0.371	2
43.	Technology	4.84	0.371	2
44.	Economic Conditions	4.74	0.535	5
45.	Environmental Impact	4.68	0.466	6
46.	Integration of Shareholders	4.68	0.468	6
47.	Market Competitiveness	4.66	0.476	8
48.	Material Availability	4.64	0.482	9

49.	Commercial Conditions	4.49	0.501	10
50.	Social Factors	4.35	0.478	11
51.	Market Structure	4.29	0.455	12
52.	Procurement Strategy	4.15	0.876	13
53.	Procurement System Handiness Locally	4.13	0.334	14
54.	Challenges of Legal Issues/factors	4.02	0.811	15
55.	Weaker Condition	3.68	0.948	16

4.3 Top Eleven (11) Factors Significant to Contractors Tendering Success in North-Central Nigeria Construction Projects

Table 9 shows the top eleven (11) factors affecting contractors tendering success in North-Central Nigeria projects. These factors are explained below:

Table 9 Top eleven factors and their related categories
(Source: Author's categorization)

S/N	Cat. No.	Category	Factors	Mean	Overall Rank
1.	16.	Business Benefit	Expansion of Organization Expertise	5.00	1
2.	20.	Capabilities	Tendering Capabilities	5.00	1
3.	31.	Client Related Factors	Flexibility for changes and variation	5.00	1
4.	40.	External Environment Related Factors	Number of Competitors	4.91	4
5.	1.	Project Characteristics	Project Difficulties Level	4.90	5
6.	2.	Project Characteristics	Constructability of Design	4.90	5
7.	3.	Project Characteristics	Project Methodology	4.84	6
8.	25.	Bidding Situation	Tender Document Detailing	4.84	6
9.	31.	Client Related Factors	Reputation of Client	4.84	6
10.	41.	External Environment Related Factors	Involvement of Other Parties/Role/Participation	4.84	6
11.	42.	External Environment Related Factors	Political Consideration	4.84	6

4.3.1 Expansion of Organization Expertise (5.00)

This has to do with elements of continuous improvement where a firm is saddled with the responsibility of getting acquaintances with recent and improved technologies to gain competitive advantage over their competitors in tendering for a construction project (Kissi et al., 2017). This competitive advantage as emphasized by the resource-based theory and procurement which promotes firm's continued existence as getting contract award is easier with the knowledge of the most recent technologies as suggested by Akintoye (2000), just as indicated by its high score. This shows that in the Nigerian construction sector, contractor's continuous improvement in their level of expertise is integral to their tender success.

4.3.2 Tendering Capabilities (5.00)

Tendering capability remains an imperative parameter for contractors to be successful in submitting their tender. However, insufficient tendering document arising from insufficient knowledge of the period, location and tendering procedure hamper the performances of the contractor to tender for a construction project as denoted by its high score. It must be noted that contractor's demonstration of competence both technical and financial (Oyeyipo et al., 2016), are invaluable to the clients in the Nigerian construction industry.

4.3.3 Flexibility for Changes and Variation (5.00)

This deals with the ability of the contractors to adjust to alteration with little or no hindrances on their tendering performance. Different clients and projects demand varieties of operations including tendering process. The contractor that is least affected by changes and alterations almost always wins the award as depicted by similarly high score. Yamin & Sim (2016), suggested that this can be done by having proper understanding of the project environment, competent project staff, effective stakeholder consultations, strong commitment to project goals and adherence to sustainable government policies.

4.3.4 Number of Competitors (4.91)

Increment in the number of tenders specifically influences the outcome of the tendering process. This induces the usage of resources, energy and time in filtering the number of tenders, and choosing the appropriate one. For instance, the tendering process in Nigeria is usually centred on open tendering system which requires a large number of contractors to tender (Omede & Saidu, 2021). Thus, there seems to be a negative correlation between large number of competitors and the contractor's chances of selection.

4.3.5 Project Difficulties Level (4.90)

This is brought about by the fact that there are several difficulties associated with project management and contract execution in Nigeria including scope changes which in many cases are not apparent at first but would crop-up to cause damages during the course of the Project Life Cycle (PLC). Similarly ranked high by the studies of Elhag et al. (2005) and Ji and Domingo (2014), these suggest that project

difficulties level has a high influence on contractor's tender success, that is, the nature and complexity of the project is as important as selecting a contractor to get the job done.

4.3.6 Constructability of Design (4.90)

This is related to the understanding of the drawings and designs pertaining to a particular project. The easier the understanding and knowledge of the design document for the project, the better the tendering process for the contractors. This is because; in no small part, the project design is important to the scope and quality of project delivery as indicated by its high score. The clearer the design, the clearer it is for the contractors and clients to be on equal terms during tendering phase and throughout the Project Life Cycle (PLC) (Muhammed et al., 2022), which shows that there is a correlation between clearer construction designs and project success. It is therefore, better for the design to be as simple as possible for the construction contractors (Oyeyipo et al., 2016).

4.3.7 Project Methodology (4.84)

Different practices are required for different projects as contractors are expected to get themselves a real-time understanding of the varieties of practices required to deliver projects. In the Nigerian context for instance, clients prefer contractors with clear methodologies, procedures, ideas and plans for a particular project. The clearer the contractor's idea on project execution is, the higher his chances of selection.

4.3.8 Tender Document Detailing (4.84)

Similarly of high importance to the tendering process is the tender document detail. It is necessary for the contractors to provide the most fundamental details in their tendering document. This allows the contractor to provide some details which may not be available or provided by others as source of advantage to their chance.

4.3.9 Reputation of Client (4.84)

Several reputations exist of the clients including name, status, standing, repute and character in the Nigerian construction sector which either motivate or demotivate contractor's desire to tender for a project. For instance, most contractors in Nigeria prefer government contract because government usually allocates higher budget to the contracts and guarantees more profit, despite the delays usually encountered in the payment process (Kissi et al., 2017), unlike their private counterparts that allocate far lower budget to contracts with much less profit but pays faster.

4.3.10 Involvement of Other Parties/Roles/Participation (4.84)

Some contractors in Nigeria collaborate to win tenders. This is born out of the fact that one party may not have the technical know-how to tender for a particular contract but have the finances. The party seeks the involvement of others to contribute technically and in many other ways in order to successfully tender for a particular construction project. Oyewobi et al. (2011) posit the industry to be prone to such behaviour and hence the need for professionalism among project participants.

4.3.11 Political Consideration (4.84)

Almost everything in Nigeria seems to be politically influenced including tendering process particularly when it comes to government contract. Relatedly, Osei-Tutu et al. (2010) agree that tender processes are influenced by activities such as kickback, cash enticements, intentional poor quality documentation and tender manipulation in the Ghanaian construction industry. This at best leads to a repetition of the tendering process and at worst causes contract award to the wrong contractor who in turn do inappropriate and unacceptable work which often lead to project abandonment and inability to achieve project goals in the Nigerian context.

5.0 CONCLUSION AND RECOMMENDATION

For this study, the contractors tendering success factors for the north-central Nigeria construction projects is investigated, evaluated and ranked based on their level of significance. Fifty-five (55) factors were established from literature in this field and were categorized into project characteristics, business benefits, capabilities, bidding situation, client related factors and external environment related factors for this study. The study concludes that expansion of organization expertise, tendering capabilities, flexibility for changes and variation, number of competitors, project difficulties, design constructability, project methodology, tender document detailing, client reputation, involvement of other parties and political consideration are the top ranked factors significantly affecting the north-central Nigeria construction projects tendering success which can be used in gaining competitive advantage when strategically applied by contractors in line with the central theme of resource-based theory and procurement, and dynamic capabilities theory as harmoniously agreed upon by the construction stakeholders (contractors, consultants and clients). The study therefore recommends that:

1. Reasonably sufficient time should be given to the contractors to examine project characteristic in order for them to assess their suitability for the construction projects they intend to tender for. A small contractor who does not have the financial capabilities should be able to determine critically and rigorously, the type of contract that he should tender for in order to avoid time, energy and financial wastage.
2. Construction design approach, bidding process and project methodology must be properly delineated to all the stakeholders by the client. This will eliminate possible vagueness of the stakeholders (contractors and consultants) as to the needs and requirements of the client during the tendering process.
3. This study also opines that contractors must be familiar with the prevalent market conditions as well as the geographical terrains of projects while tendering, as what is tenable in one geographical region may considerably vary from the other especially in the area of construction materials prices (Muhammed & Muhammed, 2021).
4. Clients especially in the public sector should considerably reduce their political considerations during tendering process. This is one area where clients are mostly found guilty as the tendering process is at most times adjusted to suit their bias intent, which culminates into corruption, and makes the wrong contractor to be awarded the construction contract. Reduction in such practices to the minimum level will increase the performances of the construction tendering process, promotes the selection of suitable construction contractor and overall, boosts construction project performance in Nigeria.

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