

Construction Procurement Systems: Influencing Factors for Nigerian Indigenous Contractors' Project Planning

*Inuwa, I. I.¹, Wanyona, G² And Diang'a, S³

^{1, 2 & 3} Department of Construction Management, School of Architecture and Building Sciences (SABS), Jomo Kenyatta University of Agriculture and Technology, Nairobi-Kenya

Abstract - The complexity of modern construction procurement systems vis-a-vis the expectation from contractors in accomplishing their procurement tasks necessitates adequate project planning if success is to be attained. Nonetheless, Nigerian indigenous contractors (NICs') are considered unproductive due to their inability to plan projects adequately for their contractual requirements, thus, preventing the Nigerian Construction Industry (NCI) from meeting the construction needs of the nation. This study therefore aims at identifying significant factors that can influence NICs' project planning in construction procurement systems. Explorative and descriptive survey methods were used to elicit data from indigenous contractors, consultants and public professionals in Nigeria. Data were analysed for reliability, significance, and correlation test, as well as descriptive statistics. The study reveals that the identified influencing factors are significantly important for NICs' project planning. Contractor's technical competence, project management capability, and understanding contractor's project procurement tasks are considered very significantly important influencing factors. The study recommends contractors to employ competent personnel, embark on continuous training, embrace project management techniques, and invest in knowledge management; and clients and consultants adhere to project management procedures. The attainment of these influencing factors for NICs' project planning will improve the NICs' potentials, hence facilitate NICs' meeting international construction best practice.

Keywords: Construction Industry, Indigenous Contractors' performance, Nigeria, Procurement systems, planning, influencing factors

INTRODUCTION

According to Hughes (2012, p.1) construction procurement has successfully been described by some researchers as the procurement of a complex system, which may help to offer insights from the procurement of other types of complex systems. The process of construction procurement is extensive and covers every aspect of the project delivery

system (Hughes, 2012; Anyadike, 2000; Aqua Group, 1999). In this light, procurement is considered the key to performance improvement in the construction industry (Ibrahim, 2008). The construction industry is vital to economic growth of any nation and this can never be over-emphasised. In Nigeria, the industry accounts for almost 70% of the nation's fixed capital formation, 1.4% GDP (Odediran *et al* 2012; Federal Office of Statistics, 1998) and employs approximately 25% of Nigeria's workforce; the largest in Africa (Ibrahim & Musa-Haddary, 2010). The industry is concerned with the business of construction projects and this involves principally the owner or client, the designers or consultants and, the construction contractors (Usman *et al.* 2012; Gollenbeck, 2008; Bennett, 2003).

The modern-day construction business demands more from the contractors beyond their traditional role of system assembly in Design-Bid-Build (DBB) procurement system (Hughes, 2012; Gollenbeck, 2008) to more roles in either management oriented systems, integrated systems or, discretionary systems (see: Mathonsi & Thwala, 2012; Babatunde, *et al.* 2010; Harris & McCaffer, 2005; Bennett, 2003). These roles add more complexities to contractors', and where complexity of a project is high according to Baily, *et al.* (2008), project planning is very important if success is to be attained.

Planning is a systematic devise to develop, on a continuing basis, specific courses of action towards a desired objective or goal in the most effective, efficient and economic manner (Eigege, 2005, p.11 citing Cummins, n.d.). In this light, planning has four goals in any proposed task (Krishnamurthy & Ravindra, 2010, p.2): to offset uncertainty and change, to focus attention on objectives, to make economic operations possible, and to assist managers in controlling the projects. In developed countries, contractors' have embraced planning because the results of a well-planned and carefully monitored and controlled contract directly impacts on the performance and profitability of the company (Harris & McCaffer, 2005).

Nonetheless, NICs' are considered unproductive due to their management incapacity and inadequate project

planning for their contractual requirements (Aniekwu & Audu, 2010; Saleh, 2004; Achuen *et al.* 2000). This consequently creates a major problem and affects the performance of the Nigerian construction industry (NCI) and prevents the NCI from meeting the construction needs of the nation (Saleh, 2004). Seeking to improve the efficiency of the construction industry, according to Oladimeji and Ojo (2012), is essential because of the contribution of the industry to national economic development. In an attempt to improve efficiency in the industry, this study therefore aims at identifying significant factors that can influence NICs' project planning in construction procurement systems.

RESEARCH ON CONSTRUCTION PROCUREMENT

There are plethora of research conducted by several researchers across the globe on construction procurements: Dada (2012); Idoro (2012a); Idoro (2012b); Ikediashi *et al.* (2012); Mathonsi and Thwala (2012); Babatunde *et al.* (2010); Ibrahim (2008); Ojo *et al.* (2006); Oyegoke (2006); Rashid *et al.* (2006); Love (2002); Alarcon *et al.* (1999); Love *et al.* (1998). The significance of construction procurement according to Idoro (2012a), stems from two reasons: firstly, it involves a series of interrelated and sequential processes and the effectiveness and efficiency of these processes have a considerable impact on the success or failure of a project; secondly, there are several procurement methods available for a developer to adopt when procuring a project.

Alarcon *et al.* (1999) developed a methodology to diagnose and evaluate the procurement process for investment projects for continuous improvement in Chile. Applying the methodology on selected projects, they discovered the main problem of procurement are schedule delays and lack of specified quality for a project which could be averted through dedicating important resources (money, personnel, time, etc) to monitor and control the process. On another set of projects they discovered that the main sources of waste were from engineering, the system itself, the suppliers, and the policies and they recommend that improvement can be attained through electronic mails, electronic data interchange (EDI), barcodes, and other policies as applied to the procurement process. In Finland, Oyegoke (2006) used four project management areas of scope, time, and cost as a framework of reference in studying managing clients' expectations in project delivery. His findings expose the weakness of the prevalent routes in managing key management variables and revealed that the discretionary contract approach supports a better management system.

In Australia, Love *et al.* (1998) indicated that a single set of criteria is generally adequate and sufficient for procurement path selection. However, similar clients do not have similar procurement needs but only one procurement method. Love (2002) discovered that, direct and indirect consequences of rework do not differ relative to project type or procurement methods in Australia; he found rework to be 52% of the cause of increase in project cost that

caused 26% of the variance in the increase in cost. To improve project performance, he recommends knowing rework: magnitude, causes, and effective prevention strategies. In Malaysia, Rashid *et al.* (2006) reveals that different procurement systems differ from each other in terms of allocation of responsibilities, activities sequencing, process and procedures and organizational approach in project delivery, and invariably affected the project performance of time, cost and quality.

In South Africa, Mathonsi and Thwala (2012) from their findings identified two factors that influence the selection of procurement systems: internal and external factors. The internal factors were broadly divided into client's and project characteristics. The client's characteristics are: client's level of knowledge and control, funding arrangements, political and social consideration, familiarity of procurement systems, competition, and government/risks allocation. The project characteristics are: size and technical complexity of project, influence of project life cycle, expedited project delivery time, quality and price certainty. Market competition, information technology, regulatory environment, natural causes and globalization constitutes the external factors. Using a qualitative approach (literature search) they discovered five new factors: socio-economic consideration, client requirements, capital cost/cash flow, procurement policy and project characteristics.

Dada, (2012); Idoro (2012a); Idoro (2012b); Ikediashi, *et al.* (2012); Babatunde *et al.* (2010); Ibrahim, (2008); and Ojo *et al.* (2006), all studied different areas in construction procurement in Nigeria. Ojo *et al.* (2006) discovered that projects category of 1-5, 5-10, over 10 million Naira (Naira; Nigerian currency: ₦160 = \$1) showed a time overrun of 18.98%, 99.64 % and 34.55 % respectively for housing projects procured through traditional contract and concluded that 1-5 million Naira cost category is suitable for traditional contract procurement on housing projects in Nigeria. Babatunde *et al.* (2010) discovers that variance of the traditional method of procurement is the most adopted in project execution in Nigeria, and also reveals that project completion at the estimated time is the highest factor considered in the traditional method, while quality assurance is the highest with the non-conventional method. This study is however limited to the Lagos area.

Dada (2012) using a logistic regression analysis developed a model with the procurement method as the dependent variable and several other variables as the independent variables for predicting procurement selection. Idoro (2012b) reveals that the use of project documents during each project stage and the overall procurement phase in projects procured by the traditional contract method must be improved, as it will enhance the outcome of the projects. In another study, Idoro (2012b) discovered that at inception, design, tendering and construction stages, plans are not prepared in many of the projects procured through Design-Build (DB) in Nigeria, and concludes that the level of use of project plans can be used to reduce the high time

and cost overruns recorded in DB projects. He suggested that stakeholders should ensure that the required project plans are prepared when projects are procured by DB.

Ikediashi *et al* (2012) identified: job cost reporting; time performance; quality of work; Health and Safety; and cost per unit, as the most important amongst eight Key Performance Indicators for DB projects in Nigeria. They advocate fundamental changes to reduce the high cost overruns associated with DB projects. Ibrahim (2008) runs a critique on the professional philosophy and mechanism of the *Public Procurement Act 2007*, focusing on the construction industry and highlighted shortcomings related to the *Act's* operational philosophy and mechanism both at the central coordinating level of the *Act vis-a-vis* their regulatory, certification, monitoring, training and advisory functions and at the implementation level. Although all the research efforts reviewed highlighted essential information concerning construction procurements, yet, none study factors that can influence contractors' projects planning in construction procurement systems.

NIGERIAN INDIGENOUS CONTRACTORS' PERFORMANCE

Inuwa *et al.* (2013) described a contractor as a corporate body that runs a business enterprise established to provide a product or service in the hope of earning profit. Their statutory business registration can either be a proprietorship, partnership, or corporation. Their primary responsibility is to ensure that all resources namely, manpower, machinery, materials and money are employed optimally for the efficient delivery of a project and to produce maximum profit for the investors in the enterprise (Olateju, 1992 cited in Fagbenle *et al.* 2011; Saleh, 2004), and so they occupy a significant position in the construction industry, and are regarded as a major player in the economy (Idoro, 2011; Bennett, 2003). In Nigeria construction contractors are usually categorised by several criteria: scope of operation (local, regional, national and multinational); specialization (building and engineering); size and category of contracts (small, medium and large); company's ownership nationality (foreign and indigenous) (Idoro, 2011; Idoro & Akande-Subar, 2008; Muazu & Bustani, 2004). Most studies on construction performance in the Nigerian construction industry focused mainly on the performance of Foreign and Indigenous contractors (Oladimeji & Ojo, 2012; Aniekwu & Audu, 2010; Idoro & Akande-Subar, 2008; Muazu & Bustani, 2004; Achuenu *et al.* 2000).

There are conflicting views amongst researchers on the performance of NICs'. To Uduak (2006) and Ibrahim (2012) their performance in managing projects are better and claimed they can be entrusted with large and highly technical projects. On the other hand, most researchers acknowledged that the NICs' performances are marred with: abandonment, cost and time overruns, poor quality, poor workmanship; poor management capability, financial difficulties, poor planning, poor mechanization and high frequency of litigation (Oladimeji & Ojo, 2012; Idoro &

Akande-Subar, 2008; Muazu & Bustani, 2004; Achuenu, *et al.* 2000). Contracting according to Muazu and Bustani (2004), is a terrain that calls for high specialization which makes it practically impossible to run a construction firm diligently without the requisite knowledge (Freeman, 2011). Nonetheless, by comparison, one is at pains to claim finding an indigenous firm in Nigeria able to match the skill and competence of a foreign firm, much less surpassing it. The greatest single edge the foreign firms have over indigenous firms in Nigeria is good management (Muazu & Bustani, 2004). Muazu and Bustani (2004) highlighted inadequate project planning as one of the major problems confronting the NICs.

INFLUENCING FACTORS FOR NICs' PROJECT PLANNING

There are two main levels of planning associated with construction projects: strategic and operational (see: Bamisile, 2008; Harris & McCaffer, 2005). This study is limited to contractors operational planning. The interrelationship between activities, resources and time in most projects, especially building, is such that unless they are carefully planned, resources can become overloaded during operation (Baily *et al.* 2008).

Aniekwu and Audu (2010) asserted that substantial part of the NICs' performance problems can be address through training, pre-construction planning and the application of modern construction techniques and, most importantly (Gollenbeck, 2008), through the understanding and application of project management techniques. The business world according to Kerzner (2000), has come to recognize the importance of project management for the future as well as the present. According to Gollenbeck (2008) the contractors' project managers and their firms must have project management capability for them to succeed in the contemporary construction business.

Client demands for contemporary procurement systems pose a challenge to contractors (see: Harris & McCaffer, 2005; Bennett, 2003). Hence, for the contractors to be relevant, they need technical skills, management and entrepreneurial skills, good knowledge of the markets, adequacy of plants and equipment, and continuous improvement of business knowledge (Mbamali & Okotie, 2013; Bala *et al.* 2009; Harris & McCaffer, 2005; Muazu & Bustani, 2004; Saleh, 2004). The variances in modern construction procurement systems impose different roles on contractors (Harris & McCaffer, 2005; Oyegoke, 2006; Rashid *et al.* 2006). This calls for the contractors to understand their expected roles in any type of procurement systems because their roles in relation to other parties can invariably affect the performance of any type of procurement systems (Rashid *et al.* 2006).

Construction is a multi-organizational process that is heavily dependent on the exchange of large and complex data. Successful completion of a project depends on the accuracy, effectiveness and timely communication and

exchange of critical information and data between the project teams (Khatri, 2000 in Inuwa *et al.* 2012). Managing of modern construction information which basically deals with design and project management requires the application of ICT (Inuwa *et al.* 2012; Roberts & Wallace, 2002). The advent of ICT has revolutionized the construction industry through more accurate data processing systems (Roberts & Wallace, 2002). Modern construction contracting deals with a lot of design and management information. Hence, it requires the application of ICT to be able to accomplish its tasks, especially in project planning and management (Roberts & Wallace, 2002).

The issue of sustainability in the construction industry has been of concern to stakeholders in recent times (Jatau & Wescott, 2011 (Nwokoro, & Onukwube, 2011)). The industry's approach towards addressing this issue is through sustainable construction (Jatau & Westcott, 2011). Sustainable construction has emerged as a guiding paradigm to create a new kind of construction environment: one that meets the needs of humans in the present without limiting the ability of future generations to meet their own needs (Ofori, 2001 in (Nwokoro & Onukwube, 2011)). Construction is a major and primary sector of Nigerian economy and its consideration of the issues of sustainability covers a huge spectrum of the sector (Nwafor, 2006 in Nwokoro & Onukwube, 2011). The contractors' understanding, application and adherence to a country's environmental laws in relation to sustainable construction will assist his/her project planning consideration and inputs. This also encompasses social progress: this category consists of health and safety, employee interest, learning and development, and community involvement in project execution (Jatau & Wescott, 2011).

The issue of late honouring of interim payments to the contractors in Nigeria as acknowledged by Adams (1997), is an impediment to contractors' project planning capability and performance. Most NICs' have no access to capitals (Bala *et al.* 2009; Adams, 1997). Where they are able to access capital-loans from banks; they access it at higher interest rates and if interim payments are delayed it attracts more interest. This translates to high cost of construction and low return on investment to the contractors. Thus, prompt honouring of contractors' interim payments can have a significant influence on their project planning. Furthermore, the prevalence of corruption in the NCI is an issue that needs to be addressed as it negatively affects projects performance (Adebanjo, 2012; Oyewobi *et al.* 2011). The industry's business culture needs to be free from corruption for all parties to effectively and efficiently attain their aims.

Another factor that can play a significant influence on contractors' project planning is the adherence to the concept of buildability/constructability (Aina & Wahab, 2011). According to Aina and Wahab (2011) buildability is increasingly becoming a major requirement in building

practice. Buildability is the extent to which the design of a building facilitates ease of construction, subject to the overall requirements for the completed building (CIRIA, 1983 in Aina & Wahab, 2011). Buildability is often described as integrating construction knowledge, resources, technology and experience into the engineering and design of a project (Aina & Wahab, 2011). The aforementioned factors have significant influence on contractor's project planning capability, hence play a vital role in determining contractor's project planning effectiveness for attaining project success.

RESEARCH METHODOLOGY

The study used explorative and questionnaire survey methods. Literature search was used to identify factors that can significantly influence NICs' project planning in construction procurement systems. Unstructured interviews were conducted on 5 NICs', 3 academicians that are also consultants and 2 public building professionals (PBPs'), to obtain more information that were not captured in the literature search. All the interviewees' have over 15 years working experience in the NCI. The information from the explorative method forms the bases of ranking the level of importance covered in the questionnaires. Three sets of questionnaires totalling 300 were developed and administered to indigenous contractors' (150), consultants' (75) and PBPs' (75) respectively, through purposive sampling technique in the north-central (Abuja), north-eastern (Bauchi/Gombe) and north-western (Kano) geopolitical zones of Nigeria respectively.

The choice of purposive sampling was informed by: non-availability of an authoritative sampling frame of active indigenous contractors in Nigeria (Muazu & Bustani, 2004; Achuen *et al.* 2000; Adams, 1997); and the ability to target groups who are best able to respond to the research issues (Ibrahim, 2011). Afterwards, SPSS version 17 (2008) was used to analyse the data obtained for: reliability test using Cronbach's *Alpha* (α), significance test, Spearman's coefficient of correlation (ρ) and; descriptive statistics.

The ranking was based on arithmetic mean value scores and have Likert scale of 1-5. For interpretation purposes, the mean score of 1 indicates "not important", 2 "least important", 3 "fairly important", 4 "important" and 5 "very important". A lower mean value indicates a lower level of importance. Although the use of arithmetic means suggest treating Likert scale-based data at an interval level of measurement, the mean scores should not be deemed as "quantities" to show how much more important each factor is than the other, but as "indicators" to establish a rank order of importance for the factor (Idrus and Newman, 2002 in Ibrahim, 2011). For instance (Ibrahim, 2011), a value of 3.30 leans more to "important".

Standard deviations (SD) of the responses were also used to measure the variability of the responses; higher SD is interpreted as higher disparity or variation (Ibrahim, 2011). Kruskal Wallis H-test was used to test the null hypothesis

that, the distribution of rankings is not the same for the three groups at 5% level of significance. The null hypothesis was rejected as the computed value of Kruskal Wallis H-test of 9.304 at 2 degree of freedom (df) is greater than the table value of 5.991. This shows that there is consistency and agreement in the group rankings irrespective of their different background. Spearman's ρ (rho) was used to test the coefficient of correlation between the rank pairs of: contractors and consultants; consultants and public building professionals and; contractors and public building professionals. The computed coefficients are: 0.998; 0.999; and 0.999 for the three pairs respectively, indicating a high degree of agreement among the groups. Cronbach's α was used to measure the questionnaires construct coefficient of reliability (or consistency). The test

result shows that the Cronbach's α for the 15 identified significant factors to be 0.82, this signifies high reliability and consistency in a scale of 0-1; with a cut off value of 0.7 (Ogwueleka, 2011; Ibrahim, 2011).

DATA PRESENTATION AND ANALYSIS

Questionnaire Response Rate

Table 1 below shows the questionnaire response rate according to the category of respondents. The research record an overall questionnaire response rate of 59% (177). This is better than other studies in the construction industry: 55.25% (Usman *et al.* 2012); 47% (Ibrahim, 2011); 35% (Adams, 1997).

Table 1: Response rate According to Category of Respondents'

Respondents'	Distribution (No)	Responses (No)	Response Rate (%)
Contractors'	150	69	38.98
Consultants'	75	44	24.86
Public building Professionals	75	64	36.16
TOTAL	300	177	100

Respondents' Organizational and Demographic Profiles

Thirty nine (39%) percent, 36%, and 25% of the respondents are from Contracting firms, Public Institutions (PBPs'), and consultancy firms respectively. Public

institutions according to Iro *et al.* (2013) have 75% of the total construction share in Nigeria, which makes it a major client of the industry. This representation therefore depicts the primary triads of parties involved in the management of construction projects (Bennett, 2003): contractors; consultants; and clients', thus depicting adequate participation for the study.

Table 2: Respondents' Years of Experience

Years	Mid value(X)	Frequency (F)	FX
Less than 5	2.5	10	25
5-10	7.5	53	397.5
10-15	12.5	36	450
Over 15	15	78	1170
Total		177	2032.5

$$\text{Mean Year of Experience} = \frac{\sum FX}{\sum F} = 11.50$$

Table 2 above shows the respondent's years of experience in the construction industry and found the mean year to be 11.50 years, this shows that the respondents have adequate experience to respond to the research enquiry.

Assessment of Factors for Indigenous Contractors Project Planning

Table 3 below shows the individual respondent's assessment of the significant factors that can influence NICs' project planning in construction procurement systems. The table below shows the weighted means and ranks of the individual respondent's assessments of the level of importance of the significant factors for NICs' project planning.

Table 3: Individual Respondent's Assessment of Factors Level of Importance

S/N	Factors Influencing contractors Project Planning	Contractors		Consultants		PBPs'	
		Mean	Rank	Mean	Rank	Mean	Rank
1	Contractors' project manager's capability	4.5441	1	4.6136	4	4.5312	5
2	Technical Competence	4.4783	2	4.6818	1	4.8065	1
3	Contractors' project management capability	4.4493	3	4.6279	3	4.6719	2
4	Understanding contractor's project procurement task	4.4493	4	4.6364	2	4.6406	3
5	Adherence to the concept of buildability/constructability	4.2969	5	4.1818	7	4.3651	7
6	Prompt honouring of payments certificates	4.2754	6	4.3636	5	4.5714	4
7	Compliance with safety procedures	4.1471	7	4.1591	9	4.1452	10
8	Adequacy of plants & equipment	4.1304	8	4.1818	8	4.2698	8
9	Continuous improvement of contractors' business knowledge	4.118	9	4.205	6	4.469	6
10	Contractors' organizational structure	4.0435	10	4.000	11	4.2187	9
11	Fairness & transparency in industry's business culture	3.8406	11	3.9318	12	3.9194	12
12	Understanding environmental Laws	3.7353	12	4.0476	10	3.9531	11
13	Contractors' ICT compliance	3.6471	13	3.7273	15	1.11091	15
14	Type of procurement system	3.6087	14	3.8182	14	3.8226	13
15	Good response to weather	3.4493	15	3.8409	13	3.6094	14

Table 3 above reveal the weighted means range of the individual group's respondent's level of importance of factors that can significant influence NICs' project planning in construction procurement systems as: 4.54-3.45, 4.68-3.73, and 4.81-3.44 for contractors, consultants and PBPs' respectively. These show that all the identified factors are important to the contractors' in project planning of their procurement task. The top three most significantly important factors as assessed by individual respondent groups, are: contractors' project manager's capability,

technical competence, and contractors' project management capability (contractors'); technical competence, understanding contractors' project procurement task, and contractors' project manager's capability (consultants'); and technical competence, contractors' project management capability, and understanding contractors project procurement task.

The computed standard deviation (SD) for all the results show low values for the SDs', which indicates a high degree of consistencies in the respondents' opinions.

Table 4: Combined Respondents' Assessment of Factors' Level of Importance

S/N	Factors Influencing contractors Project Planning	Mean	SD	Ranking
1	Technical competence	4.6457	.62530	1
2	Contractors' project management capability		.57091	2
3	Understanding contractors' project procurement task	4.5650	.66359	3
4	Contractors' manager's capability	4.5568	.62988	4
5	Prompt honouring of payments certificates	4.4034	.86308	5
6	Adherence to the concept of buildability/constructability	4.2924	.88577	6
7	Contractors' improvement of contractor's business knowledge	4.267	.8087	7
8	Adequacy of plants & equipment	4.1932	.83984	8
9	Compliance with safety procedures	4.1494	.91271	9
10	Contractors' organizational structure	4.0960	.89623	10
11	Fairness & transparency in industry's business culture	3.8914	.92518	11
12	Understanding environmental Laws	3.8908	.98229	12
13	Type of procurement system	3.7371	1.01684	13
14	Good response to weather	3.6045	1.13897	14
15	Contractors' ICT compliance	3.5909	1.02133	15

Table 4 above shows the combined weighted means range of the three groups' level of importance of factors that can significantly influence NICs' project planning in construction procurement systems to be between 4.65 and 3.60. This shows that all the identified factors are significantly important to NICs' in project planning of their procurement tasks. The top three most significantly important factors are: technical competence (4.66); contractors' project management capability (4.60); and

understanding contractors' procurement tasks (4.57). The results show low values for the standard deviations, which indicates high degree of consistencies in the respondents' opinions. This shows that there is an agreement in the respondents' assessments.

DISCUSSION OF RESULT

This study sought to identify significant factors that can influence NICs' project planning in construction projects

procurement systems. Fifteen factors were identified and are assessed to be significantly important in influencing NICs' projects planning. Technical competence, contractor's project management capability and understanding contractors' procurement tasks are assessed to be the most important significant factors. These results indicate that the distribution of rankings is the same among respondents' on the significant factors that can influence NICs' project planning in building procurement systems. Research on NICs' by Aniekwu and Audu (2010); Bala *et al.* (2009); Muazu and Bustani (2004); Saleh (2004); Achuenu, *et al.* (2000); Adams (1997) confirmed that technical competence amongst other things is a panacea for NICs to improve on its project planning performance. Research has also shown that the adoption of traditional management in the NCI despite its shortcomings has also contributed to NICs' underperformance in projects management (Ekundayo *et al.* 2013). According to Harris and McCaffer (2005) for contractors to make headway in modern construction business, they need a better understanding and application of project management methodology. This is so because project management according to George and Tryggstad (2009) cited in Ekundayo, *et al.*, (2013), is a management discipline that can be applied to all types of construction procurement systems. Project management (PM) has been globally acknowledged as an independent and an efficient way to achieve project goals and objectives (Mader *et al.* 2012; Walker 2007; Cleland 2004 in Ekundayo, *et al.*, 2013).

CONCLUSION AND RECOMMENDATIONS

This research was able to identify significant factors that can influence NICs' project planning in building projects procurement systems, through an explorative and a descriptive survey method in northern Nigeria. The research result reveals that all the respondents agreed that the identified factors are significantly important to the NICs' projects planning in any type of construction procurement system. The respondents ranked contractors' technical competence, project management capability and understanding procurement tasks, as the most important factors that can influence contractors' project planning in any type of construction procurement system. The attainment of these influencing factors for NICs' project planning will improve the NICs' potentials, hence facilitates its meeting international construction best practice.

The research therefore recommends: indigenous contractors' to employ competent personnel and embark on continuous training, embrace project management techniques, and invest in knowledge management; and clients/consultants adhere to project management procedures. Though, this research is delimited to NICs' building projects operational planning at the construction stage, further research can be conducted on NICs' strategic planning and its effect on operational planning at the construction stage.

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