AFRICAN JOURNAL OF APPLIED RESEARCH (AJAR)
www.ajaroniline.com Vol.1, No.1 ISSN 2408-7920 January 2015
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Inuwa, I. I[1]., Wanyona, G.[2] and Diang'a, S.[3] (2015) Identifying Building Contractors' Project Planning Success Indicators: The Case Of Nigerian Indigenous Contractors**.** In: Mojekwu, J.N., Ogunsumi,L.O., Ojigi,L.M. Atepor, L., Thwala,D.W., Sackey,S. Awere E., and Bamfo-Agyei, E. (Eds) African Journal of Applied Research .(AJAR) Journal, Vol.1,No.1 ISSN 2408-7920 January 2015, Cape Coast, Ghana. 58-71

IDENTIFYING BUILDING CONTRACTORS' PROJECT PLANNING SUCCESS INDICATORS: The Case of Nigerian Indigenous Contractors

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Abstract
The frequent criticism of theperformance of Nigerian Indigenous contractors is a consequence of management incapacity and poor project planning. This can be addressed if contractors understand the indicators of project planning success and apply this knowledge in the planning of their project tasks. This research therefore aims at identifying contractors' project planning success indicators and their level of importance. Literature review revealed sixteen contractors' project planning success indicators. The study used a questionnaire survey method and administered 300 questionnaires through purposive sampling to indigenous contractors, consultants and public professionals in northern Nigeria. Data collected were analysed using SPSS for: reliability, correlation, and significance tests, as well as descriptive statistics. The research findings reveal that all the identified success indicators are important to contractors in attaining project planning success. The most important success indicators are: plan's adherence to time; plan's adherence to quality; and adequacy of plan in determining suppliers' delivery dates. The study therefore recommends that contractors should: understand the technicalities in project planning through the adoption of project management methodology; adopt ICT in project planning; employ a competent workforce, embark on continuous training and have good knowledge of the construction market.This research finding will facilitates the indigenous contractors in attaining project success, consequently, enhance the performance of the NCI to meetinternational best practice.

Keywords: Construction industry, Contracting, Indigenous contractors, Project Management and Planning, Nigeria, Success indicators

INTRODUCTION

Construction contractors are entrepreneurs involved in the management of construction projects (Inuwa *et al.*, 2013; Harris & McCaffer, 2005; Bennett, 2003). Their role in the management of modern construction projects is circumscribed within design and management decisions, direct physical production of the facility on site, project close-out/final accounting, and rehabilitation and maintenance of existing facilities (Windapo, 2013; Babatunde *et al.*, 2010; Oyegoke, 2006; Rashid *et al.*, 2006; Harris & McCaffer, 2005). Construction entails a complex interplay of client, consultants, contractors, tools, equipment's and materials (Windapo, 2013). Hence, contractors require project planning if success is to be attained in their construction projects tasks (Baily*et al.*,2008). Planning defines the activities and actions, time and cost targets, and performance milestones which will result in successful project objectives (Teslang, 2004 in Ubani *et al.*, 2010). 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 and McCaffer, 2005). According to Scott (1995) the success of a contractor's project planning depends on a good knowledge of project planning success indicators.

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However, most indigenous contractors in Nigeria are frequently criticized for poor performance due to management incapacity and their inability to plan projects adequately according to contractual requirements (Oladimeji & Ojo, 2012; Aniekwu & Audu, 2010;Idrus & Sodangi, 2010; Muazu & Bustani, 2004; Achuenu *et al*., 2000; Saleh, 2004). This prevents the Nigerian Construction Industry (NCI) from meeting the construction needs of the nation (Aniekwu & Audu, 2010; Saleh, 2004; Achuenu *et al.,* 2000).This problem can be addressed if Indigenous contractors understand the indicators of project planning success and apply the knowledge of this understanding in planning their projects (Muazu & Bustani, 2004; Achuenu *et al*., 2000; Saleh, 2004; Scott, 1995). Contractors' who understand these indicators, according to Scott (1995), stand a better chance of adequately planning their projects to attain success. This research therefore aims at identifying contractors' project planning success indicators. The objective of the research is to identify and assess contractors' project planning success indicators.The attainment of Indigenous contractors' project planning success will enhance and facilitate their efficiency in project delivery in Nigeria and ultimately translate to high performance of the NCI. Moreover, modern clients' quest for efficiency and drive for competitiveness are the fundamental goals of today's globalized economy(Oyediran, 2006). Therefore, contractors who are able to deliver these goals will attract full endorsement and patronage from their clients' (Oyegoke, 2006).

CONTRACTORS' CONSTRUCTION PROJECT PLANNING

Eigege (2005, p.11) citing Cummins (n.d.) defines planning as 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. Planning as a process involves essentially answering the following questions in accomplishing any task (Eigege, 2005, p.12): What are we going to do? Why are we doing it? When do we do it? How do we do it? How much will it cost to do it? Where do we do it and who does it? 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 control. There are two main levels of planning associated with construction projects: strategic and operational (Bamisile, 2008; Harris & McCaffer, 2005; Gahlot & Dhir, 1992; Seeley, 1986).

This research is delimited to contractors' construction works operational planning at the post-contract stage of a building project. Contractors' operational planning involves establishing a method statement for each activity which allows a detailed look at the project's resource requirements, which are not obvious at the strategic level (Harris and McCaffer, 2005). In addition, a contractor's operational plan incorporates a construction programme of works (Harris & McCaffer, 2005; Gahlot & Dhir, 1992). A programme of works primarily presents the sequence in which the various activities should occur with their associated durations and resource requirements (Harris and McCaffer, 2005, p.73).The interrelationship between activities, resources and time in most building projects must be carefully planned to avoid an overload of resources during project operations (Baily*et al*., 2008). The object of planning construction projects therefore, is to pre-determine how the project objectives will be

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achieved (Chitkara, 2012, p.54). The use of the construction works operational plan is for achieving efficient and effective resource management by facilitating scope management, decision making, resource organization and coordination, monitoring and control and sound financial management (cash flow forecasting); and as an agreed plan against which the effects of delays to the project might be determined (Chitkara, 2012; Gupta, 2010; Gahlot & Dhir, 1992; Seeley, 1986).

Performance of Nigerian Indigenous contractors

In Nigeria, construction contractors are categorised byseveral criteria (Idoro, 2011; Idoro & Akande-Subar, 2008; Muazu & Bustani, 2004): scope of operation (local, regional, national and multinational); specialization (building and engineering); size and category of contracts (small, medium and large); and the company's owners' nationality (foreign and indigenous). The debate on project performance in NCI centres mainly on the performances of foreign and indigenous contractors (Idoro & Akande-Subar, 2008). Indigenous contractors are contracting firms that are fully-owned and managed by Nigerians; the nationality of the firms' ownership and management is exclusively Nigerian.

Uduak (2006) and Y. Ibrahim (2012) scored the performance of Nigeria indigenous contractors'better in building and civil engineering projects and claimed that they can be entrusted with large and highly technical projects, while, most studies reports that their performance is frequently associated with poor management resulting in poor planning, poor goal commitment, poor team motivation, poor technical competence, poor scope and work definition and poor project control system (Aniekwu & Audu, 2010; Bala *et al*., 2009; Muazu & Bustani, 2004; Saleh, 2004; Achuenu *et al*., 2000; Adams, 1997).These have resulted in low productivity of the Nigerian indigenous contractors compared to their foreign counter-parts causing a major percentage of the total projects in Nigeria given to foreign contractors (Kirmani, 1988 in Aniekwu & Audu, 2010). The outcome to the industry is: low income generation and redistribution due to expatriates repatriating their profits abroad, an insignificant value addition to construction and local industries supplying construction materials, and consistent contribution of 1% employment over the last decade as against the World Bank's average observation of about 3.2% in other developing countries (Aniekwu & Audu, 2010; Idrus & Sodangi, 2010). This consequently prevents the country from fully benefitting from the industry's contribution to economic growth (Aniekwu & Audu, 2010; Bala *et al*., 2009; Adams, 1997).

Indigenous contractors' Construction Project Management

Construction projects managed by Nigerian Indigenous contractors are characterised by features of project failure emanating from the abandonment of projects; cost and time overruns; poor workmanship; poor management capability; financial difficulties; poor planning; poor mechanization and high frequency of litigation (Oladimeji & Ojo, 2012; Idrus & Sodangi, 2010; Muazu & Bustani, 2004; Achuenu *et al*., 2000). Many researchers have attributed their poor performance to the adoption of traditional management approaches, which over the years have proven to be ineffective in the management of construction projects

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(Ekundayo *et al*.,2013; Odediran*et al.*, 2012;Aniekwu & Audu, 2010; Muazu & Bustani, 2004). The consequence of such adoption, according to Muazu and Bustani (2004), is poor management. In the opinion of Aniekwu and Audu (2010), a substantial part of Indigenous Contractors' construction performance problems can be addressed through training, pre-construction planning and the application of modern construction techniques and, these can be generally curbed through the understanding and application of project management techniques (Gollenbeck, 2008).

The developed economies have for long (since early 1950s) recognized project management as an independent and efficient way to achieve project goals and objectives (Ekundayo, *et al*., 2013), and have come to recognize its importance (Kerzner, 2000). They have efficiently used project management in achieving all their construction project objectives including cost, time, quality, scope, change and stakeholder management (Morris and Hough 1987; Madter *et al*., 2012 cited in Ekundayo *et al*., 2013). Project management is the planning, scheduling, and controlling of a series of project integrated tasks, such that the objectives of the project are achieved successfully and in the best interest of the project's stakeholders (Kerzner, 2000). Ekundayo *et al*. (2013) defines project management as a discipline concerned with the planning, organizing, securing, managing, leading, and controlling of project resources to achieve specific goals. Its application is diverse and universal and as such, allows its use across a wide spectrum of human activity (Chitkara, 2012). In order for contractors to benefit from project management, Krishnamurthy and Ravindra (2010) opined that adequate planning should precede the execution of other managerial functions.

Project Planning Success Indicators

According to Bennett (2003), to achieve success in project planning there must be: a clear understanding of the project's objectives, purposes, scope and nature by both the client/owner and the organization responsible for carrying out the work and a relationship between the client/owner; establishment of the project delivery organization, with clearly defined roles and responsibilities. Without this, the client or the consultant will negatively affect the contractor's project planning. This therefore requires a good working relationship and sound communication network between the client/owner and the project delivery organization. The issue of attaining project planning success in developed countries is no longer a problem as they have embraced project management methodology, and consequently reaps its benefits (Ekundayo *et al*., 2013; Harris & McCaffer, 2005; Kerzner, 2000).

In developing countries like Nigeria however, indigenous contractors' construction project planning is very poor due to non-adoption of project management techniques, management incapacity and the inability to plan projects adequately according to contractual requirements (Oladimeji & Ojo, 2012; Aniekwu & Audu, 2010; Idrus & Sodangi, 2010; Muazu &Bustani, 2004; Achuenu *et al*., 2000; Saleh, 2004). This problem can be addressed if indigenous contractors understand the indicators of project planning success and apply the knowledge of this understanding to planning their projects (Muazu & Bustani, 2004; Saleh, 2004; Achuenu *et al*., 2000; Scott, 1995).

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According to Oxford Dictionary of English (2000), success is the accomplishment of an aim or purpose, while an indicator is a thing that indicates the state or level of something. Therefore, success indicators can be construed as signals or signs that inform that an event, operation or activity has accomplished its intended purpose. A success indicator confirms a state of prosperity in an operation, or the attainment of success in an endeavour. In this context, any factor that signifies the attainment of the benefits of contractors' construction works operational planning, the curbing of wastage, and curtailing risks and accidents, constitutes an operational planning success indicator.

An operational plan should include sufficient details to enable proper consideration to be given to the timing and duration of operations, type and quantity of materials and equipment's, delivery dates and manpower requirements (Chitkara, 2012; Gupta, 2010; Krishnamurthy & Ravindra, 2010; Harris & McCaffer, 2005; Gahlot & Dhir, 1992). For contractors' operational plan to attain this feat, according to Gahlot and Dhir (1992), it must satisfy the essential characteristics of a good operational plan (programme), and this include:

- It must be suitable for use as a control tool against which progress can be measured,
- It must be sufficiently accurate to enable its use for forecasting requirements of materials, manpower, machinery and money,
- It must provide for difficulties likely to be encountered in future in respect of quality, scope, processes and for taking remedial measures.

These characteristics by implication can be used by contractors to gauge their operational plan performance and can subsequently be used as indicators for attaining project operational planning success. Looking at the abovementioned characteristics in succession, the following can be deduced as project planning success indicators: plan's provision for facilitating project monitoring and control, ability of plan in facilitating project resource organization and, plan's flexibility. In addition (Scott, 1995; Seeley, 1986), the contractors' operational plan should be use as the agreed plan against which the effects of delays to the project will be determined and as such, can be used as an indicator for contractors' project planning success through its (plan's) ability to facilitates claim assessment for delay.

Scott (1995) identified factors that ensures contractors' project operational plan effectiveness and efficiency as defined by construction projects supervisors (architects/engineers/projects manager). These factors are (Scott, 1995):

- The durations of activities defined by the contractor should be sensible
- Any specific restrictions stated in the contract should be complied with: targets dates, staged completion, completion of the whole work.
- A proper logical sequence had been adopted
- Identified major tasks in the project, ensure activities size were reasonable and ensures adequate accommodation of contractor's, subcontractors' and public utilities works had been considered.

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Thus, success indicators in consideration of the aforementioned requirements includes: plan's adherence to time, cost estimate, and to quality, adequacy of plan in determining suppliers' delivery dates, plan's capability to accommodate contractors' work, plan's provision of basis for preparing schedules and, plan's efficiency in integrating the sub-contractors' work. Furthermore, the breakdown of activities in a contractors' operational plan according to Scott (1995), must be such that all operations that might be affected by work changes and delays should be identified individually and as such, contractors' agent should have a good working knowledge of the project operational plan (programme). Trade heads need to be able to read the project schedules, tasks involved and specification, according to Passenheim (2009), to assist them in knowing what to do next. To achieve this, the contractors' project operational plan should be comprehensible. Hence, as a success indicator, the plan should be clear in communication and also comprehensible among trade heads.

A good contractor's operational plan according to Scott (1995), should be able to meet his job technical requirements including: appropriate time for striking formwork, ensuring correct sequences, having proper allowance for weather susceptible operations, etc. Hence, a contractor's project operational plan should be realistic and should properly predict what may happen to the project (Chitkara, 2012; Gupta, 2010; Scott, 1995; Seeley, 1986). Project planning success indicators construed from the abovementioned factors include: plan's adherence to project technical requirements, plan's efficiency in identifying accident-prone areas and, plan's ability to curb re-work.

RESEARCH METHODOLOGY

The study used literature review, interviews, and questionnaire survey method.The study area is delimited to the northern geo-political zones of Nigeria. According to Adams (1997), the best way to obtain information free of bias and with increased accuracy concerning indigenous contractors is from contractors themselves, independent consultants who work in the industry and, clients' supervisory staff (who in this study are referred to as public building professionals), who work closely with the contractors. Therefore construction consultants (Architects, Builders, Engineers and, quantity surveyors) and public building professionals (building professionals working for government establishments) were also involved in the research as part of the population. Adams (1997) emphasized that the last group (consultants and clients' supervisory staff) will probably be more objective in judging contractors performance. Obtaining a reliable population size for NICs is not achievable (Idoro, 2011; Jinadu, 2007). Nonetheless, a population size of 500 is used for the study. The sample size for this study is 300, this was computed using Ayoub and McCuen (2000) formula for computing sample size of unlimited population (see: Enshassi *et al*., 2006)

Sixteen contractors project planning success indicators were identified through literature review and interviews. These form the basis of ranking the level of importance of the project planning success indicators covered in the questionnaire. Purposive sampling technique was used to administer 300 questionnaires and distributed in the ratio of 2:1:1 to indigenous contractors', consultants' and public building professionals (PBPs') in the north-central

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(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; Achuenu *et al.*, 2000; Adams, 1997), and the ability to target specific professionals and contractors who are best able to respond to the research issues (A.D. Ibrahim, 2011). Subsequently, SPSS version 17 was used to run: reliability test using Cronbach's Alpha, significance test, Spearman's coefficient of correlation (ρ) and, descriptive statistics to analyse the data obtained.

The ranking was based on arithmetic mean value scores using Likert scales of 1-5. For interpretation purposes, the mean score of 1 indicates "not important", 2 "least important", 3 "moderately 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 cited in A.D. Ibrahim, 2011). For instance (A.D. Ibrahim, 2011), a value of 3.30 leans more to 'important". Standard deviations (SD) of the responses were used to measure the variability of the responses; a higher SD is interpreted as a higher disparity or variation (A.D. 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 a 5% level of significance. The null hypothesis was rejected as the computed value of Kruskal Wallis H-test of 6.326 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 PBPs' and; contractors and PBPs'. The computed coefficients were: 0.990; 0.997; and 0.993 for the three pairs respectively, indicating a high degree of agreement among the groups. Cronbach's alpha was used to measure the questionnaires construct coefficient of reliability (or consistency). The test result shows the Cronbach's alpha for the 16 project planning success indicators to be 0.75, signifying high reliability and consistency in a scale of 0-1; with a cut off value of 0.7 (A.D. Ibrahim, 2011).

DATA PRESENTATION AND ANALYSIS

Response Rate, Respondents' Organizational and Demographic Profile

The study attained an overall questionnaires response rate of 59% (177). This response rate for this type of survey is higher than other studies in the construction industry: 55.25% (Usman *et al.*, 2012); 55.25% (Iro *et aI.*, 2013); 47% (Ibrahim,2011); 47% (Adams, 1997).

Thirty nine percent (39%), thirty six percent (36%), and twenty five percent (25%) of the respondents are from contracting firms, PBPs', and consultancy firms respectively. PBPs' represents public institutions and have 75% of the total construction share in Nigeria(Iro *et aI.*, 2013), which makes it a major client of the industry. The research respondents therefore represent the primary triads of parties involved in the management of construction projects

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(Bennett, 2003): contractors; consultants; and clients, signifying adequate participation for the study.

Table 1: 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**

Source: Field survey (2013)

Mean Year of Experience = ∑FX/∑F = 11.50

Table 1 above shows the respondents' 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.

Interpretation of Result

Table 2 and 3 below are individual group's and combined groups' respondents' assessment of contractors' project planning success indicators' respectively. Both tables 2 & 3 show the weighted means, SDs' and ranks of the respondents' assessments. Table 2 shows weighted means ranges of: 3.7206-4.6119, 3.7727-4.5682, and 3.5238-4.5512 for contractors, consultants and PBPs' respectively. These reveal that all the identified success indicators' are important in determining contractors' project planning success. The most important success indicators as assessed by the individual groups are: adequacy of plan in determining suppliers' delivery dates (4.6119), plan's adherence to quality (4.4925), plan's adherence to time (4.4412) and plan's capability to accommodate contractors work (4.4412) for contractors; plan's adherence to quality (4.5682), plan's adherence to time (4.5455), and plan's adherence to cost estimate (4.4318) for consultants; and plan's adherence to time (4.5512), plan's adherence to quality (4.5469) and adequacy of plan in determining suppliers' delivery dates (4.5079) for PBPs'. The result reveals low values for the SDs' indicating a high degree of consistencies in the respondents' opinions. Table 3 shows a combined groups weighted mean range of 3.7299- 4.7159. This reveals that all the groups are in agreement that all the success indicators are important to the contractors in attaining project planning success. The most important success indicators as revealed by Table 3 are: plan's adherence to time (4.7159);

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Table 2: Individual Group's Rank Assessment of Contractors' Project Planning Success Indicators

S/N	Contractors' Planning Success Indicators	Contractors			Consultants			PBPs		
		Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank
1	Plan's adherence to time	4.4412	0.65523	3	4.5455	0.6271	2	4.5512	0.6034	1
2	Plan's adherence to quality	4.4925	0.72557	2	4.5682	0.7281	1	4.5469	0.7954	2
3	Adequacy of plan in determining suppliers' delivery dates	4.6119	0.67319	1	4.4091	0.6220	4	4.5079	0.6444	3
4	Plan's adherence to cost estimate	4.3529	0.89384	5	4.4318	0.7594	3	4.4677	0.6198	4
5	Plan's adherence to project technical requirements	4.3529	0.74843	4	4.4091	0.8441	5	4.3968	0.6849	5
6	Ability of plan in facilitating project resource organization	4.3088	0.73824	6	4.2273	0.7428	6	4.2813	0.6540	7
7	Plan's provision for facilitating project monitoring and control	4.2794	0.82581	7	4.1364	0.9546	8	4.3438	0.6228	6
8	Plan's capability to accommodate contractors' work	4.4412	0.65523	3	4.1364	0.7019	7	4.1563	0.6228	9
9	Plan's clarity in communication	4.3529	0.89384	5	4.0455	0.8614	10	4.1935	0.6488	8
10	Plan's provision of basis for preparing schedules	4.2794	0.82581	7	3.9318	0.8183	11	3.9375	0.7319	11
11	Plan efficiently integrates sub-contractors work	3.9559	0.9990	9	4.0909	0.8302	9	3.8594	0.7318	12
12	Plan's flexibility	4.0294	1.0646	8	3.9091	1.0525	13	3.6875	0.8141	14
13	Plan's comprehensibility among trade heads	3.9559	0.9531	10	3.7727	0.8856	16	3.8438	0.8399	13
14	Plan's efficiency in identifying accident-prone areas	3.7206	0.9279	13	3.8182	1.0404	15	3.9375	0.7319	10
15	Plan's facilitation of claim assessment for delay	3.8235	0.9611	11	3.8864	0.7223	14	3.6406	0.7208	15
16	Plan's ability to curtail rework	3.8060	1.0334	12	3.9091	0.8844	12	3.5238	0.8587	16

Source: Field survey (2013)

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Table 3: Combined Groups' Rank Assessment of Contractors' Project Planning Success Indicators

S/N	Contractors' Planning Success Indicators	Mean	SD	Rank
1	Plan's adherence to time	4.7159	3.04424	1
2	Plan's adherence to quality	4.5314	0.74886	2
3	Adequacy of plan in determining suppliers' delivery dates	4.5230	0.65140	3
4	Plan's adherence to cost estimate	4.4138	0.76863	4
5	Plan's adherence to project technical requirements	4.3829	0.74798	5
6	Ability of plan in facilitating project resource organization	4.2784	0.70653	6
7	Plan's provision for facilitating project monitoring and control	4.2670	0.79444	7
8	Plan's capability to accommodate contractors' work	4.2614	0.66752	8
9	Plan's clarity in communication	4.2184	0.81070	9
10	Plan's provision of basis for preparing schedules	4.0682	0.80421	10
11	Plan efficiently integrates sub-contractors work	3.9545	0.86730	11
12	Plan's flexibility	3.8750	0.98343	12
13	Plan's comprehensibility among trade heads	3.8693	0.89441	13
14	Plan's efficiency in identifying accident-prone areas	3.8239	0.89296	14
15	Plan's facilitation of claim assessment for delay	3.7727	0.82431	15
16	Plan's ability to curtail rework	3.7299	0.94442	16

Source: Field survey (2013)

Plan's adherence to quality (4.5314); and adequacy of plan in determining suppliers' delivery dates (4.5230). The result also reveals low values for the SDs' indicating a high degree of consistency in the combined respondents' opinions.

Discussion of Result

The contractors' aim of planning construction project is to pre-determine how their project objectives will be achieved (Chitkara, 2012) and the attainment of such aim entails the project plan meeting the: essentials characteristics of good project plan, basic use/benefits of contractors project planning and, things being considered by supervision Engineers'/Architects' when checking to ensure the effectiveness and efficiency of contractor's project planning. This research result agrees with: Gahlot and Dhir (1992) publication's on the essential characteristics of good project plans; Chitkara (2012) and Seeley (1986) publications' on the use/benefits of project plan, and Scott (1995) finding on the things being considered by supervision engineers'/architects' when checking to ensure the effectiveness and efficiency of contractors' project plan. Moreover, the research agrees with the opinion of Krishnamurthy and Ravindra (2010) that a contractor's project plan should be flexible to accommodate changes brought about by unexpected events. It also agrees with the finding of Scott (1995) that the contractor's project plan should be comprehensible and realistic in predicting what will happen in future.

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CONCLUSION AND RECOMMENDATION

This research was able to identify contractors' project planning success indicators and their level of importance through literature search, interviews and questionnaire survey conducted in Northern Nigeria. This was in relation to most indigenous contractors being frequently criticized for poor performance in Nigeria due to management incapacity and the inability to plan projects adequately for their contractual requirements. As it was earlier deduced fromScott (1995) that the understanding of project planning success indicators will serve as a guide to contractors in managing and planning construction projects and eventually lead to their attainment of project planning success and better performance in the NCI, as well as enable them to meet international best practice. All the research respondents agrees that the sixteen (16) contractors project planning success indicators identified are important to indigenous contractors in achieving project planning success. In addition, all the respondents' are in agreement that plan's adherence to time, plan's adherence to quality and, adequacy of plan in determining suppliers' delivery dates are the most important contractors' project planning success indicators in project planning.

From the research literature review andfindings, the research recommended that Nigerian indigenous contractors should: understand the technicalities in project planning through the adoption of project management methodology; adopt ICT in project planning; employ a competent workforce and embark on continuous training; and have good knowledge of the construction market. Theresearch finding will facilitates indigenous contractors in attaining project success, consequently, enhance the performance of the NCI to meet international best practice.This research was however, delimited to indigenous building contractors in the northern geopolitical zones of Nigeria. Further research can be conducted to cover the entire country and to capture the views of foreign and engineering contractors on the factors that determine contractors' project planning success indicators.

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