

ASSESSMENT OF THE COMPETENCY LEVEL OF INDIGENOUS CONSTRUCTION COMPANIES ON BUILDING PROJECT DELIVERY IN FEDERAL CAPITAL TERRITORY, ABUJA.

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Abstract

The study assesses the competency level of indigenous construction companies on building project delivery in Federal Capital Territory, Abuja Nigeria. The target population for this study comprised of 267 so no sampling was carried out. A structured questionnaire designed by the researcher was used to elicit information from respondents after subjecting it to face and content validity by two experts from Building Technology option in the Department of Industrial and Technology Education, Federal University of Technology, Minna, Niger State and one expert from the Federal Ministry of Works and Housing Federal Capital Territory, Abuja. The instruments for collection of data were pilot tested to determine the reliability coefficient and the reliability coefficient of the instrument was obtained to be 0.783. A structured questionnaire titled; Assessment of The Competency Level of Indigenous Construction Companies on Building Project Delivery was used for data collection by the researcher with the aid of three (3) research assistants and from the data collected Mean and Standard Deviation was used to answer the research questions while the Analysis of Variance (ANOVA) was used to test the hypotheses at 0.05 level of significant. The findings of the study revealed that the indigenous construction company are capable in preparing building project details determine designated land use, capable of selecting and assessing site including the site appropriateness and specialized consultant, contractors ensure their project are completed within a schedule time. The study thus recommends that the indigenous company contractors should employ competent personnel and always embark on train then continuously and indigenous construction company should embrace project management technique, consultants or service providers' selection so as to procure very suitable qualified personnel for project and Issues such as resources, technological abilities.

Keywords: Assessment, Construction companies, building project, Competency, Building Technology.

Introduction

Indigenous Construction Company is a construction company established under the Enterprise Promotion Decree of February 1972 and has no other home base but Nigeria, their entire capital and any other proprietary interests in the enterprise are owned and controlled by Nigerian citizens or associations and most or all of its technical and managerial undertakings are manned by Nigerians. Ninety five percent of all the construction companies operating in Nigeria are indigenous, while the remaining five percent of construction companies are foreign in origin (Ibrahim, *et al.*, 2014). indigenous construction company have not had a fair share of major construction activities in the country, as they are often awarded to their foreign counterparts whom are considered more technically and managerially more superior and efficient in funds acquisition and project execution, and because of labour intensity of construction, indigenous construction companies are often categorized according to size of their permanent employees (Bashford, *et al.*, 2016). The broad objectives for the establishment of indigenous construction companies are as follows; to create more employment for Nigerians, to enable Nigerians have greater control of their economy, to avoid foreign domination in order to prevent possible economic sabotage, to create greater opportunities for training indigenous personnel, to maximize local retention of profits and to enhance indigenous company growth in Nigeria (Ibrahim, *et al.*, 2014). Odediran, *et al.*, (2012) stated that the benefits of the indigenous construction company to every economy cannot be overemphasized because the contributions of the indigenous construction company to Gross Domestic Product in both developed and developing countries range from 7% to 10% and 3% to 6% respectively thus still faced with several challenges.

The challenge with the indigenous construction companies is that their inability to train their workers, which is the responsibility of every indigenous company to nature, develop and equip her contractors and workers with available skills on projects so as to have the required experience to execute all complexities of construction challenges (Ibrahim, *et al.*, 2014). These challenges of indigenous construction company

have hindered their project success, there have been grave concerns over the poor performance of construction projects which is partly due to the selection of wrong contractor to carry out construction works; problems associated with client and consultant; problems caused by contractors incompetence; poor communication; poor accessibility; expensive site situations; pre-determined designs and resource among others (Inuwa, 2014). Indigenous construction companies can never carry out or deliver any meaningful building construction project except with the contribution of experts and competence contractors, consultants and architects. Idoro, *et al.*, (2018) described a construction contractor as a company or individual that provides independent, professional services in the construction industry to third-party employers and these services are typically rendered as part of a pre-project contractual agreement with the hiring firm, or through an agreement to provide a specific service for a given duration of time. A contractor is also the one accountable for the quality of the work delivered to the client. Company contractors cannot carry out a building construction alone except with effort of the expert and competent consultant (Usman *et al.*, 2019). Usman describe a consultants as professionals that are typically appointed by the client to perform expert tasks on a project which provide advice on setting up and defining the project, developing and co-ordinating the design, preparing production information and tender documentation, contract administration and inspecting the work of contractors.

The members of the indigenous construction companies that are likely to be required on most projects are cost consultant, services engineer and architects. The term "architect" refers only to individuals who are registered with a professional body. Architectural services can be obtained from individuals without licenses, but they cannot call themselves architects and cannot sign construction documents. Architects work hand-in-hand with other professionals such as civil engineers, contractor and company workers to deliver qualified designs and services (Widjaja, 2016)). In order to ascertain the competencies performance by the contractor, consultant and architects in this indigenous construction company in building delivery assessment is necessary.

Assessment is the process of measuring the effectiveness and efficiency of building construction work and using the results obtained in taking relevant decisions. While David and Lewis (2016) viewed assessment as the collections of information about condition and situation performance of building structure as well as judgment interpretation and planned actions. Achievement and competence of the performance of a construction company can be assessed in order to ascertain their effectiveness. Competency is the ability of an individual to do a job properly. Competency is set of defined behaviours that provide a structured guide enabling the identification, evaluation and development of the behaviours in individual employees (Murder, 2016). The delivery of construction projects happens to be one of the most common activities encounter in our daily lives and they are in phases, the pre-design phase (also called the planning or programming phase), the project is defined in terms of its function, purpose, scope, size, and economics (Annie, *et al.*, 2013). In most projects, the design team consists of the architect, landscape architect, civil and structural consultants, and mechanical, electrical, and plumbing (MEP) consultants. In complex projects, the design team may also include an acoustical consultant, roofing and water- proofing consultant, cost consultant, building code consultant, signage consultant, interior designer, and so on (Aniekwu & Audu, 2010).

They added that the construction phase begins after the general contract or has been selected, contract awarded, and notice to proceed has been issued and the selection of a general contractor is a function of the chosen project delivery method. In order for the Indigenous construction company to be successful in their activities Olabiyi, *et al.*, (2018) pointed out that if indigenous construction company will comply with the rules and regulation guiding the building construction project work, this will go a long way in reducing several challenges and risks and thereby rendering a quality building construction project delivery and the effectiveness of construction delivery was criticized by Graham and John, (2015) to include poor quality construction, high cost of charges, frequent delays in delivery, poor enumeration of workers, low productivity, lack of professional architects, and surveyors of which this criticism has led to debate on the effectiveness of construction project delivery. Therefore, this study will assess indigenous construction company on building project delivery in Federal Capital Territory, Abuja.

Statement of the Research Problem

Indigenous contractors in Nigeria have suffered untold hardship of discrimination from clients over the

years. Major reasons advanced by clients were simply that indigenous contractors portray a high level of incompetence, lack of technical know-how, shabby quality of work delivered, low managerial capacity, poor quality construction, high cost of charges, low productivity, frequent delays in delivery, poor enumeration of workers and lack of professional architects, contractors and consultants among others have been identified as being responsible for the backwardness in the general growth of Nigeria indigenous company. Thus, they do not perform to the satisfaction of the clients. Usman, *et al.*, (2019) asserted that the persistent set back in the growth of indigenous construction company have been centred on the following; poor technological manpower, financing, inadequacy of capital, mass illiteracy, management incapability and marketing incompetency both national and international and among others have led to poor patronage of this indigenous companies. The poor patronage of this indigenous construction company becomes the worries of the day. Therefore, it becomes very important to assess the competency level of indigenous construction company on building project delivery in Federal Capital Territory, Abuja.

Aim and Objectives of the Study

The study assessed the competency level of indigenous construction companies on building project delivery in Federal Capital Territory, Abuja. Specifically, the study determined:

1. The competency level of indigenous construction companies in predesign phase in building project delivery in FCT Abuja.
2. The competency level of indigenous construction companies in design phase in building project delivery in FCT Abuja.
3. The competency level of indigenous construction companies in construction phase in building project delivery in FCT Abuja.

Research Questions

The following research question were formed to guide the study:

1. What is the competency level of indigenous construction companies in predesign phase in building project delivery in FCT Abuja?
2. What is the competency level of indigenous construction companies in design phase in building project delivery in FCT Abuja?
3. What is the competency level of indigenous construction companies in construction phase in building project delivery in FCT Abuja?

Research Hypotheses

The following hypotheses were formed to guide the study:

- H₀:** There is no significant difference in the mean response of the contractors, consultants and architect on the competency level of indigenous construction companies in predesign phase in building project delivery in FCT Abuja.
- H₀:** There is no significant difference in the mean response of the contractors, consultants and architect on the competency level of indigenous construction companies in design phase in building project delivery in FCT Abuja.
- H₀:** There is no significant difference in the mean response of the contractors, consultants and architect on the competency level of indigenous construction companies in construction phase in building project delivery in FCT Abuja.

Research Methodology

A descriptive survey research design was used for this study and the study was carried out in Abuja, Federal Capital Territory Abuja. The population for this study made up of 267 subjects in 101 indigenous construction companies which comprised of 109 indigenous contractors, 50 consultants and 108 registered architects in Federal Capital Territory, Abuja Metropolis. A population of 267 was considered manageable and therefore no sampling was carried out. The instrument for data collection was a structured questionnaire titled; Assessment of the Competency Level of Indigenous Construction Companies on Building Project Delivery (ACLICCPD) developed by the researcher. The instrument for data collection was subjected to face and content validity by two experts from building technology option in the Department of Industrial and Technology Education, Federal University of Technology, Minna, Niger State and one expert from the Federal Ministry of Works and Housing Federal Capital Territory,

Abuja. A trial testing was conducted in Nassarawa State within Karu Metropolis. Questionnaire was administered to 37 subjects comprises of 12 indigenous contractors, 12 registered architects and 13 consultant in the building construction companies in Karu Metropolis. The data obtained from the administrated questionnaire were analysed with Cronbach Alpha Statistic to determine the reliability coefficient and the reliability coefficient of the instrument was obtained to be 0.783. The questionnaire was administered to the respondents by the researcher with the aid of three (3) research assistants. After the administration of the 267 questionnaires, the number returned was 257. The data was analysed using Statistical Package for Social Science (SPSS), Mean and standard deviation was used to answer the research questions while the Analysis of Variance (ANOVA) was used to test the hypotheses at 0.05 level of significant. Mean scored of 2.50 and above were considered agreed and mean score between 1.50 - 2.49 were considered disagreed and the null hypothesis tested higher than 0.05 were accepted while below were rejected.

Results

Research Question One: What is the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja?

Table 1: Mean and Standard Deviation of the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja.

S/N	ITEMS	\bar{x}	SD	REMARK
1	The construction companies is competent in advertising client on appropriateness of the proposed building based on the land to be used	2.61	1.04	Agreed
2	The construction company is good in conducting site analysis before commencement of building project.	2.91	1.17	Agreed
3	The construction company is capable of selecting and assessing site including the site appropriateness	2.84	0.82	Agreed
4	The construction company is responsible for economic feasibility assessment and the overall budget and financing	3.20	0.79	Agreed
5	The company is able to comply with the building programme such as government assessment, building laws and zoning constraints	3.39	0.91	Agreed
6	The company is competent in understanding of space adjacencies by the construction company	2.85	0.82	Agreed
7	The company is not competent in complying 100% with safety procedures	2.37	0.67	Disagreed
8	The company always Comply with the design team selection	2.96	0.74	Agreed
9	The company is not competent in complying with the analysis of the overall project budget	2.32	0.87	Disagreed
10	The company always set a preliminary budget schedule	3.24	0.76	Agreed
11	The company always comply with the Preliminary site/ climate analysis	3.23	1.02	Agreed
12	The company is capable to always make provision for adequate storage of materials	2.79	0.89	Agreed

Keys: N = 257 No of respondents, \bar{x} – Mean, SD – Standard Deviation

Table 1 revealed that the respondents jointly agreed to 10 items out of 12 items presented as the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja with mean values ranging from 2.61 to 3.39 indicating that majority of the indigenous company respondents accepted that the indigenous construction company were competent especially in predesign phase activities in building project delivery in FCT Abuja, while the respondents

disagreed to 7 and 9 with mean scores between 2.32 – 2.37 which is below the cut-off point, this shows that the indigenous construction company is not competent in complying 100% with safety procedures, and also in complying with the analysis of the overall project budget. The result also revealed that the standard deviation (SD) of the items ranges from 0.58 – 1.17. This shows that the respondents were not very far from the mean and from one another in their responses showing that the items were valid.

Research Question Two: What is the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja?

Table 2: Mean and Standard Deviation of the Competency Level of Indigenous Construction Company in Design Phase Activities in Building Project Delivery in FCT Abuja

S/N	ITEMS	\bar{x}	SD	REMARK
1	The construction company have a competent and specialized consultant	3.32	0.98	Agreed
2	The company have a competent and registered architect for building designs	2.84	0.82	Agreed
3	The construction company is competent at design of building to begins after the selection of architects	2.56	0.76	Agreed
4	The construction company architect is liable to owner for his work and that of consultants because of their competencies	2.96	0.74	Agreed
5	The company have a competent and specialised architects and consultants	2.52	0.87	Agreed
6	The construction company consist of competent design team which includes the architects, civil and structural consultants, plumbing, mechanical and electrical engineers	3.35	0.64	Agreed
7	The construction company usually engage competent consultant before or at the same time with the architects	3.15	1.02	Agreed
8	The building project architects as a professional coordinate the entire design process since they are capable	2.58	0.88	Agreed
9	The consultants are usually chosen by the competent architects	3.10	0.92	Agreed
10	The company are always capable of complying with state and federal codes and statutes during design	2.89	1.08	Agreed
11	The company design phase activities consist of schematic, design development and construction document stage	2.89	0.87	Agreed

Table 2 revealed that the respondents jointly agreed to all the items presented as the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja with mean values ranging from 2.52 – 3.35 over the cut-off point indicating that majority of the indigenous company respondent accepted that the indigenous construction company were competent especially in design phase activities in building project delivery in FCT Abuja. The result also revealed that the standard deviation (SD) of the items ranges from 0.64 – 1.08. This shows that the respondents were not very far from the mean and from one another in their responses showing that the items were valid.

Research Question Three: What is the competency level of indigenous construction company in construction phase building project delivery in FCT Abuja?

Table 3: Mean and Standard Deviation of the Competency Level of Indigenous Construction Company in Construction Phase Building Project Delivery in FCT Abuja

S/N	ITEMS	\bar{x}	SD	REMARK
1	Competent general contractor is always employing to confirm the work as described in the contract documents	2.53	0.85	Agreed
2	The company execute construction works according to the design by the competent architect	3.52	0.76	Agreed
3	The project schedule is optimistic and realistic	2.56	0.66	Agreed
4	The indigenous construction company are competent enough to ensure their project are completed within a schedule time	2.66	0.80	Agreed
5	Poor quality work is usually a fault on the part of our local contractors because of their incompetency	3.13	0.88	Agreed
6	The company general contractor is competent to monitor the inspection process to ensure work of all subcontractors are progressing in accordance with the contract document	3.24	0.69	Agreed
7	The indigenous construction company are competent to ensure operations usually commences under appropriate safety standard	3.32	0.98	Agreed
8	The indigenous construction company are competent to ensure the company usually provide immediate solution to minor error (punch list) during construction work	2.84	0.82	Agreed
9	The company is competent to always keep the site tidy and clean ready for construction work	2.57	0.66	Agreed
10	The indigenous construction company are competent to ensure that the company comply with contract document with the help of using independent testing laboratories	2.96	0.74	Agreed
11	The indigenous construction company are competent to ensure that the company has the ability to programme and plan properly	2.52	0.87	Agreed
12	The indigenous construction company are competent to ensure they comply with the local and national regulation guidelines	2.69	0.61	Agreed
13	The indigenous construction company are competent to ensure Site supervision and control through supporting personnel level	2.57	0.58	Agreed
14	The indigenous construction company are competent to Provides updates on work as it progresses and periodic listing of all work orders and their status	2.71	0.86	Agreed

Table 3 revealed that the respondents jointly agreed to all the 14 items presented as the competency level of indigenous construction company in construction phase building project delivery in FCT Abuja with mean values ranging from 2.52– 3.52 over the cut-off point indicating that majority of the indigenous construction company respondent accepted that the indigenous construction company were competent especially in construction phase activities in building project delivery in FCT Abuja. The result also revealed that the standard deviation (SD) of the items ranges from 0.61 – 0.88. This shows that the respondents were not very far from the mean and from one another in their responses showing that the items were valid.

Hypothesis One

There is no significant difference among the mean response of the contractors, consultants and architect on the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja.

Table 4: Analysis of Variance test for Comparing data Obtained from the Contractors, Consultants and Architect on the Competency Level of Indigenous Construction Company in Predesign Phase Activities in Building Project Delivery in FCT Abuja.

	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	.001	2	.001	.006	.994	Significant
Within Groups	24.605	25	.097			
Total	24.607	27				

Table 4 presents the summary of Analysis of Variance (ANOVA) on responses of the contractors, consultants and architect on the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja. Data from the table revealed that F-value of 0.06 which is less than significant value of 0.994 at 25 degree of freedom is greater than 0.05 level of significance. Based on this H_{01} was accepted to be true. This is an indication that there is no difference in the mean responses of the three groups of respondents on the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja.

Hypothesis Two

There is no significant difference on the mean response among the contractors, consultants and architect on the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja.

Table 5: Analysis of Variance test for Comparing data Obtained from the Contractors, Consultants and Architect on the Competency Level of Indigenous Construction Company in Design Phase Activities in Building project delivery in FCT Abuja.

	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	.002	2	.001	.010	.990	Significant
Within Groups	25.093	24	.099			
Total	25.095	26				

Table 5 presents the summary of Analysis of Variance (ANOVA) on responses of the contractors, consultants and architect on the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja. Data from the table revealed that F-value of 0.10 which is less than significant value of 0.990 at 26 degree of freedom is greater than 0.05 level of significance. Based on this H_{02} was accepted to be true. This indicates that there is no difference in the mean responses of the three groups of respondents on the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja.

Hypothesis Three

There is no significant difference on the mean response among the contractors, consultants and architect on the competency level of indigenous construction company in construction phase activities in building project delivery in FCT Abuja.

Table 6: Analysis of Variance test for Comparing data Obtained from the Contractors, Consultants and Architect on the Competency Level of Indigenous Construction Company in Construction Phase Activities in Building Project delivery in FCT Abuja.

	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	.004	2	.002	.026	.974	Significant
Within Groups	17.317	20	.068			
Total	17.321	22				

Table 6 presents the summary of Analysis of Variance (ANOVA) on responses of the contractors, consultants and architect on the competency level of indigenous construction company in preconstruction phase activities in building project delivery in Federal Capital Territory, Abuja. Data from the table revealed that F-value of 0.26 which is less than significant value of 0.974 at 22 degree of freedom is greater than 0.05 level of significance. Based on this H_0 , was accepted to be true.

Discussion of the Findings

Finding on the competency level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja. The findings revealed that the respondents agreed with 10 items out of 12 items on the competencies level of indigenous construction company in predesign phase activities in building project delivery in FCT Abuja. They disagree with item 7 and 9 that the company is not competent in complying 100% with safety procedures and the company is not competent in complying with the analysis of the overall project budget. In agreement with the view of Gollenbeck (2019) that for the construction company to be successful they should be capable of complying with the safety procedures and the analysis of the overall budget. This finding is in agreement with the view of Jinadu (2017), who opined that the budget analysis, Training of management and other staff, Inventory control of materials on site, proper planning, monitoring and control must be taken very serious by the construction company. The respondent also disagreed that the indigenous company is not competent in complying 100% with safety procedures.

Finding on the competency level of indigenous construction company in design phase activities in building project delivery in FCT Abuja. The findings revealed that the respondents agreed with all the 11 items on the competencies level of indigenous construction company in design phase activities in building project delivery in FCT Abuja. The respondents all agreed that the construction company have a competent and specialized consultant, and registered architect for building designs and design phase to begins after the selection of architects. In line with the view of Annie, *et al.*, (2013) that the design phase begins after the selection of the architect and the architect (usually a firm) have limited capabilities for handling the broad range of building design activities, more specialized consultants are usually required, depending on the size and scope of the project. In agreement with the view of Aniekwu and Audu, (2010) that in most company projects, the design team consists of the architect, landscape architect, civil and structural consultants, and mechanical, electrical, and plumbing (MEP) consultants. In line with the view of Chimay (2016) that in complex projects, the design team may also include an acoustical consultant, roofing and water- proofing consultant, cost consultant, building code consultant, signage consultant and interior designer among others.

Finding on the competency level of indigenous construction company in construction phase activities in building project delivery in FCT Abuja. The finding revealed that the respondents agreed with all the items that the general contractor are competent to confirm all the construction work are done as described in the contract documents, execute construction works according to the design by the competent architect and ensure their project are completed within a schedule time. This finding is in line with the report of Molenaar *et al.*, (2019) who observed that for contractors to make headway in modern construction business, they need to ensure that construction work are carried out based on the contract documents which is based on the design presented by the architect. Frimpong *et al.*, (2013), postulated that the success of a construction company project is cramped to the project's goals and set objectives within an explicit project scope. In agreement with Shaban (2018), who specified that projects basically revolve around three areas, these are completing a project in time, within an estimated budget based on a defined quality with the aim of getting value for money. The respondent agreed that indigenous construction company are competent to ensure they comply with the local and national regulation guidelines. The

respondents agreed that the company general contractor is competent to monitor the inspection process to ensure work of all subcontractors are progressing in accordance with the contract document, are competent to ensure Site supervision and control through supporting personnel level and indigenous construction company are competent to ensure that the company comply with contract document with the help of using independent testing laboratories. According to Asilokun (2014) a successful project delivery among other factors is dependent on the human resources managing the projects.

Conclusion

Ninety five percent of all the construction companies operating in Nigeria are indigenous construction companies while the remaining five percent of construction companies are foreign in origin and the concern of key construction project stakeholders globally (clients, consultants and contractors) is to deliver a project that meets time, cost, quality, and other requirements that define project success. The study revealed that indigenous construction company are capable in preparing building project details, determine designated land use, selecting and assessing site including the site appropriateness, responsible for economic feasibility assessment and the overall budget and financing, the company is able to comply with the building programme such as government assessment, building laws and zoning constraints but disagreed that the company cant 100% Comply with safety procedures and cannot comply with the analysis of the overall project budget.

Recommendations

Based on the findings of the study, the following recommendations were made

1. The indigenous company contractors should always employ competent personnel and train them continuously, embrace project management techniques, and invest in knowledge management.
2. The clients/consultants should adhere to project management procedures.
3. In addition, there should be a policy that will regulate when governmental agencies and organisations should embark on infrastructural projects;

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