

# PROJECT MANAGEMENT COMPETENCIES OF INDIGENOUS CONTRACTORS IN NIGERIA

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**Abstract:** All over the world, governments are talking about reducing spending of capital and recurrent expenditures. Capital expenditures cover cost for major projects such as infrastructure. Moreover, the wealth and worth of a nation is a function of the availability and quality of its infrastructure. It has been noted that indigenous construction firms do not represent a strong source of competition. Consequently, most construction markets in Africa are dominated by expatriates. Governments of most African countries pay huge amount of money to expatriates because of deficiencies in indigenous capacity. This study therefore, identifies and analyses project management competencies required by indigenous construction firms. A quantitative research method was adopted for the study and 72 questionnaires were distributed to indigenous construction firms in Lagos and Abuja, Nigeria. This study revealed cost management, site management, and time management as the most critical project management competencies of indigenous contractors surveyed. The study further revealed that the critical PM competencies of contractors surveyed are hard/technical competencies. The study recommends that indigenous contractors should in addition to hard competencies develop soft/personal competencies which can also facilitate the achievement of project success.

**Author keywords:** competencies, construction market, contractor, Nigeria, project management

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## INTRODUCTION

The construction industry plays a key role in the economic development of all nations in terms of contributions to Gross Domestic Product (GDP) (Lowe, 2003; Isa, Jimoh and Achuenu, 2013; Waziri and Bala, 2014).

Nigeria has one of the most vibrant construction markets in Africa (Odediran et al., 2012). In the Nigerian construction market, 95% of all the construction firms are indigenous while the remaining 5% are foreign by origin (Ibrahim, Githae and Stephen, 2014).

The construction industry is a project – centered industry with special characteristics of project production (Bowen, Cattel, and Hall, K.A. ,2012; Isik et al., 2009; Omonori and Lawal, 2014). Project Management (PM) competencies are vital for successful delivery of projects and for

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organizational performance in terms of turnover and profits. PM competencies are one of the key factors associated with project success (Kendra and Taplin, 2004; Marion, Richardson and Earnhardt, 2014). Moreover, the success of a construction project can significantly impact on company's overall turnover (Edum-Fotwe and 2000; Farinde and Sillas, 2012). Hence, it is important for contractors to possess the required PM competencies in order to successfully accomplish their construction project tasks (Odediran, et al. 2012; Baily, et al., 2008).

However, there are reports of deficiencies in project management competencies of indigenous contractors in Nigeria (Ayodele and Alabi, 2011; Tunji-Olayeni, Lawal and Amusan, 2012; Ekundayo, Jewell and Awodele, 2013; Bala et al., 2009) which inhibit their competitiveness (Inuwa et al., 2014; Odediran, et al. 2012).

Ayodele and Alabi (2011) noted that poor scheduling of project operations by indigenous contractors is a major cause of project delay in Nigeria. Moreover, contractor related causes of cost over runs include: in - correct planning, wrong method of estimation and poor contract management (Tunji-Olayeni et al., 2012). Ekundayo et al., (2013) reported the poor dispute resolution skill of most indigenous contractors which has led to adversarial relationships between project participants. Bala et al., (2009) also revealed that most indigenous contractors lack team motivation, and project control system. Hence, construction clients in Nigeria have a penchant for foreign construction firms.

How significant can the contributions of foreign construction firms be to Gross National Income (GNI) of their home countries? From the periods between 2010 and 2013 the volume of projects awarded under the Nigerian Federal Ministry of Works alone was approximately 173 Million Dollars. However, indigenous construction firms in Nigeria could only boast of approximately 53 Million Dollars' worth of construction work during the same period (Budget Office of the Nigerian Federation, 2013).

In an era when governments all over the world are emphasizing the need for reduction in capital and recurrent expenditure, it behooves on governments in developing countries particularly in Nigeria to reduce cost of providing basic infrastructure (capital spending) by a conscious patronage of indigenous contractors. Local contractors are generally seen as holding the greatest potential for general economic development as they minimize the flow of financial resources out of the country (Larcher, 1999). However, patronage of indigenous contractors would increase when indigenous contractors improve on project management competencies; an area in which foreign construction firms have a significant comparative advantage. Furthermore, improvement and development of critical project management competencies by indigenous construction firms would bring about: increased market share, increase in level of profits earned and sustainability of indigenous contractors.

Hence, the aim of this study is to identify and assess critical project management competencies required by indigenous contractors in Nigeria.

## **LITERATURE REVIEW**

### **Project Management Competencies**

Project Management (PM) is the application of knowledge, skill, tools and techniques to project activities to meet project requirements with such processes as initiating, planning, executing, controlling and closing (PMBOK, 2000).

Competence is the ability to do something well (Cambridge English Dictionary, 2016). According to Garies and Huemann (1999) describes competency as the ability to manage projects professionally through the application of best practices in project design and project execution.

Competencies can be classified into several categories. Stretton (1995) grouped competencies into three namely: attribute-based competencies, performance-based competencies and combined competencies. Stretton (1995) further explained that attribute – based competencies includes personal attributes such as skills, knowledge and other personal characteristics. Performance-based competencies refer to competencies for practical situations such as the work place. While the combined competencies advocate for a combination of both attribute-based and performance-based approach to competencies for a better understanding of the concept (Stretton, 1995).

Crawford (2005) classified competencies into three groups: input competencies personal competencies and output competencies. According to Crawford (2005) input competencies are the competencies that a person brings to a job, which are mainly knowledge and skills. Crawford (2005) also explained that personal competencies are the fundamental personality characteristics central to a person's ability to perform a given task while output competencies refer to the ability to perform a given task with the expected organizational performance (Crawford, 2005).

Gardiner (2005) grouped competencies into soft and hard competencies. According to Gardiner (2005) soft skills are people skills. This includes interpersonal skills, communication skills, negotiation skills and problem solving skills (El-Sabas, 2001). Hard skills on the other hand are technical skills which include the skill of planning, estimating, scheduling and controlling projects (Gardiner, 2005). Technical skills are also related to the skills acquired through the use of methods, processes, procedures, tools and techniques (El-Sabas, 2001).

Isik et al (2009) examined the impact of corporate strengths/weaknesses on project management competencies. The study revealed that corporate strengths/weaknesses can influence PM competencies such as time management competencies, cost management competencies, quality management competencies, human resource management competencies, risk management competencies, supply chain management competencies, claims management competencies, knowledge management competencies, and health and safety management competencies.

Brill, Bishop and Walker (2006) investigated the competencies and characteristics required of an effective project manager and discovered that conventional PM competencies like cost management competencies, time management competencies and quality management competencies were not perceived as important competencies for project managers. However, industrial relation competencies, work place health and safety competencies, stakeholders' management competencies, networking competencies and business competencies were found to be important competencies necessary for the future.

Olateju Abdul-Azeez and Alamutu (2011) carried out an assessment of PM practices in the Nigerian public sector. Findings from the study revealed lack of in depth knowledge of PM tools and techniques in public sector institutions. Ekundayo, Jewell and Awodele (2013) examined the challenges facing the adoption of the executive PM structure in Nigeria. The findings revealed lack of proper awareness, unfavourable policies, skill shortages, traditional culture of stakeholders and the absence of a regulatory body as factors militating against the adoption of the executive PM structure.

An observable gap in the literature on PM competencies in the Nigerian construction industry is the scanty evidence of studies focusing on PM competencies of personnel (consultants and contractors) in the construction industry. Assessment of PM competencies of construction industry personnel will provide an analysis of the current PM competencies status of personnel in the construction industry.

This study presents the PM competencies of indigenous contractors in the Nigerian construction industry.

## **METHODOLOGY**

The study was based on a quantitative research design with the use of questionnaire. Convenience sampling method was used to distribute questionnaires to 72 indigenous contractors in Lagos and Abuja, Nigeria. Out of the 72 questionnaires distributed, 53 were properly filled and returned. This gives a response rate of approximately 74%. The questionnaire was divided into 2 sections. Section one covered general information about the firms surveyed while respondents were asked to indicate how critical project management competencies were to indigenous contractors in the second section of the questionnaire. The questions in this section the questionnaire were ordinal in nature and a five point Likert scale ranging from 1- not critical at all to 5- very critical was used. Cronbach's alpha was also used to test for the reliability of items in the questionnaire. Cronbach's alpha coefficient ranges from 0 to 1 with alpha coefficients  $> 0.70$  representing a satisfactory reliability (Nunally, 1978). Twenty-five items made up the construct project management competencies. Cronbach's alpha coefficient for the construct measuring project management competencies was 0.897 indicating a high degree of internal consistency.

## Characteristics of Firms Surveyed

### Size of Workforce

Out of the 53 indigenous construction firms surveyed in this research, 64.2% had less than 50 people in their work force, 20.8% had between 51-100 people in their work force, 7.5% had between 101-150 people in their work force, 3.8% of the indigenous construction firms surveyed had between 151-200 and another 3.8% had more than 200 people in their work force (Table 1).

**Table 1: Size of Workforce**

Size of Workforce	Frequency	Percent
Less than 50	34	64.20
51-100	11	20.80
101-150	4	7.50
151-200	2	3.80
Above 200	2	3.80
Total	53	100.00

### Firms' Turnover in =N= Billion

Twenty-six indigenous construction firms had a turnover of less than 0.20 billion Naira. Eleven indigenous construction firms had turnover of between 0.21 and 0.50 Billion Naira. Eight indigenous construction firms had turnover of between 0.51 and 0.70 Naira. Five indigenous construction firms had turnover of between 0.71-1 Billion Naira and only three indigenous construction firms had turnover that was greater than 1 Billion Naira (See Table 2). Majority of the firms surveyed have a turnover of less than 0.20 Billion Naira.

**Table 2: Turnover in Billions**

Number of jobs secured	Frequency	Percent
< 0.20 billion Naira	26	49.10
0.21-0.50 billion Naira	11	20.80
0.51-0.70 billion Naira	8	15.10
0.71-1 billion Naira	5	9.40
> 1 billion Naira	3	5.70
Total	53	100.00

### Critical Project Management Competencies

The mean and standard deviation for all items measuring project management competencies were generated by entering the results into the SPSS. Thereafter, the mean values were used to rank the project management competencies. The study adopted the technique of Lu (2006) where a mean value of 4.00 was used as the benchmark for identifying significant competitiveness parameters. Hence, a mean value of 4.00 was used as the benchmark for identifying critical project management

competencies for the indigenous construction firms surveyed. In a situation where two items have the same mean then the item with the smaller standard deviation was ranked higher. Refer to table 3 for descriptive statistics.

**Table 3: Critical Project Management Competencies**

Project Management Competencies	Mean	Std Deviation	Rank
Cost management competencies	4.62	0.686	1
Site management competencies	4.58	0.908	2
Time management competencies	4.42	0.77	3
Quality management competencies	4.38	1.004	4
Client management competencies	4.34	0.618	5
Bidding competencies	4.32	0.915	6
Negotiation competencies	4.3	0.845	7
Leadership competencies	4.25	0.939	8
Decision management competencies	4.21	0.689	9
Material management competencies	4.21	0.793	10
Labour management competencies	4.11	0.751	11
Communication competencies	4.06	0.818	12
Health and safety management competencies	4.06	0.98	13
Procurement management competencies	4.06	1.099	14
Logistics management competencies	4.04	0.831	15
Contract management competencies	4.04	0.876	16
Delegation competencies	4.02	0.772	17
Team motivation competencies	3.98	0.951	18
Supply chain management competencies	3.96	0.759	19
Industrial relations competencies	3.96	0.94	20
Dispute resolution competencies	3.89	0.891	21
Contract claim resolution competencies	3.77	1.086	22
Performance measurement competencies	3.77	1.235	23
Risk management competencies	3.75	1.159	24
Corporate representation competencies	3.74	1.041	25
Valid N (listwise)	25		

## DISCUSSION OF RESULTS

Out of the 25 parameters representing project management competencies of indigenous contractors 17 were identified as critical (*Table 3*). Only the five most critical project management competencies are discussed because of constraint in number of pages required for this paper. The most critical project management competency of indigenous contractors is cost

management competencies (*Table 3*). Cost management comprises all the methods adopted in a construction project to ensure that construction work is completed within agreed cost limits and without compromising quality of work. Stiff competition in the Nigerian construction industry has forced many indigenous contractors to present low bids compared to their competitors. Cost management competencies can enhance profit of construction firms in a business environment that is characterized by relatively low profit margin. Cost management competencies are necessary for securing jobs and for maximizing profit.

Site management competency was ranked as the second critical project management competency for indigenous contractors (*Table 3*). As noted earlier, profit margin for most construction projects is relatively low. Consequently, indigenous contractors for legitimate means of maximizing profit. Site management competency is one of the ways of maximizing profit because it determines how much profit can be made or lost from a construction project depending on the efficient use of materials, labour and other resources (Jimoh, 2012).

The third critical project management competency as reported by indigenous construction firms is time management competency (*Table 3*). Ineffective time management skill can impact negatively on the profit of construction firms. It can ultimately lead to extra expenses, disputes and litigations. Hence, it has been ranked the third critical project management competencies for indigenous construction firms.

The three most critical project management competencies of indigenous contractors surveyed are cost management, site management and time management competencies. Hence, the contractors surveyed possess mainly hard project management competencies. Gardiner (2005) noted that hard competencies include technical competencies like cost, site and time management competencies. Contrarily Brill, Bishop and Walker (2006) investigated the competencies project managers and discovered that conventional PM competencies like cost management competencies, time management competencies were not important competencies of project managers in Utah, USA. However, competencies such as health and safety and industrial relations which are regarded as key project management competencies for the future according to (Brill et al., 2006) were ranked 13<sup>th</sup> and 20<sup>th</sup> respectively.

In spite of the adversarial nature of the industry, dispute resolution competency still ranks low. This probably explains why the Nigerian construction industry is still ridden with adversarial relationships. This finding resonates with the Ekundayo et al., (2013) who reported that most indigenous contractors in Nigeria have poor dispute resolution competence.

## CONCLUSION

Critical project management competencies of indigenous contractors have been identified. The most critical PM competencies of indigenous contractors surveyed are cost, site and time management competencies. Critical PM competencies of indigenous contractors surveyed are hard/technical competencies

## RECOMMENDATIONS

PM competencies comprise of both technical (hard) competencies and personal (soft) competencies. The most critical project management competencies of indigenous contractors surveyed are cost, site and time management competencies. The study therefore recommends that indigenous contractors should develop other personal and soft PM competencies which can facilitate the achievement of project success. Contractors with proven track record of project success are likely to gain competitive advantage and become major players in the construction market.

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