



INFLUENCE OF QUALITY PERFORMANCE ON CLIENTS' PATRONAGE OF INDIGENOUS AND EXPATRIATE CONSTRUCTION CONTRACTORS IN NIGERIA

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Received 19 Nov. 2008; accepted 29 Oct. 2009

Abstract. Contractors operating in Nigeria are classified as either indigenous or expatriates. The latter is often giving preference over the former in the award of contracts and stakeholders consider this practice unhealthy for growth and development. This study evaluates the influence of the quality performance of the two categories of contractors on their patronage. The objectives are to determine the level and difference in the patronage and quality performance of indigenous and expatriate contractors and the correlation between clients' assessment of the quality performance and patronage of indigenous and expatriate contractors in the Nigerian construction industry. To achieve these objectives, a field survey involving a sample of 43 clients selected from the population of organised clients in Nigeria was conducted. Structured questionnaires were used to collect data. The data collected were analysed to determine the ranking and test of difference in clients' patronage and clients' assessment of quality performance between the two categories of contractors using mean and t-test respectively. The correlation between patronage and quality performance was analysed using Spearman correlation test. The study established that expatriate contractors are being given preference in the award of contracts. It also established that clients perceive the quality performance of expatriate contractors to be better than that of indigenous contractors and attributed the preference in patronage to this difference. It suggested that indigenous contractors should embark on measures that will improve their quality performance in order to stop the preference for expatriate contractors.

Keywords: expatriate contractors, clients' patronage, indigenous contractors and quality performance.

1. Introduction

In recent times, the preference giving to expatriate contractors in the award of contracts in Nigeria has become a subject of concern and controversy to the public in general. Research studies discover that clients generally patronise this category of contractors more than their indigenous counterparts (Edmonds 1979; Ogunpola 1984; Olateju 1991; Samuel 1999; Mayaki 2003; Idoro 2007a). It was confirmed that the expatriate contractors who are few in number carry out over 90% of the total value of construction contracts in Nigeria despite the fact that their charges are considerably higher than those of their indigenous counterparts (Ministerial Committee on causes of high government contracts 1982; Olateju 1991). The practice remains a concern to stakeholders in the construction industry because it does not promote indigenous participation, capacity building and technological development in the construction industry and it constitutes unnecessary drain of the nation's scarce foreign exchange.

The justification for the preference giving to expatriate contractors in the award of contracts in both public and private sectors is based on stakeholders' and even public perception of the quality of work done by the two categories of contractors. The negative report that all the road contracts awarded to indigenous contractors between 1999 and 2003 by the Federal Government were aban-

doned (Federal Ministry of Works and Housing 2003) and the frequent incidences of collapsed buildings (The Guardian 2007a & b; Lagos State Physical Planning Authority 2008) have caused serious doubts on the ability and integrity of indigenous contractors. The prevailing construction practice in Nigeria now is that major contracts are being awarded to expatriate contractors.

The situation is a challenge to researchers to identify the real causes of the preference giving to expatriate contractors and the measures to reverse it. This challenge prompts the evaluation of clients' patronage of indigenous and expatriate contractors in Nigeria, the quality performance of the two categories of contractors and the influence of the quality performance of the contractors on their patronage. The results of the study are expected to assist indigenous contractors in improving on their quality performance and patronage.

2. Aim and objectives of the study

The main aim of the study is to inform contractors on clients' perception of their quality performance and how it affects their patronage. The objectives are to determine the importance of project quality in the award of contracts, the level and difference in clients' patronage and assessment of the quality performance of indigenous and expatriate contractors and the correlation between clients' assessment of the quality performance and clients' pa-

tronage of indigenous and expatriate contractors in the Nigerian construction industry.

3. Hypotheses of the study

Three hypotheses were postulated in the attempt to achieve the objectives of this study. The first hypothesis states that the frequency of award of contracts to expatriate contractors is not significantly higher than the frequency of award of contracts to indigenous contractors. The second hypothesis states that clients' assessment of the quality performance of contractors has no significant correlation with the frequency of award of contracts to them. The third hypothesis states that the quality performance of expatriate contractors is not significantly higher than that of indigenous contractors.

4. Variables of the study

The variables used for the study are classified into four groups namely: construction contractors, clients' assessment of the importance of parameters for the award of contracts, clients' assessment of the quality of construction works executed by contractors and clients' patronage of contractors. Construction contractors in Nigeria are classified into two groups namely: indigenous and expatriate while clients' patronage of contractors is described by the frequency of award of contracts to indigenous and expatriate contractors.

Three parameters namely: project time, cost and quality that clients consider in the patronage of contractors are selected for the study. The quality of construction work can be measured using two categories of variables namely: objective and subjective variables. Subjective measurements are considered more suitable for the study than objective measurements because the study focuses on clients' perception. Although, subjective variables are concerned with the assessment of stakeholders who are many, the scope of this study is limited to clients because their judgement as the employers of other parties can be regarded as the most important. For the study, five variables namely: clients' assessment of the quality of materials used for construction, standard of workmanship, level of defective works and maintenance costs of projects executed and the percentage of retention fee paid to contractors after defect liability period on projects executed are selected as variables of project quality.

5. Clients' patronage of construction contractors in Nigeria

Clients are considered as the most important stakeholder in every construction project. In a study conducted by Alinaitwe (2008), a client is regarded as the person or firm that is responsible for commissioning and paying for the design and construction of a facility and is usually the owner of the facility being commissioned. The importance of the client is borne out of the fact that he bears the highest risks and his needs and requirements are the basis of every effort, process and activity concerned with execution of a project. Mbachu and Nkado (2006) categorise

the needs and requirements of a client into design, process and construction services. The importance of the client can also be seen in his position as the employer of the parties involved in the development of a project. He engages and pays the parties and in the case of contractors, he has the power to decide who among the bidders will eventually win the contract to execute his project. His interest, relationship and satisfaction with a particular contractor are usually the basis of engaging such contractor. Maloney (2002) agrees with this by maintaining that a contractor must have a detailed understanding of the client's expectations and be able to satisfy them. Al-Momani (2000) also discovers that the lack of attention devoted to the owner's satisfaction undoubtedly contribute to a poor performance and that current technical failures are minor compared to the existence of very high clients' dissatisfaction.

Construction contractors are usually categorised by several criteria. In Nigeria, the scope of operation can be regarded as the most common criterion. Researchers use this criterion to categorise contractors into either indigenous or expatriate (Edmonds 1979; Ogunpola 1984; Olateju 1991; Samuel 1999; Mayaki 2003). Idoro (2007a) describes indigenous contractors as those contractors that are fully owned and managed by Nigerians. He further describes multinational contractors as expatriate contractors who are mainly private firms that are jointly owned by Nigerians and foreigners but solely managed by expatriates. From this description, the major differences between indigenous and expatriate contractors are concerned with company ownership and management which are either mostly or fully controlled by expatriate staff. If at all there are differences in other features such as labour, materials and equipment, these have not been used as criteria for distinguishing between the two categories of contractors.

Mayaki (2003) and Idoro (2004) trace the participation of expatriate contractors in construction in Nigeria to the colonial days when Cappa and D'Alberto, the pioneer foreign construction company was established in 1932 in Nigeria. Idoro (2004) opine that construction practice and technology in Nigeria has witnessed significant foreign participation from the colonial days to the present day. Idoro (2007b) maintains that the arrival of foreign contractors in Nigeria witnessed the emergence of contract system which was initially embraced by the colonial government for public works. He opines that the foreign contractors got tremendous patronage from the colonial government which brought about increased number of such companies being established in Nigeria before independence. He observes further that before Nigeria attained independence in 1960, the activities of the foreign contractors have been so integrated into government policies that contracting became the official practice of procuring public projects. He maintains that the legacy was pursued vigorously after independence. Edmonds (1979) discovers that expatriate contractors are the large construction companies and are few in number but they carried out 90% of the total construction works in Nigeria. Ogunpola (1984) supports this assertion by maintaining

that although, the numerical strength of expatriate contractors is about 7% of the total number of contractors however, they accounted for a substantial proportion of construction works. Olateju (1991) also confirms this assertion in a study which discovered that indigenous contractors got only 7% of the total value of contracts awarded by the Federal government and Oyo State government from 1974 to 1984. Idoro (2004) maintains that the construction industry in Nigeria is indeed dominated by expatriate contractors and that the problem in Nigeria is not that of attracting foreign participation but rather that of promoting indigenous participation. These findings are indications that in the construction industry in Nigeria, clients patronise expatriate contractors more than their indigenous counterparts.

6. Concept of quality

Researchers consider the term 'quality' from different perspectives. From the perspective of the finished product or completed project, Ling *et al.* (2009) describes quality as the output quality of the service rendered or work done from the technical and workmanship aspects. In this description, the authors consider quality from the point of view of the standards of a completed project. From the perspective of specifications or plans earlier prepared, Arditi and Lee (2004) maintain that the quality of a project is measured by its conformance to a quality plan that is designed to satisfy a customer. In this description, the duo considers quality not just from the point of view of a completed project but whether or not the completed project is executed according to a quality plan earlier prepared for such. PMI (2000) identified three important components of quality management to be quality planning, quality assurance and quality control. In this description of the three components of quality management, the body considers quality as synonymous with management. Oakland (1995) defines quality control as essentially the activities and techniques employed to achieve and maintain the quality of a product. ECI (1994 & 1996) describes quality as all planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality. In construction, these actions are numerous spanning design, tendering and construction and several individuals and corporate bodies are involved.

Quality is an important feature of construction because the safety of every structure and more importantly the satisfaction of stakeholders with the structure depend on its quality. Research studies have shown that quality has numerous effects on a project. Bhutto *et al.* (2004) opine that construction companies have taken the implementation of quality management systems the way organisations in the industrial sector do although, the reasons for such implementation may differ. In an earlier study, Griffith and Bhutto (2004) discover that quality standards implementation in the construction industry is more management driven with perceived efficiency gain. The effect of quality can be understood from the importance attached to it in the assessment of project performance. Egemen and Mohamed (2005) maintain that completing a project in accordance

with the required quality standards is one of the three major performance elements generally used for the evaluation of performance in construction. Harris and McCaffer (2002) maintain that the importance of quality performance and safety at times surpass cost and delivery time in civil engineering projects although, these factors are interrelated and interdependent. Dissanayaka *et al.* (2001) opine that good quality system in construction can help to reduce time-overruns through fewer errors and less rework. Mahadevappa and Kotreshwar (2004) also discover that an emphasis on quality can be supportive by identifying and eliminating the causes of errors and rework thereby reducing costs and making more units of product available for meeting a delivery schedule. Banerji *et al.* (2005) discover that certain quality management practices have a significant impact on company's performance in terms of quality, profitability and productivity. They discover that quality interventions have significant influence on productivity. Financial Standard (2004) maintain that the issue of quality performance of construction projects in Nigeria had resulted in the collapse of several structures, colossal waste of human and material resources and in most of the cases, the indigenous contractors were found culpable.

In view of the importance attached to quality in construction projects, several research studies on factors that can affect it have been carried out. Griffith (1993) considers quality in construction to be concerned with what a client requires therefore he asserts that quality at the design stage depends on individual consultants' ability to identify, discuss and act professionally as a technical specialist on client's requirements. Murdock (1953) in a study of the control of concrete quality discovers that the best results in the quality of concrete in construction projects are achieved when the contractor, the design engineer and the technology of production combine to ensure that the right materials and techniques are employed. This finding tends to imply that the quality that will be achieved in concrete works will depend upon both project design and construction team members and the methods adopted. Haupt and Whiteman (2003) in a study of Total Quality Management (TQM) on construction sites discover that construction has been slow to embrace the concept of TQM and has remained behind where it should be on its implementation. The duo maintains that contractors generally do not apply TQM beyond head office management. They also discover that construction companies are prepared to implement those aspects of TQM programmes that will provide them with competitive advantage and improve their overall financial performance. Mahadevappa and Kotreshwar (2004) also maintain that overemphasis on costs and delivery schedules can have an adverse impact on quality. Wells (2006) discovers that the source of labour, the basis on which it is employed and the way it is treated have profound implications on quality among other things. Zau (2006) in a study of the strategies for minimising corruption in the construction industry of China categorises corruption in the construction industry into two groups namely: contractor related and consultants/client/government officers related. He discovers that some of the forms of corruption

traced to consultants/client/government officers are administrative interference, illegal award of contract or subcontract, disclosure of project baseline price prior to tendering and demand for bribe in cash or kind from contractors. Some of the forms of corruption traced to contractors are offering of bribes in cash or kind, collusion in tendering prices among contractors, use of sub-standard materials or workmanship and non compliance with contract. He contends that these activities have negative effects on quality in construction works. Apart from this, he discovers that corruption also exists in the evaluation of project quality at completion. ASCE (1990) maintained that quality in construction is concerned with meeting the requirements defined by the owner, designers and regulatory bodies. This assertion implies that in construction, quality will depend upon the requirements of these parties. In view of the numerous parties whose requirements should be met and the several activities, actions, processes and techniques involved in meeting these requirements, many individuals and bodies are concerned with formulating, planning and implementing them, Tam *et al.* (2000) maintain that quality management is far more difficult to achieve in construction than in other industries.

Some researchers have also carried out studies on how quality can be improved in construction. Haupt and Whiteman (2003) see Total Quality Management (TQM) as an important tool for achieving this purpose. They opine that management plays an integral and pivotal role in TQM and observe that TQM has to be deployed to construction sites and for this to be achieved; they suggest that construction project management and site workers need to be empowered, involved and trained in TQM principles. Vitkauskaitė and Gatautis (2008) identify equality as one of the four most important internal current processes of construction SMEs that can be applied in the construction sector for quality improvement.

7. Building collapse

In the recent times, the incidences of collapse of buildings have remained a major problem to all and sundry: governments, professional bodies, clients, consultants, contractors and so on. Okedele (2008) identify collapse of buildings as one of the major challenges facing the built environment in Nigeria. The report of building collapse in Nigeria shows that thirty-four cases were reported between March 2005 and April 2008 in just one of the thirty-six states in Nigeria (Lagos State Physical Planning Authority 2008). The report shows that eight incidents occurred in 2005, seven in 2006, fifteen in 2007 and four in the first quarter of 2008. Similar incidents were also reported in some other states (The Guardian 2007a&b). This figure is really alarming and it is putting a question mark on the quality performance of indigenous contractors because most of the projects where collapse was reported were actually those handled by them.

8. Research methods

To achieve the objectives of the study, a field survey involving a sample of forty-three clients selected from the

population of corporate clients in Nigeria was conducted. A preliminary survey of 161 major clients made up of the Federal and State Governments and the organised private clients was first conducted to serve as the population frame for the study. The study sample was selected from this population frame by random sampling. Data were collected using structured questionnaires. Clients' assessment of the quality of materials used for construction, standard of workmanship, maintenance works and level of defective works in projects executed by indigenous and expatriate contractors were measured using five ranks namely: poor, low, average, high and very high. These ranks were weighted 1, 2, 3, 4 and 5 respectively. The percentage of retention fee paid to the two categories of contractors after defect liability period was measured using ten class intervals namely: 1–10%, 11–20%, 21–30%, 31–40%, 41–50%, 51–60%, 61–70%, 71–80%, 81–90% and 91–100%. These intervals were weighted 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 respectively. The frequency of award of contracts to the two categories of contractors was measured using five ranks namely: not at all, rarely, sometimes, usually and always. The ranks were weighted as 1, 2, 3, 4 and 5 respectively.

Clients' assessment of the importance of parameters considered for the patronage of contractors was measured using five ranks namely: not all, low, moderate, high very high. The ranks were also weighted as 1, 2, 3, 4 and 5 respectively.

Data collected were analysed to determine the ranking and test of difference in clients' assessment of the frequency of award of contracts and quality performance of the two categories of contractors using mean and t-test respectively. The correlation between clients' assessment of the quality performance of the two categories of contractors and their level of patronage was analysed using Spearman correlation test.

9. Results

The results of the analysis of data collected are presented as follows:

Ranking of clients' patronage of indigenous and expatriate contractors

In the study, clients' patronage of the two categories of contractors is represented by the frequency of award of contracts to them. Data collected were analysed to determine the ranking of clients' level of patronage of the two categories of contractors using mean. The results are presented in Table 1.

Table 1. Ranking of the frequency of award of contracts to indigenous and expatriate contractors in Nigeria

Variables ranked	N	Mean	Std. dev.	Rank
Freq. of award of contract to expatriate contractors	43	3.81	0.794	1
Freq. of award of contract to indigenous contractors	43	3.12	0.762	2

N = Number, Std. dev. = Standard deviation

The results in Table 1 reveal that the frequency of award of contract to expatriate contractors ($\bar{X} = 3.81$) ranks first while that of indigenous contractors ($\bar{X} = 3.12$) ranks second. The results show that clients give more preference to expatriate contractors in the award of contracts than indigenous contractors.

Test of difference in the frequency of award of contracts to indigenous and expatriate contractors

The results in Table 1 reveal that the frequency of award of contracts to expatriate contractors is higher than that of indigenous contractors. Further analysis is carried out to determine whether or not this difference is significant. This analysis involves the test of the first hypothesis of this study which states that the frequency of award of contracts to expatriate contractors is not significantly higher than the frequency of award of contracts to indigenous contractors. The hypothesis is tested using t-test at $p < 0.05$. The results of the test are presented in Table 2.

Table 2. Results of t-test for difference in the frequency of award of contracts to indigenous and expatriate contractors.

Variables paired	N	t-value	DF	p-value	Result
Freq. of award of contract to expatriate contractors	43	-4.870	42	0.001	Reject
Freq. of award of contract to indigenous contractors	43				

N = Number, DF = Degree of freedom

The result in Table 2 reveals that the p-value (0.001) for the test of difference in the frequency of award of contracts to the two categories of contractors is lower than the critical p-value (0.05) therefore, the hypothesis is rejected. The result indicates that the frequency of award of contracts to expatriate contractors is indeed significantly higher than the frequency of award of contracts to indigenous contractors.

Ranking of the levels of importance attached to project cost, time and quality by clients in the award of contracts

The attempt to determine whether or not the difference in patronage of the two categories of contractors is based on project quality prompts an investigation into the importance attached to project cost, time and quality in the award of contracts. The data collected on clients' assessment of the importance attached to project cost, time and quality in the award of contracts are analysed to determine the ranking of the levels of importance of the three factors using mean. The results are presented in Table 3.

The results in Table 3 reveal that project quality ($\bar{X} = 4.53$) ranks first in importance while project time

($\bar{X} = 3.74$) and project cost ($\bar{X} = 3.37$) ranks second and third respectively. The result indicates that project quality is the most important factor to clients in the award of contract.

Table 3. Ranking of the levels of importance attached to project cost, time and quality by clients in the award of contracts

Variables ranked	N	Mean	Rank
Project quality	43	4.53	1
Project time	43	3.74	2
Project cost	43	3.37	3

Correlation between project quality and patronage of contractors

Having established that clients consider project quality as the most important factor in the award of contract, further investigation is done to determine the effect of quality performance of contractors on the frequency of award of contracts by clients. The investigation involves the test of the second hypothesis of the study which states that there is no significant correlation between clients' assessment of the quality performance of contractors and the frequency of award of contracts to them. For the purpose of the test, five variables namely: clients' assessment of contractors' workmanship, percentage of retention fee collected for projects completed, defective works recorded in projects completed, quality of materials used in projects executed and maintenance costs of projects previously executed were selected to represent quality performance of contractors. The five variables and the frequency of award of contract to respondents were measured as described above. Data collected were analysed to test the hypothesis using Spearman correlation test at $p < 0.05$. The results are presented in Table 4.

Table 4. Results of Spearman test for correlation between clients' assessment of the quality performance of contractors and the frequency of award to contractors

Variables correlated	N	Cor. value	p-value	Decision
Frequency of award of contract and				
Contractors' workmanship	86	-0.358	0.001	Reject
% of retention fee collected	70	0.349	0.003	Reject
defective works in projects completed	86	0.144	0.187	Accept
quality of materials used in projects executed	86	0.446	0.001	Reject
maintenance costs of projects executed	86	-0.126	0.249	Accept

N = Number, Cor. = Correlation

The results in Table 4 reveal that the p-value for the test of correlation between the frequency of award of contract to contractors and clients' assessment of the volume of defective works in projects executed (0.187) and maintenance costs of projects executed (0.249) are

greater than the critical p-value (0.05) therefore, the hypothesis is accepted. These results imply that these two parameters of quality performance (volume of defective works in projects executed and maintenance costs of projects executed) have no significant effect on the frequency of award of contract that is clients' patronage of contractors.

The results in Table 4 reveal that the p-value for the test of correlation between the frequency of award of contracts to contractors and clients' assessment of contractors' workmanship (0.001), clients' assessment of the percentage of retention fee collected (0.003) and clients' assessment of the quality of materials used by contractors in projects executed (0.001) are less than the critical p-value (0.05) therefore, the hypothesis is rejected. The result indicates that clients' perception of the workmanship, percentage of retention fee collected for projects completed and the quality of materials used in projects completed by contractors have significant effect on the frequency of award of contracts to them by clients. This result suggests that if the quality performance of expatriate contractors is responsible for the preference in patronage giving to them by clients then, the preference can be attributed to clients' perception of their workmanship, percentage of retention fee collected for projects completed and the quality of materials used for projects completed.

Difference in quality performance between indigenous and expatriate contractors

From the test of the correlation between the quality performance of contractors and the frequency of award of contracts to them, the study established that three quality performance parameters namely: workmanship, percentage of retention fee collected for projects completed and the quality of materials used in projects completed are the determinants of their level of patronage and that the preference that clients have for expatriate contractors in the award of contracts is likely to be as a result of clients' perception of the quality performance of the expatriate contractors in these three parameters. This result there-

fore suggests that expatriate contractors perform better than indigenous contractors in these three quality parameters. In order to verify this deduction, further investigation was done to compare the quality performance of the two categories of contractors. The investigation involves the test of the third hypothesis of the study which states that the quality performance of expatriate contractors is not significantly higher than the quality performance of indigenous contractors. The five parameters of quality performance were measured as described above and the data collected were classified into two namely: clients' assessment of the quality performance of indigenous and expatriate contractors. The hypothesis was tested using t-test at $p < 0.05$. The results are presented in Table 5.

The results in Table 5 show that the p-value (0.001) for the test of difference in clients' assessment of the quality of materials used for construction by indigenous and expatriate contractors in Nigeria is less than the critical p-value (0.05) therefore, the hypothesis is rejected. The rejection of the hypothesis implies significant difference in the quality of materials used for construction by indigenous and expatriate contractors. The analysis in Table 5 reveals that the mean of clients' assessment of the quality of materials used for construction by expatriate contractors ($\bar{X} = 3.77$) is higher than that of indigenous contractors ($\bar{X} = 2.65$). The result confirms that clients consider the quality of materials used for construction by expatriate contractors to be higher than the quality of materials used for construction by indigenous contractors.

On the standard of workmanship of the two categories of contractors, Table 5 shows that the p-value (0.001) for the test of difference in clients' assessment of the standard of workmanship of indigenous and expatriate contractors in Nigeria is less than the critical p-value (0.05) therefore, the hypothesis is rejected. The result indicates that clients' assessments of the workmanship of the two categories of contractors are significantly different. The result in Table 5 reveals that the mean of clients' assessment of the workmanship of expatriate

Table 5. Results of t-test for difference in quality performance between indigenous and expatriate contractors

Variables compared	N	Mean	t-value	DF	p-value	Decision
Quality of materials used						
Indigenous	43	2.65	-8.601	42	0.001	Reject
Expatriate	43	3.77				
Standard of workmanship						
Indigenous	43	2.86	10.017	42	0.001	Reject
Expatriate	43	3.86				
Level of defective work						
Indigenous	43	3.33	-3.625	42	0.001	Reject
Expatriate	43	2.74				
Level of maintenance cost						
Indigenous	43	3.26	1.279	42	0.208	Accept
Expatriate	43	3.02				
% of retention fee paid						
Indigenous	40	4.74	-5.563	39	0.001	Reject
Expatriate	40	7.04				

N = Number; DF = Degree of freedom

contractors ($\bar{X} = 3.86$) is higher than that of indigenous contractors ($\bar{X} = 2.86$). This result is an indication that clients consider the standard of workmanship of expatriate contractors to be higher than that of indigenous contractors.

On the level of defective work that occur in projects executed, the results in Table 5 show that the p-value (0.001) for the test of difference in clients' assessment of the standard of workmanship between indigenous and expatriate contractors is less than the critical p-value (0.001) therefore, the hypothesis is rejected. This result also indicates that significant difference exists in clients' assessment of the levels of defective works recorded in projects executed by indigenous and expatriate contractors. The result in Table 5 reveals that the mean of clients' assessment of the level of defective works in projects executed by expatriate contractors ($\bar{X} = 2.74$) is lower than that of indigenous contractors ($\bar{X} = 3.33$). This result confirms that clients consider projects executed by expatriate contractors to have fewer defects than those executed by indigenous contractors.

The results in Table 5 show that the p-value (0.208) for the test of difference in clients' assessment of the maintenance costs of projects executed between indigenous and expatriate contractors in Nigeria is higher than the critical p-value (0.05) therefore, the hypothesis is accepted. This result indicates that expatriate contractors are not significantly different from indigenous contractors in the cost of maintaining projects executed. The acceptance of the hypothesis implies that clients do not see any difference in the costs of maintaining projects executed by the two categories of contractors.

On the level of percentage of retention fee paid after defect liability period on projects executed, the results in Table 5 show that the p-value (0.001) for the test of difference in clients' assessment of the percentage of retention fee paid to indigenous and expatriate contractors on projects completed is less than the critical p-value (0.05) therefore, the hypothesis is rejected. This result indicates that significant difference exists in clients' assessment of the percentage of retention fee paid to indigenous and expatriate contractors after defect liability period. The result in Table 5 reveals that the mean of clients' assessment of the percentage of retention fee paid to expatriate contractors after defect liability period on projects executed ($\bar{X} = 7.04$) is higher than that paid to indigenous contractors ($\bar{X} = 4.74$). The result indicates that the percentage of retention fee on projects completed that was paid to expatriate contractors is higher than the percentage paid to indigenous contractors. The result also implies that the percentage of retention fee expended on rectifying defects during the defect liability period is higher in projects executed by indigenous contractors than in projects executed by expatriate contractors.

10. Discussion of results

The results of the study on the ranking of the frequency of award of contracts to indigenous and expatriate contractors by clients agree with previous findings (Edmonds

1979; Ogunpola 1984; Olateju 1991; Samuel 1999; Mayaki 2003; Idoro 2007a) that clients in the Nigerian construction industry patronise expatriate contractors more than their indigenous counterparts. The study thus establishes that this legacy which was inherited from the colonial government still continues almost five decades after independence.

The results of the study reveal that project quality is the most important yardstick for patronage by clients. The finding is an indication that delays in project delivery and increases in project final costs are not as important as project quality to clients. Further results of the study on project quality reveal that clients' perception of contractors' workmanship, quality of materials used for construction and percentage of retention fee collected on projects executed are the parameters of project quality that influence clients' patronage of contractors. The study also reveals that clients perceive the quality performance of expatriate contractors to be better than that of indigenous contractors in the three parameters. The implication of these findings is that clients' perception of the quality performance of the two categories of contractors remains the post independence ground for sustaining the preference giving to expatriate contractors in patronage. They equally perceive expatriate contractors to be better than indigenous contractors in the three parameters they consider for patronage therefore, the preference for expatriate contractors in the award of contracts is expected to continue for now.

11. Conclusion

The study has established that indeed clients give preference to expatriate contractors in the award of contracts. It also established that clients' assessment of contractors' workmanship, quality of materials used for construction and percentage of retention fee collected on projects executed are the three parameters of project quality that influence clients' patronage of contractors. The study further established that clients perceive expatriate contractors as better than their indigenous counterparts in the three parameters. The conclusion from these findings is that the practice in which clients give preference to expatriate contractors in the award of contracts which started during the colonial era still persists. However, the new grounds on which the preference is sustained are now better workmanship and quality of materials used for construction and lower percentage of retention fee expended on rectifying defects in projects executed.

Indigenous contractors should realise that clients still perceive their quality performance as lower than that of expatriate contractors therefore; the preference is bound to continue in the future. The challenge posed to indigenous contractors is to adopt measures that will improve their workmanship and the quality of materials that they use for construction and reduce the percentage of retention fee expended on rectifying defects in projects executed thereby changing clients' perception of their quality performance. This will involve adopting efficient production methods that can achieve high quality performance and measures that will ensure that only genuine

materials are used for construction. It is only such measures and results that can bring about a change in the preference for expatriate contractors in the award of contracts.

References

- Al-Momani, A. H. 2000. Examining service quality within construction processes, *Technovation* 20(11): 643–651. doi:10.1016/S0166-4972(00)00002-X
- Alinaitwe, H. M. 2008. An assessment of clients' performance in having an efficient building process in Uganda, *Journal of Civil Engineering and Management* 14(2): 73–78. doi:10.3846/1392-3730.2008.14.1
- Arditi, D. and Lee, D. 2004. Service quality performance of design/build contractors using quality function deployment, *Construction Management and Economics* 22: 123–127. doi:10.1080/0144619042000201321
- ASCE. 1990. *Quality in Constructed Projects: Manual of Professional Practice*. New York, American Society of Civil Engineers.
- Bhutto, K.; Griffith, A. and Stevenson, P. 2004. Evaluation of quality, health and safety and environment management systems and their implementation in contracting organisations, in *Proceedings of the International Construction Conference of the Royal Institution of Chartered Surveyors (COBRA 2004)*, 7–8 September, Leeds Metropolitan University, Leeds.
- Banerji, K.; Gundersen, D. E. and Bahara, R. S. 2005. Quality management practices in Indian service firms, *Total Quality Management* 16(3): 321–330.
- Dissanayaka, S. M.; Kumaraswamy, M. M.; Karim, K. and Marrosszaky, M. 2001. Evaluating outcomes from ISO 9000 certified quality systems of Hong Kong constructors, *Total Quality Management* 12(1): 29–40.
- ECI. 1994. *Total Productivity Management: Guidelines for the Construction Phase*. Loughborough, Productivity Task Force, Economic Construction Institute, Loughborough, University.
- ECI. 1996. *Implementing TQ in the Construction Industry: A Practical Guide*. London, Thomas Telford.
- Edmonds, G. A. 1979. Macro firms; construction firms for the computer age, *Journal of Construction Engineering and Management* 109(1): 13–24.
- Egemen, M. and Mohamed, A. N. 2005. Different approaches of clients and consultants to contractors' qualification and selection, *Journal of Civil Engineering and Management* 11(4): 267–276.
- Federal Ministry of Works and Housing. 2003. Quarterly Report. Federal Ministry of Works and Housing, Abuja, Nigeria.
- Financial Standard. 2004. Construction Industry Operators call for Review of Road Maintenance Act. Financial Standard, Dec. 20, Lagos, Financial Standard Newspapers.
- Griffith, A. 1993. *Quality Assurance in Building*. 1st edition. London, Macmillan Education Limited.
- Griffith, A. and Bhutto, K. 2004. The integrated management system for project quality, safety and environment: pilot study research findings of developments in IMS, *International Journal of Construction Management* 4(1): 75–81.
- Harris, F. and McCaffer, R. 2002. *Modern Construction Management*. 5th edition, London, Blackwell Science Limited.
- Haupt, T. C. and Whiteman, D. E. 2003. Deploying total quality management on construction sites: inhibiting factors, *International Journal of Construction Management* 3(2): 51–68.
- Idoro, G. I. 2004. The effect of globalization on safety in the construction industry in Nigeria, in *Proceedings of International Symposium on Globalization and Construction*, November, School of Civil Engineering, Asian Institute of Technology, Bagdok, Thailand.
- Idoro, G. I. 2007a. *A Comparative Study of Direct Labour and Design-Tender-Construct Procurement Systems in Nigeria*. A Ph.D Thesis. Department of Building, University of Lagos, Akoka, Lagos, Nigeria.
- Idoro, G. I. 2007b. A comparative evaluation of health and safety performance of indigenous and multinational construction firms in Nigeria, *Construction Research Journal* 1(1): 65–75.
- Lagos State Physical Planning Authority. 2008. *Statistics of Collapse Buildings in Lagos State from 2005 to mid-2008*. Lagos State Physical Planning Authority, Lagos, Nigeria.
- Ling, F. Y. Y.; Low, S. P.; Wang, S. O. and Lim, H. H. 2009. Key project management practices affecting Singaporean firms' project performance in China, *International Journal of Project Management* 27: 59–71. doi:10.1016/j.ijproman.2007.10.004
- Mahadevappa, B. and Kotreshwar, G. 2004. Quality management practices in India ISO 9000 certified companies, *Total Quality Management* 15(3): 295–305.
- Maloney, W. M. 2002. Construction product/service and customer satisfaction, *ASCE: Journal of Construction Engineering and Management* 128(6): 522–529.
- Mayaki, S. S. 2003. The place of Nigeria's building industry in a globalise world, in *Proc of International Conference on Globalization and Capacity Building in the Construction sector*, 1–5 December, 2003, Lagos, Nigeria, 18–29.
- Mbachu, J. and Nkado, R. 2006. Conceptual framework for assessment of client needs and satisfaction in the building development process, *Construction Management and Economics* 24: 31–44. doi:10.1080/01446190500126866
- Ministerial Committee on causes of high Government contracts in Nigeria. 1982. Report. Federal Government Press, Lagos, Nigeria. 5 p.
- Murdock, L. J. 1953. The control of concrete quality, *Institution of Civil Engineers (ICE) Proceedings* 2(4): 426–453.
- Ogunpola, A. 1984. The structure of building costs and implication for economic development, in *Proceedings of the Annual Conference of Nigerian Economic Society*. Nigerian Economic Society, University of Ibadan, Ibadan, Nigeria, 28.
- Okedele, S. O. 2008. *Sustainability of Nigerian Built Environment: The Nexus of Architecture, Urban Design and the National Building Code. Inaugural Lecture Series 2008*. University of Lagos, Lagos, Nigeria.
- Olateju, B. 1991. Enhancing the contract management capabilities of the indigenous contractor, in *Effective Contract Management in the Construction Industry*. The Nigerian Institute of Building, Lagos, Nigeria, 132–142.
- PMI. 2000. *A Guide to Project Management Body of Knowledge*. Upper Derby, Project Management Institute.
- Oakland, J. S. 1995. *Total Quality Management*. First Edition, Oxford, Butterworth-Heinemann.
- Samuel, M. O. 1999. *The causes of foreign dominance of the Nigerian construction industry & the prospects for the indigenous firms*. Unpublished M. Sc. Construction Management Thesis, University of Lagos, Nigeria, 21–22.

- Tam, C. M.; Deng, Z. M.; Zeng, S. X. and Ho, C. S. 2000. Quest for continuous quality improvement for public housing construction in Hong Kong, *Construction Management and Economics* 18: 437–446. doi:10.1080/01446190050024851
- The Guardian. 2007a. Contractor gets December ultimatum over Yobe State Government Roads, *The Guardian*, Monday, June 11, Lagos, Guardian Publications Limited, 28.
- The Guardian. 2007b. NSE Sanctions two members over collapsed building, *The Guardian*, Monday, March, 19, Lagos, Guardian Publication Limited, 34.
- Vitkauskaitė, E. and Gatautis, R. 2008. E-Procurement perspectives in construction sector SMEs, *Journal of Civil Engineering and Management* 14(4): 287–294. doi:10.3846/1392-3730.2008.14.28
- Wells, J. 2006. Construction industries of developing countries: an assessment from two perspectives, *Journal of Construction in Developing Countries* 11(1).
- Zau, P. X. W. 2006 Strategies for minimising corruption in the construction industry in China, *Journal of Construction in Developing Countries* 11(2): 15–29.

VIETINIŲ IR EMIGRAVUSIŲ NIGERIJS STATYBOS RANGOVŲ DARBO KOKYBĖS ĮTAKA KLIENTAMS

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S a n t r a u k a

Nigerijoje dirbantys rangovai klasifikuojami į vietinius ir emigravusius. Sudarant sutartis pastariesiems paprastai suteikiama pirmenybė. Tačiau laikoma, kad tokia praktika nėra palanki augimui ir plėtrai. Šiame tyrime vertinama abiejų kategorijų rangovų darbo kokybės įtaka klientams. Tikslas – nustatyti vietinių ir emigravusių rangovų darbo kokybės lygį, kokybės skirtumus bei koreliaciją tarp klientų įvertintos vietinių ir emigravusių rangovų, dirbančių Nigerijos statybos pramonėje, kokybės. Šiam tikslui pasiekti atliktas tyrimas, apimantis 43 klientus, atrinktus iš Nigerijos klientų aibės. Duomenims rinkti naudoti klausimynai. Surinkti duomenys buvo analizuoti naudojant vidurkio ir t testo metodus, norint nustatyti reitingus bei patikrinti kokybės skirtumus tarp dviejų kategorijų rangovų. Koreliacija analizuota taikant Spirmeno koreliacijos testą. Tyrimo metu nustatyta, kad konkursų metu pirmenybė suteikiama emigravusiems rangovams. Taip pat nustatyta klientus pastebinti, jog emigravusių rangovų darbo kokybė yra geresnė nei vietinių rangovų. Siūloma, kad vietiniai rangovai turėtų atsižvelgti į tyrimo rezultatus, ir tai galėtų padėti gerinti jų darbų kokybę bei sumažinti emigravusių rangovų pranašumą.

Reikšminiai žodžiai: emigravę rangovai, klientūra, vietiniai rangovai, darbo kokybės įvykdymas.

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