Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 2 (5): 350-356

jetems.scholarlinkresearch.org

# An Assessment of the Critical Roles of Public Sector Clients' In-house Construction Professionals under Traditional Method of Procurement in Nigeria

**[1]Ademola Eyitope Ojo and [2]Ajibola Moses Gbadebo**

[1]OJ. Connects Resources, P7, Blk D, GRA, Akure. Ondo State Nigeria.
[2]Department of Quantity Surveying, The Federal Polytechnic, Ado Ekiti, Ekiti State Nigeria.
**Corresponding Author: Ademola Eyitope Ojo**

**Abstract**
*Where construction consultants are engaged, using traditional procurement route, what roles does the clients' construction professional employees play? This question stems from the recent indicting reports of corruption and collusion between consultants and public client in-house professionals by contract audit panels. The paper therefore elicited information from public sector construction professionals and consultants through questionnaire survey in order to identify and assess the roles of client in-house professionals where consultants are engaged at project procurement stages. The data were analysed using descriptive statistics. The study revealed a disparity in the opinions of the respondents on their critical roles. The paper concluded by deploring the seeming infallible attitude and public distrust of some consultants and clients' in- house professionals, and recommended strong teamwork and defined roles for consultants and clients' in- house construction professionals at project procurement stages and amendment to conditions of contracts to suit relationships among project team members.*

**Keywords:** construction professionals, contract management public sector clients, traditional method, Nigeria

## INTRODUCTION

There are different procurement systems in use in the construction industry (Masterman, 2002), through which the client creates the pre-conditions for the successful achievement of project objectives –time, cost and quality. The selected system under an appropriate contract type and control will help to avoid problems and attainment of these objectives. Ibrahim (2003) opine that these objectives are attained through construction processes which can be divided into three phases; Project conception, Project design, and Project construction; stressing that Project conception entails the recognition of a satisfiable need, the project design phase translates the primary concept into an optimum economic expression of client's requirements and the construction phase creates the physical satisfaction of the conception and the realization of the design.

However, in carrying out these responsibilities, clients often engage the services of competent construction professionals, as employees, and or service providers (consultants) using suitable procedures. Besides, where construction consultants are engaged to provide services which otherwise in – house employees would have provided, what critical roles, under the adopted procurement route and contract type, does the clients' professional employee stand to perform? Client In–House professionals, in this circumstance, are all construction professionals who are employees of government and discharge their responsibilities and loyalties to the appropriate government employer Onwusonye (2005). However, recent events and reports of contract audit committees and panels of injuries on public construction contracts are quite disgusting. Consultants and public client in-house professionals have enmeshed themselves in criminal and unethical acts (Public Contract Audit Committee Report, 2011; Abdul-Rahman et al, 2010) and relationships by loosing impartial defence of their employers to corruption OECD (2006). Collusion between in-house professionals /consultants and the contractors to cover up poor quality work for a price; ordering undesirable variations to increase contract price especially in earthwork and substructure parts of road work and building projects respectively etc are forms of economic sabotage which has led to project failures, cost overrun and abandonment Ogunsemi and Aje (2006). By law, (ICPC Act, 2001) such professionals should be prosecuted and recommended for discipline by their professional bodies. However, disciplinary action is seldom amongst construction professions (unlike medicine and law) hence the unethical practices remain unabated.

The research aims at identifying critical roles of Public client's in – house professionals in construction projects and assesses their disposition of these roles at Pre and Post Contract Stages of

construction Project procurement. Hence, this research will centre on traditional procurement method, using a lump sum (approximate quantities) contract type under Standard Form of Building Contract in Nigeria (SFBCN) 1990 which is often used in public sector construction projects procurement in Nigeria. Data collected from Ondo and Ekiti states in the south western Nigeria.

## MATERIAL AND METHODOLOGY

### The Construction Process and Construction Professionals

For construction projects, (Ibrahim, 2003; Aqua Group, 2007) submitted that project procurement can be categorised into pre and post contract stages with the involvement of the design and construction teams. These teams comprise of various disciplines and competencies(professionals) such as Land surveyor, Urban Planner, Quantity Surveyor, Architect, Engineers making up the project (pre contract) design team while the construction (post contract) team comprise of Quantity Surveyor, Architect, Builder and Engineers (and other professionals depending on the type of project). The composition of a professional team is a function of the nature, stage, type and expectation of the project Aqua Group (2007). Further to this, the construction industry is divided into building, civil and heavy engineering subsectors (Ofore, 2006). In the building subsector with projects not limited to residential, industrial, health, institutional, market etc buildings with their adjoining facilities like electrical, security and mechanical installations (building services)etc. Civil projects include road, railway, marine work etc, while heavy engineering project involve, jackets, pipelines, power station etc. Sometimes these projects interwoven e.g. a large industrial development complex sited in a to-be reclaimed land, on which industrial and residential buildings with network of roads and monorail to transport heavy equipment, independent power station are to be built -yet all these under a single contract award. The later example will engage multidiscipline and skills services of professionals like land surveyor, urban planner/ environmentalist, geologist, architects, engineers (building, civil, welding, structural, mechanical, electrical, quality etc),quantity surveyor, Planner and Scheduler ,project manager etc. Jadid (2009) contended that the competency of these professionals either as a consultant or clients' employees is apparent, distinctive and exigent at pre and post contract stages to ensure the attainment of project objectives - cost, time, and quality.

### Traditional Method of Procurement.

Under the traditional procurement method, independent multi-discipline consultants on behalf of the client organization undertake the pre and post contract management of projects to completion Onwusonye (2005). This is characterized by the separation of the project development (design/cost processes) from project implementation (construction and control process) (Hashim et al., 2006), where full documentation is required before the contractor can be invited to tender for carrying out the work. Experts have observed that this method became a standard practice in public sector project procurement and particularly in the building industry over 150 years ago, following the emergence of the general contracting firms and the establishment of independent consultants; though the method has been severely criticized for its inadequacies Love, et al (1998).

### Roles of Construction Project Team Members

Clients' in–house professionals' roles and responsibilities where professional consultants have been engaged without hesitation in the past, questions about their relevancy in terms of value added are now being asked (Procter, 1997) at pre and post contract management stages. Often time it's been found controversial and results into rivalry amongst professionals.

#### ❖ Pre-contract management

The roles of client in–house professionals in their multi-discipline may not be limited to;

i. Advice in the procurement of consultants' services through solicitation and prequalifying them before engagement (Public Procurement Act, 2007). Such to be prequalified must not only be professionally qualified and registered to practice the profession by the responsible authorities as individuals or corporate persons but have verifiable experience in similar work or service to provide.

ii. Develop comprehensive client's project specification and performance requirements usually called project brief. This document consist of the stakeholders' needs, project scope and description statement, project constraints- cost, time and space, project assumptions-quality etc. These requirements need to be elicited, analysed, discussed and recorded in the brief, forming part of the letter of commissioning (contract of engagement) for service. Often time this not done, and where it is done, the architect only conceal this without other consultants e.g. the engineer and quantity surveyor.

iii. Proper review and analysis of consultants proposals based on issued project brief. This may involve in-house value management process i.e. a multidisciplinary process of achieving lowest reliable cost to provide required functions at the optimum time and place while maintaining essential quality and other key requirements to meet client's/users' satisfaction(AACEI,2007). It's economical to design to a cost than costing to a design.

**iv.** A complimentary team work along core competence areas is inevitable in their roles thus;

whereas Engineers are responsible for checking structural functions and standards; Architects ensures codes and regulations in translating users' need to builders requirement (building design functional/dimensional elements), the Builder ensures physical creation and schedules(planning) of the design in term of specification; Quantity Surveyor monitors cost planning of the design to meet cost limit by taken random checking for accuracy of bill quantities of work items, preambles and rates, and compliance with standard methods of measurement.

❖ **Post -contract management**

Contractually, construction contract agreement is between the client (employer) and the contractor as depicted on article of agreement Harbans ( 2007*)*. Hence consultants are agents of the client-however, mere agent. It is on this premise that client in – house professionals derive their authority and should assume the rights/obligations of the principal i.e. under a principal – agency relationship. However, this position is remote to reality particularly on public projects, under Standard Form of Building Contract in Nigeria(SFBCN) 1990. However, in-house professionals must provide check and balance to the consultants' services.

1. An Architect must generally be familiar with the work and reporting progress and quality of the work in meeting design specifications. Non conformance work and changes must be reported and reviewed with the consultant.
2. The structural engineer is responsible for ensuring adherence to structural function and quality requirements-soil and material test reports of the project based on the specification. Other services engineers should ensure requirements on electrical and mechanical installations.
3. The Builder (in a building project) ensures that the construction methodology and sequence, survey levels, work safety and general site production management-work plan, construction information - are followed.
4. The role of the quantity surveyor generally is to ensure adequate management and control of cost on the project. This will involve accurate re-measurement, negotiate best alternative in pricing variations and other claims, checking accuracy of valuations and payment certificates. By extension, advising government on dispute resolution in matters relating to cost in capital project where required.
5. All are mandatory to attend regular site meetings and effectively and actively participate in decision making to achieving project goals.

The central role of client in –house professionals should not be to shield their employer (Onwusonye, 2005) but to be impartial in their duties. There must be short and effective lines of communication, personal accountabilities with reporting lines within the client's professionals and the consultants.

**RESULTS**

Stemming from the scope of this research, due to its large concentration of professionals (Dada,2005) the study population include construction professionals in public sector employment and construction professional consultancy firms in Ondo state of Nigeria. These are limited to architects, engineers, and quantity surveyors. The initial stage of the research elicits information through interviews of experienced construction professionals in project procurement. The next stage involves distribution of 100 number questionnaires with 46 responses received representing construction professionals selected randomly (non-probabilistic technique) in public sector and consulting firms. The respondents were those who have at least 3 -25 years of experience in the construction industry.

Table 1. Responses to Questionnaire Survey

| | Respondents | Number Distributed | Number of Respondent | Percentage of Respondent | Cumulative Percentage |
|---|---|---|---|---|---|
| A | **Client in - house Professional** | | | | |
| | Quantity Surveyor | 13 | 12 | 40% | 40% |
| | Architect | 13 | 10 | 33% | 73% |
| | Engineer | 12 | 8 | 27% | 100% |
| | Total | 38 | 30 | | |
| B | **Consultants** | | | | |
| | Quantity Surveyor | 20 | 7 | 44% | 44% |
| | Architect | 15 | 5 | 31% | 75% |
| | Engineer | 10 | 4 | 25% | 100% |
| | Total | 45 | 16 | | |

Source: Authors' survey

Largely, the questionnaire employ a Likert type scale comprised of five points (Strongly Disagree to Strongly Agree) against each question for the respondents to evaluate. The data collected from the questionnaire survey exercise were analyzed using mean analysis. The use of mean analysis allows results to be ranked in order to determine the relative importance of factors considered. The mean score is determined as follows:

$$\text{Mean Score} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{(n_5 + n_4 + n_3 + n_2 + n_1)} \quad (1)$$

where *n1, n2,n3, n4 and n5* are the number of respondents who scored the responses as 1, 2, 3, 4 and 5 respectively.

Table 2: Assessment of the Roles of Client's In House Professionals at Pre- Contract Stage.

| | Client In House Professionals (P) | | Consultants © | | Over all (P/C) | | Over all | | |
|---|---|---|---|---|---|---|---|---|---|
| Roles | mean | Ranking | mean | Ranking | mean | Ranking | Mean | Std. Dev. | Variance |
| **Architect** | | | | | | | 3.907 | | |
| Advice in the procurement of consultants' services | 4.40 | 4 | 1.90 | 2 | 4.20 | 2 | | 0.451 | |
| prequalifying consultant before engagement | 4.50 | 2 | 1.70 | 3 | 4.13 | 3 | | | 0.204 |
| Develop comprehensive client's project | 4.70 | 1 | 4.20 | 1 | 4.53 | 1 | | | |
| Proper review and analysis of consultants proposals | 4.50 | 2 | 1.20 | 6 | 3.80 | 4 | | | |
| ensures Compliance with codes and regulations | 4.10 | 5 | 1.50 | 4 | 3.73 | 5 | | | |
| Advice on Tender /Evaluation and Award | 3.70 | 6 | 1.40 | 5 | 3.33 | 6 | | | |
| **Engineer** | | | | | | | | | |
| Advice in the procurement of consultants' services | 4.13 | 3 | 1.00 | 3 | 4.08 | 1 | 3.703 | | |
| prequalifying them before engagement | 4.38 | 2 | 1.75 | 2 | 4.08 | 1 | | 0.315 | |
| Develop comprehensive client's project | 4.63 | 1 | 1.88 | 1 | 3.47 | 5 | | | 0.099 |
| Proper review of structural aspect of consultants proposals | 3.60 | 4 | 0.80 | 6 | 3.67 | 3 | | | |
| ensures Compliance with codes and regulations | 3.40 | 5 | 0.90 | 4 | 3.58 | 4 | | | |
| Advice on Tender /Evaluation and Award | 3.00 | 6 | 0.90 | 4 | 3.33 | 6 | | | |
| **Quantity Surveyor** | | | | | | | 4.140 | | |
| Advice in the procurement of consultants' services | 4.50 | 4 | 2.08 | 3 | 4.16 | 3 | | 0.464 | |
| prequalifying them before engagement | 4.33 | 5 | 2.25 | 2 | 4.16 | 3 | | | 0.216 |
| Advice on Cost aspect of client Project Brief | 4.08 | 7 | 2.00 | 4 | 3.79 | 6 | | | |
| Proper cost checking against cost plan/Budget of proposals | 4.58 | 3 | 2.33 | 1 | 4.37 | 2 | | | |
| Advice on cost of Compliance with specifications | 4.33 | 5 | 1.75 | 5 | 4.95 | 1 | | | |
| Random Audit of Bill quantities work Items/Rates | 4.75 | 1 | 1.17 | 7 | 3.74 | 7 | | | |
| Advice on Tender /Evaluation and Award | 4.67 | 2 | 1.42 | 6 | 3.84 | 5 | | | |

Confidence Level(95.0%)

Table 3: Assessment of the Roles of Client's In House Professionals at Post- Contract Stage

| | **Client In House Professionals** | | **Consultants** | | **Over all (P/C)** | | **Over all** | | |
|---|---|---|---|---|---|---|---|---|---|
| **ROLES** | **mean** | **Ranking** | | | **mean** | **Ranking** | **Mean** | **Std. Dev.** | **Variance** |
| **Architect** | | | | | | | | | |
| familiar with the work and reporting progress | 3.9 | 4 | 3.20 | 2 | 3.67 | 3 | 3.61 | | |
| Advice on subcontractor Nomination | 3.2 | 5 | 2.40 | 4 | 2.93 | 5 | | 0.576 | |
| Ensures quality of work meets Specifications | 4.3 | 2 | 2.60 | 3 | 3.73 | 2 | | | 0.332 |
| Attend regular site meetings | 4.6 | 1 | 4.20 | 1 | 4.47 | 1 | | | |
| Advice in Consultant decision making | 4.1 | 3 | 1.60 | 5 | 3.27 | 4 | | | |
| **Engineer** | | | | | | | | | |
| familiar with the work and reporting progress | 4.0 | 3 | 2.75 | 2 | 3.58 | 2 | 3.25 | | |
| Advice on subcontractor Nomination | 3.6 | 4 | 2.00 | 3 | 3.08 | 4 | | 0.438 | |
| Ensures structural/services quality meets Specifications | 4.4 | 2 | 1.50 | 4 | 3.42 | 3 | | | 0.192 |
| Attend regular site meetings | 4.6 | 1 | 3.00 | 1 | 3.77 | 1 | | | |
| Advice in Consultant decision making | 3.4 | 5 | 1.50 | 4 | 2.75 | 5 | | | |
| **Quantity Surveyor** | | | | | | | | | |
| Ensure compliance with condition of contract | 4.42 | 4 | 2.57 | 4 | 3.74 | 3 | 3.69 | | |
| Cost control in work re-measurement | 4.50 | 2 | 3.29 | 2 | 4.05 | 2 | | 0.390 | |
| Advice on best alternative in pricing variations/ claims, | 4.33 | 5 | 2.43 | 5 | 3.63 | 4 | | | 0.152 |
| checking accuracy of valuations and payment certificates | 4.50 | 2 | 2.00 | 7 | 3.58 | 5 | | | |
| advising on dispute resolution matters | 3.33 | 7 | 3.14 | 3 | 3.26 | 7 | | | |
| Attend regular site meetings | 4.75 | 1 | 3.43 | 1 | 4.26 | 1 | | | |
| Advice in Consultant decision making | 3.92 | 6 | 2.43 | 5 | 3.37 | 6 | | | |

Confidence Level (95.0%)

**DISCUSSION**

From the analysis in Table 1, it is evident that Architects from both clients' in –house employees and consultants ranked Develop comprehensive client's project role first in overall with a mean score of 4.53. Similarly, responses from all the clients' in –house employees and consultants (Architect, Engineers and Quantity Surveyor respectively) ranked high roles like prequalifying consultants before engagement, Advice in the procurement of consultants' services, Proper review of structural aspect of consultants proposals, Advice on cost of Compliance with specifications, and Proper cost checking against cost plan/Budget of proposals with mean scores far above the overall mean. These are in agreement with (Aqua Group, 2007). However, responses on Advice on Tender /Evaluation and Award role was generally ranked low with mean score 3.33 and 3.84 (overall) which is far lower than the mean scores; this suggest that under Traditional Procurement method, this roles is agreed to be the elusive duty of the consultants. Surprisingly, response from Quantity Surveyors on Random Audit of Bill quantities work Items/Rates was ranked high amongst client In house QS (4.75), lower amongst QS consultants (1.17) and ultimately low (3.74) in overall (which lower than overall mean score). This role has been a contentious issue in practice; consultants opine that client In house QS use this as a point to adjudge them incompetent and corrupt, where there are defaults. In contrast, client In- house QS contend that, it's the only means where ensued corruption and fraud are discovered especially through over blotted quantities. This is corroborated by (WorldBank, 2006; Transparency International, 2006) reports on public sector procurement for works.

From these results we can infer that, at the Pre contract stage, clients' in –house employees have critical roles to play in the various processes involved especially in all roles ranked high above the means score on overall rankings (from table 1). Moreover, with lower standard deviation measured, it indicates that the data points tend to agree with the mean scores (overall), meaning that , with effective and proper disposition , clients' in –house professionals have significant roles to play.

At post contract stage, standard forms of construction contract prescribe and allocate important right, duties and liabilities to different members of the construction team. In table 2, Attend regular site meetings is conspicuously ranked high amongst all the respondents, which is in tandem with Aqua Group(2007) suggestion that site meetings should start as soon as practicable after contract award and be regular with suitable agenda as this will have a great influence on project success. Architects and Engineers respondents agreed to roles like Ensures quality of work meets Specifications(3.73), familiar with the work and reporting progress(3.67), Ensures structural/services quality meets Specifications(3.42) with high rankings far above the mean scores (overall). However, Quantity Surveyor(QS) respondents ranking appears controversial in that, thought both client in-house QS and QS consultants ranked high roles like Ensure compliance with condition of contract(3.74) and Cost control in work re-measurement (4.08) on (overall P/C) mean far above the mean score for the group(3.69) indicating concurrent, client in-house QS and QS consultants differ sharply in their ranking of roles like Checking accuracy of valuations and payment certificates(4.50 against 2.00) and Advice on best alternative in pricing variations/ claims(4.33) against (2.43). This contrast in the roles is the bases for Consultants and public client in-house professionals corrupt and unethical acts (Public Contract Audit Committee Report, 2011) especially in collusion between in-house professionals /consultants and the contractors in ordering undesirable variations to increase contract price.

Furthermore, respondents ranked low (below mean score overall) on Advice in Consultant decision making and Advice on subcontractor Nomination in each of the groups. Perhaps this is observed as an exclusive and contractual role of consultants. Amongst QS respondents, the role of advising on dispute resolution matters is ranked low (3.26) on overall which underscores the dearth of the awareness of roles of construction professionals in construction disputes resolution in Nigeria Ojo and Akinradewo (2011) . From these results we can deduce that, at the post contract stage, clients' in –house employees have more critical roles to play in the various contract administration processes involved especially in all roles ranked high above the means score on overall rankings (from table 2). Moreover, identified critical roles are Attend regular site meetings, Ensures quality of work meets Specifications, familiar with the work and reporting progress, Cost control in work re-measurement and Ensure compliance with condition of contract which are ranked high mean scores (overall), and closer to standard deviation measured, indicating that the data points tend to agree with the mean scores (overall) hence, with effective and proper disposition , clients' in –house professionals have significant roles to play at the post contract stage as argued by (Onwusonye, 2005) that, the central role of client in –house professionals should not only to shield their employer but to be impartial in their duties..

**CONCLUSION**

The challenges associated with construction project procurement management will definitely require strong teamwork. Otherwise, client is bound to lose in terms of quality of work, delayed completion or

project abandoned and no value for money. This research expects to recommend defined and shared roles between consultants and clients' in- house construction professionals on construction contract; evolve definite responsibilities to clients' employees and create a substantial stage by stage interface/relationship between consultants and clients' in- house construction professionals. At post contract stage, redress provisions of conditions of contracts to create responsibility for clients' in- house construction professionals beyond been a mere clerk of work (SFBCN,1990) to suit contract relationships etc. It should be clearly understood that, the construction project skill, knowledge and competency resides in project management team organisation and not any single individual i.e. the project objectives is far above individual success. Project team members particularly clients' in- house professionals should see their roles as being a public trust and to which they are accountable. It is erroneous to believe that being a consultant on a project amount to omnibus responsibilities and hence uncontrollable and infallible. Mutual respect as being professional colleagues will promote good working relation.

Hence further work needed be done on teamwork – consultant and in-house professionals – to help resolved the present fragmented relationship that may be adversarial.

**REFERENCE**

Abdul-Rahman, H., Wang C. and Yap W. (2010), How Professional Ethics Impact Construction Quality: Perception and Evidence In A Fast Developing Economy, Scientific Research and Essays Vol. 5(23), pp. 3742-3749, December, www.academicjournals.org/SRE retrieved 12/01/2011.

Aqua Group (2007), Procurement, Tendering and Contract Administration, Blackwell Publishing, 9th Edition page 7. Association for the Advancement of Cost Engineering International (AACEI) (2007), Skill and Knowledge of Cost Engineering, Fifth Edition, page 297-303.

Dada J.O. (2005) An Assessment of Risk Factors in Building Projects Procurement in Lagos and Abuja. Unpublished MSC thesis Quantity Surveying Department, Obafemi Awolowo University, Ile-Ife. Nigeria

Harbans S. (2007), Construction Contracts: An Overview, The Ingeniseur. page 7-20 www.bem.Org

Hashim M., Yuet Li M., Yin N., Hooi N., Heng S., Yong T.(2006) Factors Influencing The Selection of Procurement Systems By Clients, Paper presented at International Conference on Construction Industry 2006, Padang, Indonesia, 21st June – 25th June

Hussin A. and Omran A.(2009). Roles Of Professionals In Construction Industry. The International Conference on Economics and Administration, Faculty of Administration and Business, University Of Bucharest, Romania. November ttp://Conference.Faa.Ro

Ibrahim A.D. (2003): Cost Implications of Architectural Design Variables, published MSC thesis of the Construction Engineering & Management King Fahd University of Petroleum & Minerals Dhahran, Saudi Arabia. June

Jadid M.N. (2009) Improving Collaboration between Construction Professionals By Web-Based For Engineering Construction Projects, Emirates Journal for Engineering Research, 14 (1), 19-27

Kish, L. (1995). Survey Sampling, John Wiley and Sons Inc., New York.

Love, P E D, Skitmore, M and Earl, G. (1998), Selecting A Suitable Procurement Method For A Building Project, Construction Management and Economics. Vol. 16, 221-233.

Masterman, J.W.E. (2002),"An Introduction to Building Procurement Systems, 2nd ed.", Spon Press, London.

Nigerian Public Procurement Act, (PPA) (2007) sections 16, 23 (3 a-e) and 44-47.

Oforeh C. (2006)" The Cost Management of Heavy Capital Project", Cosine Ltd. Nigeria, First Edition, Page 2.

Ogunsemi D.R.; Aje I.O. (2006), A Model for Contractor Selection in Nigeria. Journal of Financial Management of Property and Construction. 11(1), 33-43.

Ojo A.E. and Akinredewo F.O. (2011) Essential in Arbitration Clause for Construction Contract Dispute Resolution In Nigeria. Accepted by ICBEDC,conference Universiti Sains, Malaysia (in press)

Onwusonye S.I. J. (2005),The significance of Informal sector in Project Procurement methods in enhancing project finance from the money and Capital Markets, The quantity Surveyor, NIQS 54 (31-39).

Organisation For Economic Co-Operation And Development (OECD) (2006), Curbing Corruption In Public Procurement, www.oecd.org/corruption/ asiapacific retrieved 23/11/2010

Procter, C.J. (1997): Satisfaction and Service Quality in the Quantity Surveying Profession, Unpublished MSc Thesis, Cape Town: University of Cape Town. in Nkado R. (2007) Competencies for the future career of the professional quantity surveyor, http://www.upe.ac.za/qs/quarnn.htm.Retrieved 12/12/2010

Standard Form of Building Contract in Nigeria (SFBCN) 1990, Clause 6Transparency International (TI),2006 www.transparency.org/ preventing corruption on construction projects. Retrieve 23/09/2010

Worldbank (2006). Standard Bidding Documents, Procurement of works. www.worldbank.org 24/10/2007