

EVALUATION OF FACTORS AFFECTING PROFESSIONAL SERVICES IN BUILDING PROJECTS IN NIGERIA

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Abstract

This study is aimed at investigating the main factors affecting professional services in the building industry towards achieving improvement of service delivery by consultancy firms. Questionnaires were distributed to 120(one hundred and twenty (120) respondents to elicit information about their perceptions of the factors affecting professional services. A total of 9 main factors and 39 sub-variables were used to design the questionnaire. The respondents were chosen based on their involvement in an on-going building projects. Therefore, purposive sampling was used to select the population of the study. One hundred and six (106) questionnaires were returned for analysis. The Mean Item Score(MS) was used to rank the factors as perceived by architects, engineers and quantity surveyors. The spearman rank order was calculated and used to test the hypothesis which states that there is no significant difference between the perceptions of the different group of professionals. The results showed that there is an agreement in the ranking with a strong relationship among the professionals. Ability of the client to choose the right design team is the most important factor in delivering quality service. Other important factors are staff motivation and training, commitment of members of staff of the design team, long term potential relationship with client organization, adequate authority for the design team to perform effectively and the client's financial position. The result will guide both client and practitioners about those factors that need to be focused to improve service delivery.

Keywords: Building projects, Evaluation, Nigeria, Professional services, Rank agreement.

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INTRODUCTION

The services of professionals in the construction industry are wide, interdependent and interconnected. They generate construction documents meant for successful execution of the project and to meet the needs of the client. Meeting these needs is critical for the existence of the service providers and to remain competitive in the global market (Cheng, Proverbs & Oduoza, 2006). According to Masromi and Skimore (2010) service-oriented culture in the industry requires a paradigm shift to creating increase in level of quality of service, measure business performance, increase opportunity for repeat business and enhance image and company reputation.

Meanwhile, it has been reported that service providers in Nigeria are not meeting the needs of their client because of conflicting design information, delays in issuing revised drawings, dimensional inaccuracies resulting into delays in project delivery (Aiyetan, Smallwood & Shakantu,2014). Oyedele,Jayeoba, Kadiri, Folagbade, Tijani and Salami (2015) emphasize further that these deficiencies have resulted in poor construction quality performance.

These firms operate within an environment and relate with other stakeholders in rendering their services. The interaction generates several factors (either internal or external) that can improve their services in order to meet the needs of the client. The internal factors are controllable while external factors are uncontrollable, and organization often attributes their success or failures to these (Awe, 2005). Therefore, this study intends to carry out an investigation of critical factors which the service providers perceive are affecting the provision of professional services in the building industry .It is expected that this will address the shortcomings as pointed out above.

LITERATURE REVIEW

The professional services firms are unique in their characteristics and possessing inherent features of service sector industries. The overriding characteristics are knowledge intensity, low capital intensity and a professionalized workforce. This means that the production of the firm relies on knowledge inherent in individuals within the organization (Von Nordenflycht, 2010). The key resources of the firms are knowledge, human capital, relationship capital and reputation. The ability to build these resources drives the successful outcome of such firms (Hilt, Bierman, Uhlenbruch & Shimizu, 2006). The services are affected by several factors most of which are beyond the control of the service providers.

Factors that influence professional services of firms in a given environment have been discussed in the literature. According to Zhao., Zuo, Zillante and Zhao (2012), the knowledge of these factors are necessary to be competitive in the market place. Some of these factors are internal like staff development and motivation, innovation and internalization while some are external. The external factors include regulatory framework, the effects of the construction materials industry and the national economy. Others are client's requirements, professional fees and competitions.

The study of Ling, Low, Wang and Lim (2007) emphasizes that keeping up with new laws and regulations is one of the most significant risks faced by architectural and engineering design firms. According to Zhao, *et al* (2012), sound regulatory framework has a lot of implications on professional staff registration and licensing, requirements of procurement acts for tender, and requirements for collaborations with foreign firms. It protects local firms from foreign firms with stronger human and technical resources.

Knowledge and expertise requirements in the industry drives the human capital needs of the industry. The human capital needs of the industry affects the recruitment process and in turn enables firm to keep the best professionals for a reasonable period of time. Educated experts build reputation for the organization and thereby attracting viable clients and projects. This leads to better relationship that galvanize competitive advantage for the firm (Lowendahl, 2005).

The importance of management competencies cannot be over-emphasized as this determines the right allocation of expertise of the employees (Brandl, 2010). As a result of the strong dependency on experts in professional service firms, commitment and loyalty of employee are important. They should possess the characteristics of reliability, responsiveness and assurance (Razavi, Safari, Shafie & Khoram. 2012). To retain qualified staff and avoid unnecessary staff turnover, firms should attract good staff with salary, social welfare, remuneration package and benefit package (Zhao *et al.* 2012).

The building design sector of national economy is highly competitive. Design firms are fragmented and facing increasing level of competition from larger and foreign firms. The competency level of human capacity of local professional service firms have equally affected the patronage of both public and private organizations This is a reflection of the weak regulation of competition by professional bodies and the needed protection by government in Nigeria.

The level of innovation in professional service firms is a direct result of the human capacity index. Dynamism in building industry require a strong dependency on innovation in order to maintain competitive advantage. Innovative qualities, technological solutions, energy efficiency and economic capital are becoming very critical. Innovation in project-based firm involves using new or improved services for clients and using new technologies to solve clients problems better than existing technologies (Blindenbach-Drissen & Ende, 2006)

There is a growing need for innovation in the construction industry in the face of increasing technological capabilities, changing clients requirements, environmental regulations and standard, rising construction cost and increased competition. This is because operators in the Nigerian construction industry are often in the habits of low disposition towards adoption of new innovative changes (Mohammed, Yusof & Kamal, 2014). The level of innovations and creativity in design help firm to remain competitive.

By and large, the construction development will continue to create demands for different types of construction materials. Therefore, availability and prices are critical factors in project viability (Ling, Ibbs & Kumaraswamy, 2005). The utilization of proper construction material is crucial for successful implementation of any design concept. The specification and usage of materials are equally important to arrive at affordable cost for the client which influences the integrity and innovation of designs. The consulting sector of the building industry is also affected by the national macroeconomic environment. It is generally believed that when there is an increase in average annual Gross Domestic Product (GDP), it is an indication of growth in demand for construction activities in any economy (Zhao, *et al.* 2012).

The natural and geographical features of project sites have a direct influence on the design concepts and form a key components of urban planning. They affect project both at macro and micro level (Shen, Hao, Tam & Yao, 2007). Ling, et al.(2005) found out that field specialization, technical expertise and the ability to handle complex projects are crucial factors that are necessary for firms to win projects. Equally, clients prefer firms that have capacity to provide package deal contract covering broad areas of service delivery.

The importance of research and development in today constant changing environment cannot be over-emphasized, moreso in a situation where expertise and reputation of firm is very crucial. Firms that give attention to research and development get new knowledge that can be applied in practice to achieve innovations (Ling *et al.* 2006). This is in line with development in information technology that has the capacity to reduce design inconsistencies and rework.

The adoption of information and communication technology (ICT) has become a norm during design process by design firms. The study of Russell (2007) reiterates that the development of computer aided design (CAD) programs have assisted firms in no small measure. It leads to easier distribution of the service product more efficiently. Technological development have shortened geographical sphere of operations rapidly and this has enhanced productivity. The introduction of building information modelling (BIM) in the range of design services have increased performance. It facilitates smooth communication and reduction in design inconsistencies that can lead to rework (Zhao *et al.* 2012).

The ICT capacity of firms is expected to cut across telephone, internet/intranet, various hardware and software, document management system, project management software, telephone conferencing. All these helps the firms to remain competitive. According to Ling *et al.* (2006), this covers area of management quality, strategic planning, quality of professional staff, quality of technical staff, service quality, financial resources, technological supremacy, efficiency and productivity. The size of workforce and their experience in terms of number of years in practice, type of building, size and complexity of project handled in the past all play major role in the capacity of firms to handle specific project.

PROFESSIONAL SERVICES IN BUILDING PROJECTS

In Nigeria, basic professional services in building projects are provided by firms of architects, structural engineers, mechanical and electrical engineers (M&E) and quantity surveyors. Depending on the complexity of projects and management systems, other professionals such as builders, project managers, acoustic engineers, communication engineers can be involved. However, this study is limited to the basic professional services provided by architectural, engineering and quantity surveying firms. The services are largely based on knowledge acquired by the human capital of the firms. The success of both public and private projects is largely dependent on the quality and capabilities of these human resources deployed to perform technical and design related activities for the clients (Sporrong, 2014).

Professional services in building projects are interconnected and compliments each other and are project based (Brandl, 2010). Therefore, there is a need for continuous development and training of the competencies and expertise of the human capital of the firms. The project organization presents opportunity for this through cross project planning and innovations (Koch and Bendixen, 2005). The projects determine what they learn and at what proportion. Therefore the type of project and clients become very vital (Lowendahl, 2005). Critical decision of such a client become a pivotal to meeting their needs. The services involve interactions between the client and service providers as a solution to the needs or requirements of the client.

The professional firm has a responsibility to imbibe reasonable skill, care and diligence, integrity and trust (McClure, 2002). Professional service organizations refine, package and sell knowledge and are dependent on well educated and skilled personnel. According to Nachum (1998), knowledge is their main resource and remains both the input and the output of their production processes. Their clients are other firms or institutions (body corporate or individuals) with their output been used as input into the production processes of others.

The assignments of the professionals are often temporary, putting requirements on processes, management and organizing as opposed to traditional mass producing industries. The characteristics of services make it difficult to access their quality as compare with products. They are therefore characterized by intangibility meaning that services are intangible in nature, they cannot be counted or measured. The services are produced and consumed simultaneously. Therefore, the client (customer) is involved in the process and the input of the client affects the quality of service delivered. Services are perishable meaning that services cannot be produced and later made available for consumption. Services

are equally heterogeneous resulting in variations from providers to providers and from client to client (Parasuraman, Berry & Zeithaml 1991).

The output of services of professionals in the building sector of the construction industry are delivered in many ways such as reports, design, and planning documentations like specifications project management, contract administration and provision of advisory services. The consultants are expected to be independent with a strong knowledge and skills that can allow them to fulfill less traditional roles like project initiator and identifier, facilitators and promoters.

The execution of professional services requires information about the needs of the clients and often requires involvement of the client in design and production. This however varies depending on the type of project, and often takes place in form of meetings and briefings at the client organization. Some category of clients exert a greater level of influence in the process of design procurement to production. This is essential for competence and development in the construction industry (Masterman, 1992). Traditionally, professional service providers ability to manage and transfer their knowledge within their organization, to other professionals and clients form their major task. This is crucial in order to be able to interpret the needs of the client into a design and delivering same within a reasonable time. The services of professionals in building projects cover the various stages of activities including planning and feasibility, design, tender, construction and close out. These are outlined in the figure below:

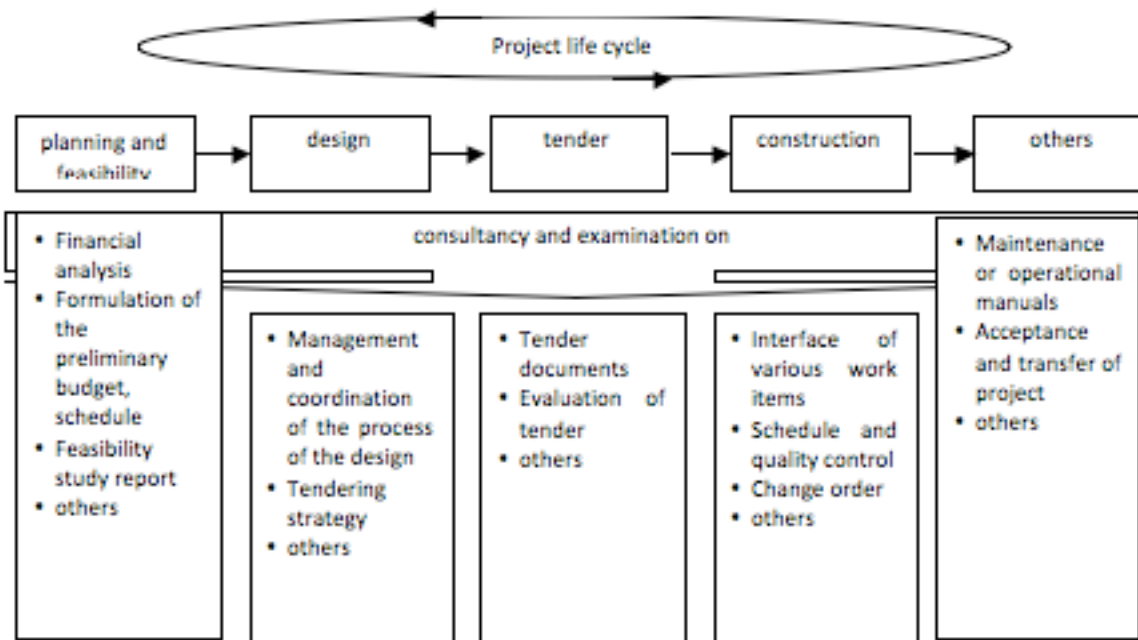


Figure 1: Professional Service Areas in Building Project

Source: Yang and Peng (2008)

RESEARCH METHOD

The factors investigated for the study are staff education and motivation, innovation, internationalization, information and communication technology (ICT), regulatory framework, construction materials industry, client factors, competition and professional fees. They were developed into a questionnaire and this was used to elicit information from the professionals. The questionnaire was based on the factors identified above. The respondents consist of architects, structural engineers, mechanical and electrical engineers and quantity surveyors. The questionnaire had two sections. The first section consists of the respondents' personal characteristics such as academic qualification, years of experience, specialization and professional qualifications. The second section requires the respondents to rate the impacts of these factors as it affects their services. The factors are rated on a 5-point likert scale ranging from 1=Nil, 2=Low, 3=Average, 4=High and 5=Very High. The sampling frame was the list of consultants obtained from clients of on-going building projects or recently completed within the last one year within the South-West geo-political area of Nigeria. Purposive sampling technique was used to the consultants based on their active participation in the process of executing the building projects.

The questionnaire was administered online through Survey Monkey, a software that assist in creating surveys and stores data online. A brief introduction was sent to the respondents through an email along with a hyperlink of the survey created online. The system records response automatically and the researcher can assess same through an administrator’s hyperlink. The survey was sent to one hundred and twenty (120) respondents. Fifty response was received online, and a follow up was conducted with a hard copy of the survey to those who did not respond online after a lot of phone calls. Additional fifty six responses was received through this making it a total of one hundred and six (120). This resulted into a response rate of 88.3%.

To test the hypothesis that there is no significant difference between the perceptions of the professionals about the factors affecting professional services, the Spearman rank order correlation (R_s) was used (equation iii) and the strength of the relationship (T) was established by converting (R_s) to T (equation iv). The result of (T) is used to test the hypothesis. When T_{cal} is greater than T_{tab} , the null hypothesis (H_0) is accepted as there is agreement in the ranking, and when T_{calc} is less than T_{tab} . Then there is no agreement in the ranking. In this study, the strength of relationship is established between the following pairs: Architects and Mechanical/Electrical Engineers; Architects and Structural Engineers; and Architects and Quantity Surveyors using the following formula:

$$R_s = 1 - \left(\frac{6 \sum d_i^2}{n(n^2 - 1)} \right) \dots\dots\dots (i)$$

$$T = R_s \left(\frac{\sqrt{n-2}}{1 - R_s^2} \right) \dots\dots\dots (ii)$$

Where:

R_s = Spearman rank order; d_i^2 = square of the difference between ranking of variable being tested; n = Number of variables; $n-2$ = degrees of freedom; T = Strength of the relationship.

DATA PRESENTATION AND ANALYSIS
Respondent Characteristics

A total of 106 questionnaires were returned. Table 1 below shows descriptive analysis of the respondents on their academic qualification, years of experience and the professional qualification of the respondents. Majority (29.2%) has more than twenty years of experience in the industry while the least are professionals within 15- 20years with 8.5percent. Architects are 26.40% in population, 49% are engineers while 24.60% are quantity surveyors. All respondents are affiliated to their respective professional organization as shown in the table.

Table 1. Descriptive Characteristics of Respondents

Variable	Frequency	Percentage (%)
Academic Qualification		
HND	28	26.41
BSc	38	35.85
MSc	39	36.84
PhD	1	0.90
Total	106	100
Years of experience		
1-5 years	24	22.60
6-10 years	25	23.60
11-15 years	15	14.20

15-20 years	11	10.38
Above 20 years	31	29.22
Total	106	100
Specialization		
Architects	28	26.41
Mechanical/Electrical Engineers	25	23.50
Structural Engineers	27	25.50
Quantity Surveyors	26	24.60
Total	106	100
Professional Qualification		
MNIA	28	26.40
MNSE	52	49.00
MNIQS	26	24.60
Total	106	100

Data Analysis

The Mean Score (MIS) was calculated for responses from architects, engineers and quantity surveyor using the following equation.

$$\text{MIS} = \frac{5N_5 + 4N_4 + 3N_3 + 2N_2 + 1N_1}{N_5 + 4N_4 + 3N_3 + 2N_2 + 1N_1} \quad \text{..... (iii)}$$

$$5(N_5 + 4N_4 + 3N_3 + 2N_2 + 1N_1)$$

Where N_5 , N_4 , N_3 , N_2 and N_1 are the number of respondents who picked 5, 4, 3, 2, 1 ratings respectively. The result is shown in table 2 below:

Table. 2. Analysis of Mean Item Score for the Professionals

Factors Affecting Professional Services	ARC. MIS	ARC. RANK	M & E MIS	M & E RANK	QS MIS	QS RANK	SE MIS	SE RANK
Staff Development and Motivation								
Staff education and training	4.00	3	4.13	4	3.64	6	3.77	3
Commitment of members staff	4.07	2	3.95	7	3.46	10	3.85	2
Salary and social welfare structure to attract staff	3.57	9	3.67	14	3.11	20	3.35	10
Innovation								
The firm has new/improved methods for service leverage	3.26	21	3.71	11	3.54	8	3.15	18
The firm has new/ improved activities focused on the employee in order to increase knowledge	3.79	6	3.68	13	3.40	13	3.04	22
The firm has new/improved internal administration and operation	3.59	8	3.71	11	3.32	15	3.04	22
The organization has created and established new lines of services	3.36	18	3.32	22	3.54	8	3.15	18
Internationalization								
Firm's degree of involvement in international market	2.92	30	2.86	30	2.74	28	2.62	32
Networking and collaboration with foreign firms	3.07	27	2.95	29	2.89	25	2.81	28
Firm's policy and strategies for entering international market	3.07	27	3.05	27	2.65	29	2.65	31
Competent staff with international orientation	3.18	24	3.09	25	2.92	24	2.92	25
Government regulations to encourage internationalization	3.04	31	2.81	34	2.57	30	2.88	26
ICT								
The use of modern	4.08	1	4.14	3	3.82	3	3.56	6

hardwares to enhance services									
Adoption of Building Information Modelling	3.57	9	4.00	6	3.11	20	2.70	30	
Allocation of resources to the firm to one another	3.36	18	2.96	28	2.89	23	2.96	24	
Technology links all members of the firm to one another	3.44	15	3.67	14	3.48	11	3.27	12	
Technology that supports communication is placed in the hands of employees	3.48	13	3.83	10	3.29	17	2.96	24	
Technology links all members of the firm to all relevant external information	3.50	12	3.70	12	3.30	16	3.24	13	
Regulatory Framework									
Availability of regulatory framework to promote interests of firms	3.11	26	3.22	23	3.52	9	3.35	10	
Frequency of changes in regulations	2.89	31	3.05	27	2.74	27	2.77	29	
Policy framework for technical staff registration	3.46	14	3.57	16	2.96	23	3.33	11	
Requirements by procurement acts	3.41	16	3.55	17	3.21	18	3.20	16	
Construction Materials Industry									
Strength of the local materials industry	3.33	19	3.35	21	3.19	19	3.40	8	
Effects of sub-standard quality materials	3.22	22	3.40	20	3.19	19	3.12	20	
Supply and price of construction materials	3.32	20	4.05	7	3.44	12	3.08	21	
Availability of specified materials for design	3.39	17	3.65	15	3.52	9	3.56	6	
Client Factors									
Ability to choose the right team of designers	3.71	7	3.87	9	3.81	4	4.00	1	
Long term potential relationship with client organization	3.81	5	4.30	1	3.89	2	3.50	7	
Adequate authority for design team to perform effectively	3.82	4	4.17	2	3.74	5	3.65	4	
Client's financial position	3.71	7	3.96	8	3.63	7	3.50	7	
Client's involvement in design	3.33	19	3.87	9	4.48	1	3.38	9	
Competition									
Sustaining of smaller design firms by government protection through legislation	2.59	29	2.68	32	2.77	27	2.84	27	
Recognition by clients to participate in major design competition	2.93	25	3.14	24	2.96	23	3.00	23	
Competition regulation by professional bodies	3.15	25	3.43	19	3.00	22	3.63	5	
Competition for fair and open market between smaller firm and larger size firm	2.67	32	2.95	29	3.08	21	3.14	19	
Professional fees									
Adequacy of fees paid by clients	3.52	11	3.07	26	3.39	14	3.22	15	
Payment milestone encourage quality of service	3.54	10	3.10	25	3.44	12	3.23	14	
Private clients response to fees payment	3.54	10	3.14	24	2.88	26	3.16	17	
Public clients response fees payment	3.21	23	3.50	18	2.88	26	3.08	21	

ARC.=Architects, M&E=Mechanical and Electrical Engineers, SE=Structural Engineers,
QS=Quantity Surveyors, MIS=Mean Item Score.

Architects ranked the use of modern hardwares to enhance services as the most important at 4.08. Commitment of members of design team, staff education were ranked second and third at 4.07 and 4.00 respectively. Adequate authority for the design team to perform effectively was ranked fourth at 3.82, while long term potential relationship with client organization was ranked fifth at 3.81. Sustaining of smaller design firms by government through legislation was ranked least at 2.59. The rankings of mechanical and electrical engineers shows that long term potential relationship with client organization is the most important at 4.30. Adequate authority for the design team to perform effectively was ranked second at 4.17. The use of modern hardwares to enhance services and staff education were ranked third and fourth at 4.14 and 4.13 respectively. Supply and price of construction materials was ranked fifth at 4.05 while sustaining of smaller design firms by government through legislation was ranked least at 2.68.

The quantity surveyor ranked client's involvement in design as first at 4.48 followed by long term potential relationship with client organization and the use of modern hardwares to enhance services at 3.89 and 3.82 respectively. Ability to choose the right team of design was ranked fourth at 3.81 and staff education and training at 3.64 was ranked fifth. Government regulations to encourage internationalization was ranked least at 2.57. Ability to choose the right design team was ranked first by the structural engineer at 4.00, while commitment of members of design team, staff education were ranked second and third at 3.85 and 3.77 respectively. Adequate authority for the design team to perform effectively was ranked fourth at 3.65. Competition regulation by professional bodies were ranked fifth at 3.63. The firm's degree of involvement in international market was ranked least at 2.62(see table 2)

Test of Difference in the Ranking of Factors by the Professionals

This test is to establish if there is any agreement in the ranking of the factors affecting skilled labour shortages between artisans and the contractors. Table 5 shows the result of the calculation of Spearman rank correlation coefficient (R_s), the t-values (t_{calc}) is t-calculated, (t_{tab}) is t-calculated, H_0 is null hypothesis (the decision rule of rejection or acceptance of the null hypothesis) and the p-value is probability value.

Table 3: Test of agreement for the ranking of factors affecting professional services

Consultants	R_s value	T_{calc}	T_{tab}	Null hypothesis (H_0)	P- Value
Architects and Mechanical/ Electrical Engineers	0.86	20.22	1.615	Accept	@ .05
Architects and Structural Engineers	0.76	10.99	1.615	Accept	@ .05
Architects and Quantity Surveyors	0.77	11.51	1.615	Accept	@ .05

Table 3 above shows the Spearman rank order correlation. The architect and mechanical/electrical relationship is strong and positive at 0.86, with T_{calc} and T_{tab} of 20.22 and 1.615 respectively. Therefore, the null hypothesis of no significant differences between the perceptions of the consultants is accepted at 0.05 significant level. At the same significant level of 0.05, the null hypothesis for the pairs of architects and structural engineers, and architects and quantity surveyors is accepted. They have correlation (R_s) value of 0.76 and 0.77 respectively. The T_{calc} are 10.99 and 11.51, while the T_{tab} are equally 1.615. This tests' result showed that there are agreements in the ranking order by the professionals. They are equally strongly related. However the architects and mechanical/electrical engineers shows the greatest relationship.

DISCUSSION

The result of the hypothesis shows that the ranking of the factors by the different groups of professionals is in agreement. The ability to choose the right design team, education and training of staff members, commitment of members of design team, long term potential relationship with client organization, adequate authority for design team to perform effectively, client financial position are at top priority for the design team to perform to the expectation of the client. The ability of the client to choose the right design team for a project is very critical in meeting project objectives. It is important to have the right people in the team. This will improve team relations, enhances communication, provides a very clear direction and commitments of the team members. This agrees with the study of Azmy(2012). This is also confirmed by the study of Dadzie, Abdul-Aziz and Kwame(2012) which says that ability to work as a team and

experience of the team are critical towards ameliorating the problems of delay and cost escalation in building projects.

The issue of education and training of members in the team is also in line with the study of Oyedele and Tham (2007) where it was equally confirmed that one of the problems confronting the services of architects in Nigeria is the need for skilled personnel through effective training. The study of Oyedele, et al. (2015) equally concludes that most of the factors confronting poor quality construction are human problems.

The commitment of members of design team is in tandem with appointing the right team to effectively deliver services to their client. Azmy (2012) emphasizes this in his submission defining effective service as “*the ability of the team to clearly define, agree and understands projects’ common goals and their roles and responsibilities to accomplish assigned tasks and deliver a completed and well-built project compliant with the highest quality, as well as effectively embrace owner’s expectations during the entire project through the use of effective communication strategies*”(pp 137).

The success of service generates long term potential relationship with client organization. This is because meeting their needs is critical for the existence of the service providers and to remain competitive in the global market (Cheng, Proverbs & Oduoza, 2006). It establishes performance standards resulting in service-oriented culture in the industry thus creating increase in level of quality of service, measure business performance, increase opportunity for repeat business and enhance image and company reputation (Masromi and Skimore, 2010)

There is a need for collaboration, teamwork and adequate authority for design team to perform effectively. Since professional services require input of the client and continuous interaction between the client and the consultants, then execution of professional services requires information about needs of the clients and often requires involvement of the client in design and production. Professional service providers ability to manage and transfer their knowledge within their organization, to other consultants and clients form their major task. This is crucial in order to be able to interpret the needs of the client into a design and delivering same within a reasonable time.

Client financial position is critical in fulfilling his obligations. The clients are responsible for funding of the projects, and expect that the project will be a success to justify his investment. They are responsible for commissioning and paying for the design and construction of the facility, and are central to the construction process (Alinaitwe, 2008). This is expected to motivate the commitment of the service providers who are expected to provide a competent service and possess good interpersonal skill (Cunningham, 2013).

CONCLUSIONS

The study identifies the factors that are critical towards the effective performance of services of professionals comprising architects, structural engineers, mechanical and electrical engineers and quantity surveyors in building projects. The result is expected to improve the final outcome of building projects as decisions affecting projects are made at the documentation stage by the professionals. It was found out that Building Information Modelling (BIM) was not accorded serious priority. It is however important that this novel innovation should be encouraged. It is being introduced in several societies as a tool to enhance performance, improving the quality of process of both design and construction stages. It fosters effective planning, reducing design errors, coordinating of drawings to enhance the total construction quality. This will engender continuous training and education by the practitioners.

It is therefore expected that this study will act as a platform both for clients and practitioners in the consulting sub-sector of the building industry about those factors that need to be focused on in order to improve service delivery that will engender better project delivery. It will thereafter generate awareness for the industry practitioners the need for continuous education, imbibe effective teamwork and good quality global practices. The result is expected to guide both client and practitioners in the consulting sub-sector of the building industry about those factors that need to be focused on in order to improve service delivery that will engender better project delivery.

References

Aiyetan, A.A, Smallwood, J.J and Shakantu (2014) Influence of Client understanding on quality of design. In: Jolanta, T, Kriengsak, P, Nobuo, M and Chien-Ho (Ed) *5th International Conference Proceedings on Engineering, Project and Production Management*, 26-28 Nov. 2014. Nelson Mandela Metropolitan University, 244-253.

- 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.
- Asika, N (2009) Research methodology in the behavioural sciences. Nigeria: Longman Nigeria Plc
- Assessing Women in Engineering (AWE) project (2005). Attributing theory: An overview. www.aweonline.org, 23/12/2015. 1-9.
- Azmy, N (2012) The role of team effectiveness in construction project teams and project performance. A published PhD Thesis of Iowa State University, Ames Iowa, USA.
- Blindenbach-Drissen. F and Ende. J (2006) Innovation in project-based firms: The context dependency of success factors. *Journal of Research Policy*. 35(2006) 545-561.
- Brandl, K (2010) Perspectives on globalization and the danish architecture and engineering industry. *Research Paper for Centre for Strategic Management and Globalization, Copenhagen Business School*.
- Cheng, J, Proverbs, D.G and Oduoza, C.F (2006). The satisfaction levels of UK construction clients based on the performance of consultants: Results of a case study. *Journal of Engineering, Construction and Architectural Management*. 13(6), 567-583.
- Cunningham, T (2013) Factors affecting the cost of building work : An overview. Dublin Institute of Technology.
- Dadzie, J., Abdul-Aziz, A.R and Kwame, A (2012) Performance of consultants on government projects in Ghana: Client and contractor perspective. *International Journal of Business and Social Research*. 2(60), 256-267.
- Field, A.P (2005) Discovering statistics using SPSS. 2nd Edition, Sage Publication Ltd, London.
- Hilt, M, Bierman, L, Uhlenbruch, K and Shimizu, K (2006). The importance of resources in the internalization of professional service firms: The good, the bad and the ugly. *Academy of Management Journal*, 49(6), 1137-1157.
- Koch, C and Bendixen (2005) Multiple perspectives on organizing; Projects between tyranny and perforation. *Building Research and Information* 33(6), 536-546.
- Kylindri, S, Blanas, G, Henriksen, L and Stoyan, T (2012) Measuring project outcomes: A review of success effectiveness variables. *International Scientific Journal in Business, MIBES*. 25-27, May 2012, 212-223.
- Leedy, P.D and Ormond, J.E (2001) Practical research planning and design, 7th Edition, Prentice-Hall, Upper Saddle River, N.J.
- Ling, F; Ibbs, C and Hoo, W (2006); Determinants of international architectural, engineering and construction firms' project success in china. *Journal of Construction Engineering and Management*, 132(2), 206-214.
- Ling, F.Y.Y; Ibbs, C.W and Kumaraswamy (2005) Enablers that help foreign AEC firms win construction contracts in China. *Journal of Construction Management and Economics*, 132 (2), 206-214.
- Ling, F.Y.Y; Low, S.P., Wang, S.Q., and Lim, H.H (2007) Key project management practices affecting Singaporean firms. *International Journal of Project Management*.
- Lowendahl, B (2005) Strategic management of professional service firms. 3rd Edition, Copenhagen Business School Press, Copenhagen, Denmark.
- Mohammed, A, Yusof, N and Kamal, E.M (2014) Empirical assessment of nigerian construction industry consultancy services innovation practices. *International Journal of Managerial Studies and Research*. 2 (9), 175-186.
- Masromi, M and Skimore, M (2010) A new approach to assessing Malaysian contractor satisfaction levels. In: Proceedings of PM-5-Advancing Project Management for the 21st Century, 29-31 May 2010, Moevenpick Resort and Thalasso Hotel, Crete Island.
- Masterman, J.W.E. (1992) An introduction to building procurement systems. London, Spon.
- Naoum, S. G and Mustapha, F. H (1994) Influences of the client, designer and procurement methods on project performance. *Proceedings of CIB-W92 Procurement Systems Symposium Hong Kong*. 221 – 228
- Nunnally, J.C and Bernstein, I.H (1994) Psychometric theory (3rd Ed) .McGrawHill, New York
- Oyedele L.O and Tham, K.W (2007) Clients' assessment of architect's performance in building delivery process: Evidence from Nigeria. *Journal of Building and Environment*, 42 (5), 2090-2099.
- Oyedele, L.O, Jaiyeoba, B.E, Kadiri, K.O, Folagbade, Iyabo, S.O, Tijani, K and Salami, R.O (2015) Critical factors affecting construction quality in Nigeria: Evidence from industry professionals. *International Journal of Sustainable Building Technology and Urban Development* (6) 2, 103-113.
- DOI: [10.1080/2093761X.2015.1033662](https://doi.org/10.1080/2093761X.2015.1033662)

- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991) Refinement and reassessment of the SERVQUAL Scale. *Journal of Retailing*, 67(4), pp. 420-450.
- Razavi, S.M, Safari, H, Shafie. H and Khoram (2012) Relationships among service quality, customer satisfaction and customer perceived value; Evidence from Iran's software industry. *Journal of Management and Strategy*. 3 (3) 28-37.
- Russell, V (2007) Architectural services: Sixth Services experts meeting domestic regulation and trade in professional services, 15-16 Feb. 2007, Paris.
- Shen. L, Hao. J, Tam. V.W and Yao. H (2007), A checklist for assessing sustainability performance of construction projects. *Journal of Civil Engineering and Management*, 13(4), 273-281.
- Sporrang, J (2014) Selecting architectural and engineering consultants. *PhD Thesis, Chalmers University of Technology, Sweden*.
- Von Nordenflycht, A (2010) What is a professional service firm? Toward a theory and taxonomy of knowledge-intensive firms. *Academy of Management Review*, 35(1), 155-174.
- Yang, J-B and Peng, S-C (2008) Development of a customer satisfaction evaluation model for construction project management. *Building and Environment Journal*, 43(2008) 458-468.
- Zhao. Z.Y, Zuo. J; Zillante, G and Zhao. X.J (2012) Foreign architectural and engineering design firms' competitiveness and strategies in China: A diamond model study. *Habitat International*, 36 (2012), 362- 370.