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Expected Success Factors in the Procurement of Public Sector Projrcts in Nigeria: A Stakeholder Analysis

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ABSTRACT

Perceptions, whether right or wrong, have the capacity for determining human interactions and responses to issues. Analysing and ultimately managing stakeholders' views have been recognized as necessary for the success of projects or programs. This research set out to investigate the expectations of client and consulting organizations in the Nigerian construction industry on priorities in public project procurement or implementation. An opinion survey of client and consulting organizations in some selected states of Nigeria was done. A set of 155 questionnaires was administered through the use of purposive and snowballing techniques on clients and consulting organizations. 65 completed questionnaires were returned. The data collected was subjected to both descriptive and inferential statistical analysis. The results of the analysis indicate that project completion at 'least or budgeted cost' is regarded as the most important issue of emphasis by consulting organizations while 'project meeting transparency and accountability' requirements is the most important to client organizations. The results further suggest that there are no significant differences, between client and consulting organizations, in the rankings of the six identified expectations on public sector project implementation. It is recommended that the homogeneity of perceptions by the two organizations can form the basis of intervention efforts for improvements in public sector project delivery. Furthermore, the results

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provide the stakeholders of public projects feedback on perceptions, which can be useful in planning for future public projects.

Keywords: Public project implementation, clients, consulting organizations

INTRODUCTION

Public infrastructure projects consume government revenue, provide infrastructure, alter and affect the environment and thus contribute to or detract from the enlightened self-interest of nations (Dada, 2007). The way public projects are executed is thus of paramount interest to the citizens of any nation. As a matter of fact, the way public projects are procured has the possibility of determining the popularity of a government and the future direction of the nation state. Petersen and Murphree (2004) assert that the public sector has both fiscal and moral responsibility to the citizenry. Public projects are executed within the larger context of the construction industry. Wells (1986) reported efforts of some developing nations to either nationalize their construction industry all in a bid to ensure that the industry contributes to their national development. Ogunlana (2010) reported that the Asian tigers have set goals and have linkages of their construction industry to their overall national developmental agenda. Some of these nations have construction industry development boards to provide leadership for stakeholders to stimulate sustainable growth and to enhance the industry's role in their country's economies. As such the construction sectors in some of those nations have made progress in exporting or internationalising their services. Ogunlana (2010) asserted that while many Asian construction companies are over-committed in China, India and the Middle East with construction projects, Nigeria's construction sector has not made or been positioned to make similar contributions. One of the indicative parameters of Nigeria's Vision 20:20 is 'adequate infrastructure services that support the full mobilization of all economic sectors' (Ogunlana 2010: 8). Nigeria has a broad vision of using infrastructure to drive other sectors of the economy (Concept, 2007). The Nigerian Federal Government introduced the due process, which culminated in the enactment of the Public Procurement Act in 2007. The BMPIU (2005) reported that a diagnostic study conducted into the state of Federal Government public procurement revealed that Nigeria may have lost several billions of naira partly due to inflation of contract costs, lack of transparency and competence based competition as criteria for the award of public contracts. This development raises questions about the implementation of public projects in Nigeria: are there ingredients of integration, in project implementation, to specific deliverables with respect to national goals? Since infrastructure projects, whether public or private, are part of the outputs of the construction industry, the existence and/or use of intrinsic and extrinsic goals and parameters with which to execute and judge public projects in Nigeria by stakeholders remains debatable. The issue for investigation in this research is thus: in the realization and execution of public projects, how do some selected stakeholders -clients and consultants- prioritise their goals and expectations in project implementation? The rationale for this investigation is the important place that stakeholder management has in the ownership, implementation and success of projects and programmes (Yuan et al., 2010; Forrer et al., 2010; Li et al., 2012).

PRIORITIES IN PUBLIC PROJECTS AND STAKEHOLDER MANAGEMENT

The gross domestic product of nations especially developing ones that have to build up infrastructure shows the contribution of capital projects to national development (Ogunlana, 2010). For example building and civil engineering construction (in which public projects are included) in Nigeria was reported to have contributed as much as 3.4% to the gross domestic product of that nation (Federal Office of Statistics, 1998). Developing countries still have a large mass of infrastructure to provide for her citizens. Some of the infrastructure are provided for or enabled by the public sector depending on procurement form and arrangement. Whichever procurement method is used, underlying expectations exist.

Even though project priorities may differ from one client to the other, the priorities nonetheless exist (Greenberg, 1993; Peters and Hommers, 1997). Some nations have goals in the execution of their public projects. Public projects are a common trust and just as any other projects there should be parameters to measure their success. Literature position indicates some goals or strategies of some countries to integrate developmental agenda into their public project implementation. Some goals or measures of success on a public project include but are not limited to (Wells, 1986; Masterman, 1992; Anyaegbunam, 2002; PPA, 2007; Park et al., 2012):

- 1. Project implementation at least or budgeted cost,
- 2. Project implementation at least or budgeted time
- 3. Project implementation to meet agreed or expected quality considerations
- 4. Transparency and accountability
- 5. Project implementation to promote technology transfer to nationals
- 6. Project implementation to generate employment opportunities for nationals
- 7. Project implementation in such a way as not to affect health and safety and the environment or ecosystem, or project implementation using the principle of sustainability
- 8. Poverty alleviation and other socio economic goals

The first three goals or objectives are traditional micro-measures of success or project performance and are sometimes called the iron triangle of cost, time and quality. Pinto and Slevin (1988) equally developed what he termed surrogate measures to determine project success, however some of these measures are limited to the project or are at the project level and are not intertwined with any political or national vision. For some public projects profitability may not be a top requirement. Park et al. (2012) explained that in some international development projects, which are examples of public projects, the target or driver of the project might not be profitability but poverty reduction. Forrer et al (2010) provided an analytical framework in which the use of public sector requirements of efficiency, effectiveness and equity. Forrer et al. (2010) also added accountability as a requirement in modeling the procurement of public projects.

The corruption proneness being reported or assessed by such organizations as Transparency International and other multilateral institutions is not just limited to the procurement of services but also the procurement of tangible infrastructure projects (Transparency International, 2010). Thus any attempt to improve the welfare of the citizens of a nation will involve efforts directed at executing their public projects efficiently and in line with their national goals and ethos. Logically, some of these measures can be regarded as critical success factors (CSFs) in public project implementation. CSFs can be process or project related and they can be at project or organizational or at both levels concurrently. The measures of the success or performance of public projects may then be local measures to the project or measures that go beyond the immediate. Knowing and keeping to CSFs will improve organizational performance (Russell, 2008).

Jefferies et al. (2002) agreed that Rockart and the Sloan School of Management developed the concept of CSFs. The concept of CSFs was first developed by Rockart (1979). Rockart (1979) saw CSFs as those areas 'in which, results if they are satisfactory, will ensure competitive performance for the organisation'. Yang et al. (2009), while quoting Seraph et al. (1989), views CSFs as 'those critical areas of managerial planning and action that must be practised in order to achieve effectiveness'. The implication is that CSFs are related to good outcomes for an organisation that will help organisational survival and performance. On the project level they are factors that enhance project performance. According to Russell (2008), an understanding of CSFs may assist business executives in improving their processes so as to reduce the cost of project failure. The concept of CSFs has been applied as a management measure in a number of sectors. Thus, there have been attempts to apply this same concept to construction management. The concept of the CSFs thus cuts across different fields of human endeavour (Yu et al., 2006; Omran et al., 2010; Ansarinejad et al., 2011) where process improvement is desired. According to Zhang (2005), the identification of CSFs will help in the efficient allocation of limited resources. CSFs can either be at the project level or the oganisational level. Additionally, CSFs according to Yu et al (2006) can be used as a template and checklist for future projects. The goal of CSFs is to improve ultimately organisational or process performance. CSFs on projects have attracted the attention of researchers and practitioners. How are Nigeria's public projects assessed with respect to CSFs or deliverables or goals in project implementation?

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Ogunlana (2006) says government especially in participative democracies is about people. Hence all activities of government even in project execution should be directed to protecting the common good of the citizens. This study thus investigates the perceptions of a critical sector among immediate project participants – client organizations and consulting organizations- regarding public project implementation. In the first instance, these two sets of organisations have experience of construction procurement. It is expected that the views of these organizations can shape the formulation and success of implementation of government public project procurement policies. It is also in the context of a previous finding that the failure of some past public projects had been due to the failure of the government in carrying along the host community in the project implementation (The Guardian., 2002). Stakeholder integration and management, which have been identified as necessary to the success of projects, have been lacking. Yet, the necessity of considering the perspective of different stakeholders in performance measurement of projects has been cannot be over-emphasised (El-Gohary, 2006; Yang et al., 2009; Yuan et al, 2010; Forrer et al., 2010; Li et al., 2012). It is in this context that the views and perceptions of client and consulting organizations on what they expected should be priorities in project implementation are located. Perceptions, whether right or wrong, have the possibility of influencing behaviour and determining customer patronage, choices and courses of action (Smith and Nagle, 1995; Dada and Oladokun, 2008). This research thus attempts to rank some of the expected deliverables in public projects and find out whether significant differences exist in the importance rating of those issues by both construction industry clients and consultants. The study should thus contribute to the body of knowledge on expectations of two of the key participant organisations in project delivery. An empirical assessment of their differences or otherwise on the issues will reveal the present state and assist logically in suggesting direction for improvement

METHODOLOGY

This research was conducted through the examination of relevant literature followed by field investigation. Literature was consulted on the micro or traditional measures of project success, which invariably become project goals. Macro measures that go beyond the traditional requirements of time, cost and quality considerations were equally investigated on public projects. The researcher used the three traditional micro measures of time, cost and quality and additional measures adopted from interviews, experience and intent of the Federal Government of Nigeria on some of her goals for public projects (Vision 20:20 Concept: 2007). The researcher's awareness of agitation by local oil communities for technology transfer and government's renewed emphasis on transparency in public projects were also used to obtain factors which respondents were expected to rank. The population for the research consisted of construction industry client and consultant organisations. The client organizations were either from the public or private sector. The public sector clients included ministries, departments or agencies at either the federal, state or local government levels. The consultant organizations were consultants in the built environment. A set of 155 questionnaires were administered through purposive and snowballing techniques on the construction industry clients and consulting organizations located in at least thirteen states of Nigeria. The questionnaires were administered through purposive and snowballing techniques. The use of these non-probabilistic methods was due to a lack of reliable and comprehensive database of the respondent organizations. The use of such methods has found application in construction or project management research, as it has been opined that in some instances such methods are the only practical way of getting data on a subject matter (Kidder, 1981; Li et al., 2005). 94 % of the respondent organisations that identified their locations were drawn from thirteen states of the federation and Abuja, the federal capital territory. Construction industry professionals in the respective organizations supplied the needed information on behalf of the organizations. The professionals were any of the following: architects, builders, engineers, town-planners, estate surveyors, quantity surveyors and land surveyors.

The questionnaire sought to know the professional affiliation of the respondents that were filling out the questionnaire on behalf of the respective

organizations. The questionnaire also sought to know the head office locations of the organizations, the professional affiliations of respondents with their grades of membership, their years of experience, the experience of their organization in construction commissioning, The questionnaire further asked them to rank in the order of importance their expected issues of emphasis in public sector project implementation. Rank '1' was the highest while '6' was the least among the six issues identified. The issues were: project completion at the least/budgeted cost, project completion at the least/budgeted time, project completion to agreed quality expectations, project completion enhancing transparency and accountability to the electorate, project implementation for prestige effect or status symbol. Respondents were also given opportunity to add to the issues for ranking if they had such issues. The level of significance for statistical testing was set at 5%.

ANALYSIS, RESULTS AND DISCUSSIONS

Lagos State houses the head offices of the highest number of the organizations (with a frequency of 46 which translated to 69.7%) for the opinion survey instrument. Ondo, Kwara, Kogi, Anambra, and Abia states and Abuja each houses 1(1.5%). Enugu state houses 4 (6%) respondent organizations and Oyo, Enugu and Ekiti states house 2 (3%) each of the projects. Head office locations showing states were not indicated by five respondents (7.6%). For the observation that Lagos State houses the head offices of the highest number of respondents, the possible explanation is that Lagos remains the commercial nerve centre of Nigeria. Lagos state used to house the capital city of the Federal Government of Nigeria until 1991 when the seat of Government was moved to Abuja. The nature of construction business where a building product does not necessarily have to be produced in the head office is another possible explanation. Construction products by their nature are immobile, but as far as location is concerned, they can be dispersed and scattered in different geographical locations. It therefore implies that the head office location of the project participants does not in reality signal a delimitation of their projects to such locations.

Descriptive Data Analysis and Results

Table 1 shows the response rate to the questionnaire.

Questionnaire	Number from client org.	% from client org.	Number from consultant org.	% from consultant org.	Total number from both org.	% of total number from both org.
Received	32	49	33	39	65	42
Not received	39	51	51	61	90	58
Total	71	100	84	100	155	100

Table 1: Response Rate to the Survey Instrument

Org. = organisation

Table 1 shows that the response rate by the client organizations to the questionnaire was 49% and that of the consultants' questionnaire was 39%. The aggregated response rate was 42%. Table 1 shows that the response rate by the client organizations to the questionnaire was 49% and that of the consultants' questionnaire was 39%. The aggregated response rate was 42%.

Table 2 shows the classification of respondent organizations used in the study.

Table 2: Organisational Classification of Respondents to the Survey Instrument

Group	Frequency	Percentage		
Consultant	33	50.77		
Client	32	49.23		
Total	65	100		

Consultant organizations represented 33 (50.77%) of respondents while client organizations were 32 (49.23%). Table 3 shows the professional affiliation of respondents that completed the questionnaire on behalf of their respective organizations.

Professionals	NCL	PCL	NCS	PCS	NTOT	PTOT
Architect	3	9.40	7	21.20	10	15.40
Builder	12	37.50	3	9.10	15	23.04
Civil/structural engineers	6	18.80	6	18.20	12	18.46
Mechanical Engineers	2	6.30	2	6.10	4	6.15
Estate surveyors	3	9.40	7	21.20	10	15.40
Quantity surveyors	4	12.50	6	18.20	10	15.40
Dual or more professions	2	6.30	2	6.10	4	6.15
Total	32	100	33	100	65	100

Table 3: Professional Affiliations of Respondents

NCL = Number of client organizations; PCL = % of client organizations; NCS = Number of consultant organizations; PCS = % of consultant organizations; NTOT = Total number in both organizations; PTOT = % of total number; HND = Higher National Diploma.

The second, fourth and sixth columns of Table 3 indicate the number of respondents while the third, fifth and seventh columns respectively indicate the associated percentages with respect to the total for that group. The table indicates that architects dominated the representatives of respondents that completed the supplied information for consultant organizations. For client organizations, civil/structural engineers dominated.

Table 4 shows the highest academic qualifications of construction industry professionals who completed the questionnaire on behalf of their organizations.

Qualification	NCL	PCL	NCS	PCS	NTOT	PTOT
Masters	6	18.70	8	24.20	14	21.5
Bachelors	18	56.30	11	33.30	29	44.60
HND	8	25.00	12	36.40	20	30.80
Not indicated	-	-	2	6.00	2	3.08
Total	32	100.00	33	100.00	65	100.00

Table 4: Highest Academic Qualifications of Respondents

NCL = Number of client organizations; PCL = % of client organizations; NCS = Number of consultant organizations; PCS = % of consultant organizations; NTOT = Total number in both organizations; PTOT = % of total number; HND = Higher National Diploma.

Table 4 indicates that Higher National Diploma holders - 12(36.40%) - dominated the respondents representatives in the consultant group, while bachelor's degree holders dominated in the client group. 14 (21.50%) of individuals who stood for their respondent organisations had master's degree while 29 (44.60%) had the bachelor's degree. 20 (30.80%) had the higher national diploma qualification while 2 (3.08%) did not indicate their highest educational qualification. On the whole, bachelor's degree holders dominated respondents' representatives in the aggregated groupings. The insight that can be gained from the table is that not less than 96.10% of respondents have at least a degree or equivalent qualification. It can be argued that the strength of their understanding and responses could be better guaranteed.

Inferential Analysis and Results

Table 5 shows the analysis of the rankings of each of the expected issues of emphasis on public sector projects. The lower the computed mean rank from Mann Whitney-U analysis the higher the ranking assigned in the table, in order of importance. The aggregated ranks for the two groups on each item are also shown.

Issue or measure	Clients' MR	Clients' Rank	Consultants' MR	Consultants' rank	Aggregated MR	Aggregated rank
TRANACCO	30.81	1	35.12	6	32.97	1
EXPTIME	31.98	5	33.98	5	32.98	2
PRESTIGE	32.45	3	33.53	4	32.99	3
TECHTRAN	32.88	4	33.12	3	33.00	4
EXPQUAL	33.56	5	32.45	2	33.01	5
EXPCOST	36.31	6	29.79	1	33.05	6

Table 5: Ranking by Respondents of Expected Issues of Emphasis in Public Projects

MR = Computed mean rank from Mann Whitney-U analysis; EXPCOST = Expected cost; EXPTIME = expected time; EXPQUAL = Expected quality; TRANACCO = Transparency and accountability consideration; TECHTRAN= Technology transfer to Nigerians

Table 5 indicates that the mean sum of ranks for client organizations had a highest value of 35.12 and the least absolute value of 27.79. Equally,

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mean sum of ranks for consultant organizations had a highest value of 36.31 and the least absolute value of 30.81. The first ranking is assigned to the issue with the least mean sum of ranks. The results further indicate that while consulting organizations ranked 'project meeting expected cost or being completed at the least cost' as the most important expectation in public sector projects, clients ranked this issue least. While consultants ranked 'project meeting or exceeding quality expectations' second, clients ranked it fifth. The least important to consulting organizations was 'transparency and accountability to the electorate'.

Table 5 further reveals that client organizations rank issues in an inverse direction to consulting organizations. The aggregated ranking shows however that transparency and accountability requirements rank highest while cost expectations ranks least. However the differences in rankings of the two groups need to be statistically investigated.

The following null and alternative hypotheses were thus postulated:

Null Hypothesis (H_0) : There is no significant difference between client and consultant organizations in their ranking of expected deliverables or priorities in public project implementation Alternative Hypothesis (H_1) : There is significant difference between client and consultant organizations in their ranking of expected deliverables or priorities in public project implementation

The testing of these hypotheses was done through the use of the Mann Whitney-U analysis. The Mann Whitney-U analysis is a non-parametric equivalent of the students-t test (Levin, 1987; Kinnear and Gray, 2000; Gupta, 2001). The analysis is suitable for use in this research. Two groups are being compared here and the scales used are ordinal. Table 6 shows the edited output of the results.

lecuo	MPCS	epce	MPCI	SPCI	Lhvoluo	Zvoluo	P voluo	Sig
15500	WINCS	SRUS	MRGL	SKUL	0-value	Z-value	F-value	Sig.
TRANNACCO	35.12	1159.00	30.81	986.00	458	-0.944	0.345	NS
EXPTIME	33.98	1121.50	31.98	1023.50	493	-0.446	0.656	NS
PRESTIGE	33.53	1106.50	32.45	1038.5	510.50	-0.241	0.809	NS
TECHTRAN	33.12	1093.00	32.88	1052.00	524.00	-0.053	0.958	NS
EXPQUAL	32.45	1071.00	33.56	1074.00	510	-0.300	0.764	NS
EXPCOST	29.79	983.00	36.31	1162.00	422.00	-1.509	0.131	NS

Table 6: Mann Whitney-U Analysis of Expected Issues of Emphasis by the Groups

RG = Respondent group; CS = consultant; CL = client; MR = mean rank; SOR = sum of ranks; Sig = significance; NS = not significant.

Table 6 shows the mean ranks and mean sum of ranks, the U-values, the Z values and the probability values for the issues used for Mann Whitney –U analysis. The Mann Whitney-U values can be approximated to Z values (Gupta, 2001). All the U and Z values in Table 6 indicate that the results are not significant. Alternatively the probability values (p-values) could be examined for decision making according to Asika (1991) and Kinnear and Gray (2000). In Table 6 all the p-values are less than the set level of statistical significance (5%). The decision is thus to accept the null hypothesis. It is thus concluded that there are no significant differences in rankings of the respective expected issues of emphasis in public project implementation.

Discussion

The results of the descriptive analysis of rankings done by respondents indicate that while consulting organizations ranked 'project meeting expected cost or being completed at the least cost' as the most important expectation in public sector projects, clients ranked the issue least. While consultants ranked 'project meeting or exceeding quality expectations' second, clients ranked it fifth. The least important to consulting organizations was 'transparency and accountability to the electorate'. Client organizations seemed to be more conscious of transparency and accountability expectations on public projects while consulting organizations were more conscious of project completion at least or budgeted cost. This conveys the impression that it is not just the final cost at which a public project is executed that matters so much to client organizations rather that every amount spent on the

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project could or should be accounted for. Table 2 further reveals that client organizations rank issues in an inverse direction to consulting organizations. This may thus imply that the business philosophy of the client may affect their ranking. This development may however warrant more examination in future works.

The inferential analysis indicates that the two groups -client and consulting organizations- agree on the issues. Their rankings and views statistically are not divergent but homogenous. Perhaps one possible rationalization for this development could be that the degree of interaction among clients and consultants starts right from the design level of the projects. Also, apart from professional fees charged by and paid to consultants, they see themselves as client's representatives. It may therefore not come as a surprise to see concurrence in their rankings of expected issues or deliverables in public project implementation. It may equally be rationalized that the greater the interaction between the two groups, the greater their understanding and ability to see through each other's eyes. Another possible reason is that consultants receive their brief from the clients, and as such consultants can get used to client expectations. This is an issue in stakeholder management and consensus building.

The outcome of this research is similar to the one conducted by Dada (2007) to examine the perceptions of consultants and clients' organisations on their expectations for public project implementation. Even though the present study focuses on client and consulting organizations' views on public projects, it is interesting that as in the results of Dada (2007) there are no significant differences in expectations of the two respondent groups on public projects. The policy implication of this research finding is that since the views of the two groups -clients and consultant organizations- are homogenous, intervention programs for the execution of public projects when hinged on the above areas of emphasis, should logically meet with minimal or no resistance. It should also be possible to evolve participative project implementation strategies to avoid the reasons adduced to have contributed to the failure of many public projects (The Guardian, 2002). The rankings or the issues are also possible measures on which the performance of public projects executed in the past can be gauged. The measures can be used in analysing the potential worth, contribution and utility of planned future projects. One limitation to the use of the results of this work however

is the extent of generalisability. This is because of the sampling method used. The results of the work are however useful and indicative and can lend direction to future research. In environments where data are collected using probabilistic means, the results can be subject to greater level of application and generalisability.

CONCLUSIONS AND RECOMMENDATIONS

The study set out to investigate the priorities attached to some success factors or deliverables in public sector project implementation. The perspectives of client and consulting organizations were investigated. The results indicate that while consulting organizations ranked 'project meeting expected cost or being completed at the least/budgeted cost' as the most important expectation in public sector projects, clients ranked this issue least. The most important issue to clients was 'transparency and accountability to the electorate'; this was however the least important to consulting organizations. However there were no statistical significant differences in those rankings. It is recommended that all stakeholders in public sector project implementation should take advantage of homogeneity of expectations in evolving and implementing strategies for improvement and innovation in public sector project procurement. A research of this nature can be conducted in other developing countries that still have critical housing and infrastructure to provide their nationals.

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