



Impact of Contractors' Financial Capability on Construction Project Delivery in Nigeria

Zubair, Ahmed * & Ataguba, Joseph Obaja

Department of Quantity Surveying, Federal Polytechnic Idah, Kogi State, Nigeria
Department of Estate Management, Federal polytechnic Idah, Kogi State, Nigeria

ABSTRACT

Analysis of financial strength is a criteria that indicate the likelihood of contractors' capability and therefore for a major criterion for evaluating construction contractors' during prequalification and tender evaluation. The purpose of this study is to assess the impact of contractors' financial capability on construction project delivery in Nigeria. Prequalification assessments based on financial reputation and other prequalification of winning contractors' as well as cost data relating to 67 completed building projects were source from clients; consultants and contractors. Tools for data analysis comprised frequency distribution tables, percentile, mean item score and analysis of variance. A further decomposition of financial capability into co – variables revealed that annual turnover, value engineering, and financial prudence, financial stability, credit worthiness, tax status and financial status are among the co – variables that exert strong influence on construction project delivery. The study has clearly shown that contractors' financial reputation is an important criterion for evaluating potential performance of construction contractors' during prequalification and tender evaluation. It is therefore recommended that construction practitioners and clients should only considered financial capability of contractors to determine their level of insolvency more emphasis should be based on technical and managerial capabilities of contractors during prequalification and contract award in Nigeria.

Keywords: contractors', financial capability, construction project delivery.

INTRODUCTION

In addition to a grasp of construction technology, contractors required a working knowledge of construction management skills in order to ensure the delivery of projects within clients objectives through an integrated approach to construction management, contractors are expected to carry out the tasks of project planning, design and construction (Hendrickson and Au 2000); in addition to these they are expected to supervise subcontractors and suppliers of construction materials to meet the total quality scheme of clients. In essence, the management of construction process demand financial stability on the part of contractors, phenomenon which has been adjudged to be limited among contractors in Nigeria. Construction industry (Ajayi, Ogunsanmi, Ajayi and ofilli, 2010). The three indicator of project delivery have been identified by Hatush and Skitmore (1997) and Huang (2011) among other authors to include cost, time and quality. In addition to other prequalification data of managerial capability, technical competence, quality of past performance, and health safety and environmental records, it is expected that the performance of projects is correlated with the financial capability of a contractor. Mansfield ugwu, and Doran (1994) have identified cost over – runs as one of the problems associated with poor performance of construction projects. It is against this backdrop that this study is aimed at identified those co – variables of contractors' financial capability which exert moderate impact on construction project delivery in Nigeria. Specific objective for the achievement of this aim include. To assess the impact of contractors' financial capability on construction project delivery in Nigeria. The significant of this study is borne out of the need to identify those specific financial capability factors which when prudently harnessed by a contractor shall lead to successful completion of project within the budget.



REVIEW OF LITERATURE

Contractors' financial capability

The financial stability of a contractor determines whether they will stand or fall and therefore feature prominently on the list of many author (Russell, 1992). A financially distressed contractor is more likely to have difficulties in obtaining credit and new business opportunities. According to Mangitung and Emsley (2002), the evaluation of financial soundness emphasizes financial historical Data in order to obtain a picture of financial stability over a certain period of time rather than the current financial position. The detailed measurement and financial analysis of contractors carried out by clients involve the assessment of the contractor's past, present and anticipated future financial condition. The objective, according to Hastush and Skitmore (1997a), is to identify any weakness in contractor's financial health that could lead to future problems and to determine any strength the firm might capitalize upon. The financial status of the contractor is used as a criterion to cover aspects such as the financial stability, the credit rating, banking arrangements and bonding as well as the financial capacity to perform the work (Hastush and Skitmore, 1997b).

The financial stability relates to bank status which gives an indication of the financial management abilities of the contractor and their relationship with a bank that would enable them to obtain the required financing. Credit status is usually collected in the form of credit ratings from subcontractors and suppliers and this measures how promptly contractors pay their bills and their reputation among suppliers and subcontractors. The bonding status also measures the capability of the contractor to get a bond for a certain type and size of project, while published account reports measure the liquidity, efficiency and profitability of the contractor. Alsugair (1999) advise that prequalification formula should be used to determine a contractor's maximum financial capability using financial based data. According to him, a contractor should be disqualified from bidding on a project if the difference between the contractor's maximum financial capability and the volume of uncompleted work is less than the project cost. However in Nigeria, contracting firms submitting information as regard their financial standing are never sincere because of the high rating attached to financial capability criterion by the bureau of public procurement in Nigeria. Therefore wrong information are usually provided by prospective contractors in their audited accounts so that they can be rated high on financial capability criterion during the prequalification assessment. This therefore made individual prequalified to now request for bank reference and turnover history of the firm under consideration. The turnover is a measure of long term capacity and assist in the analysis of the company's activities as well as being a constituent of several performance and stability ratios. However Holt et al (1994) submit that the absence of a standard format in use by referee means that bank and credit references must be evaluated subjectivity. Considering the foregoing therefore it is important to assess the effect of contractor's financial capability on construction projects delivery so that construction professionals and client can determine the importance of this criterion during prequalification assessment and tender evaluation.



Construction Project Delivery

According to Brook (2004), the aim of prequalification is to find a contractor who can simultaneously supply a product for a competitive price and demonstrate:

1. A reputation for good quality workmanship and efficient organization.
2. Timely completion of the project.
3. Vibrant financial capability and sound business record,
4. Skills and expertise suitable for the project in question; and
5. Comprehend the requirement of the scheme in terms of work and the quality expected.

Similarly, Cheung et al (2004) observed that selecting a competent contractor is paramount to successful delivery of construction. In other words, selecting a suitable construction contractor is the panacea for effective project delivery taking into cognizance indices of time, cost, and quality. An implication of these observations is that the competence of any contractor in terms of its technical capability, experience and managerial ability reflects on the performance of the project. Considering this fact, it is important that due care be taken in the selection of contractors for construction project in order to achieve the expected performance of the project in terms of cost, time and quality. Ogunsemi (2002) opined that the feature of project participants as it affects the feature of project performance cannot be overlooked. Moreover, Odusami (2001) observed that contractor selection cannot be solely anchored on objective techniques since project success, or delivery is difficult to define owing to its subjectivity in the context of project delivery the set of three parameters enabling a system to remain in balance include cost, time and quality (Holt et al 1994 and Hendrickson and Au, 2000);

RESEARCH METHOD

The research area comprised two major Nigerian cities: Abuja and Kaduna. These cities were selected because majority of construction practitioners, clients and contractors have their operation office in these two cities. More importantly, Abuja is the seat of government where a lot of development in terms of construction is going on while most of the policy makers also reside in Abuja. Data for the study were sourced mainly from archival materials. Data relating to prequalification assessment of contractors, initial contract sum, planned contract duration, completion cost and actual contract duration of 67 completed building projects were source from consultant quantity surveyors. The data were analyzed with the aid of analysis of variance (ANOVA) to determine the impact of contractors' financial capability on construction project delivery.

RESULTS AND DISCUSSION

Table 1: Below show the summary of the background information of respondents. It is observed from the table that 26.9% of the respondents to have post graduate qualifications while about 37.31% have bachelor of science and 31.34% possess higher national diploma in their various fields of study. Furthermore about 67.16% of the respondents are members of their respective professional bodies, 22.39% and 10.45% of them are also associate and graduate/probationer members of their professional bodies respectively. Moreover the respondents have an average of about 21.02 years of experience in the construction industry and have also participated in about 10 prequalification exercises on the average within the



last two years, while the average value of project executed in the last financial year by the respondent is put at 55.57m. based on the above analysis, therefore, it can be concluded that the data provided by the respondents can be relied upon for the purpose of analysis.

Table 1: Background information about respondents

Category	Classification	Frequency	Percentage.
Academic Qualification of respondents	MSc / M Tech / M Eng	3	4.48
	PGD	18	26.9.
	BSc / B Tech / B Eng	25	37.31.
	HND	21	31.34.
	Total	67	100.00,
Professional affiliation of respondents	Architect	20	29.85.
	Builder	5	7.46.
	Engineer	15	22.39.
	Quantity Surveyor	27	40.30.
	Total	67	100.00.
Membership of professional bodies.	NIA	20	29.85.
	NIOB	5	7.46.
	NIQS	27	22.39.
Cadre of professional membership	member	45	67.16.
	Associate	15	22.39.
	Graduate/probationer	7	10.45.
	Total	67	100.00.
Type of organization firm.	Contracting	12	17.91.
	Consulting	28	41.79.
	Client	27	40.30.
Years of experience in construction	1 -10	20	29.85.
	11 – 20	5	7.46.
	21 – 30	27	40.30.
	31 - 40	15	22.39.
	Total	67	100.00
Mean 21.02.			
No of prequalification over the last two Years.	1 – 5	15	22.39.
	6 - 15	20	29.85.
	11 – 15	19	28.36.
	15 – 20	13	19.46.
	Total	67	100.00.
Mean 10.14.			
Total value of project executed within The past two years.	1 – 20	12	17.91.
	21 – 40	10	14.93.
	41 - 60	14	20.90.
	61 - 80	11	16.42.
	81 – 100	20	29.85.
Total	67	100.00.	
Mean 55.57m.			



Table 2: Respondents ranking of the variables of contractors' financial capability.

Criteria	Clients' Mean	Rank	Consultants Mean	Rank	Contractors Mean	Rank	Overall Mean	Rank	F – Stat	Level of Sign
Financial Stability.	4.36	1	4.65	1	4.34	1	4.45	1	6.537	0.001.*
Financial Status.	4.15	2	4.32	2	4.20	2	4.22	2	1.366	0.250.
Banking Capability	4.00	3	4.22	3	4.16	3	4.13	3	1.874	0.161.
Credit rating	3.92	4	4.11	4	3.88	4	3.97	4	3.411	0.036**.

- Significant at $P < 0.001$
- ** Significant at $P < 0.05$.

The analysis of contractors' rating in the variables of financial capabilities is shown in table 2: above. It is observed from the result that contractors' financial stability ranked 1st under the ranking of the three categories of respondents, and in most cases the certified audited account of past financial years, banks statement of account and references are usually requested from the contractors' during prequalification exercises in order to determine the true picture of the financial stability of the firm. The p – value of 0.001 also revealed that there is no agreement among the clients, consultants and contractors in the ranking of this factor. Considered also important by the respondents most especially the clients and consultants is the financial status of the contractors. .this according to some of the clients and consultants interviewed is very important because they would want to confirm if the contractor is financial buoyant so as to be sure that if eventually the contractor is awarded the project and the statutory minimum of 25% of the contract sum released to him as mobilization. It is not used in paying backlog of debts as is usually the case with most Nigerian contractors. Table 3: is the individual and group mean of each variable (sub criteria) of contractors' financial reputation and their impact on cost performance of project in descending order, value engineering and financial prudence was ranked first as exerting high impact on cost performance of projects following a group mean score of 3.79 and p – value of 0.074. Ranked second in table (3) is financial stability of the contracting organization which also exerts a higher degree of impact on project costs.

Table (3) impact analysis of variables of contractors' financial reputation on cost performance of project.

Variables of Financial Reputation.	Contractor	Mean Consultant	Item Score Client	Group Mean	Rank	F Ratio	P Value.
Value engineering and Financial prudence.	3.73	4.05	3.59	3.79	1	3.238	0.074.
Financial stability.	3.89	3.82	3.59	3.77	2	2.699	0.108.
.Tax status	3.87	3.16	3.82	3.62	3	6.035	0.015*
Annual turnover	3.62	4.20	3.00	3.61	4	1.805	0.221
Financial status	3.58	3.14	3.39	3.37	5	5.378	0.021**
Credit worthiness	3.29	3.13	3.39	3.27	6	8.556	0.005*

- Significant at $P < 0.05$



Although tax status, financial status as captured from book of accounts, and credit worthiness were ranked third, fifth and sixth in table (3) $p < 0.05$ reported against these variables implies the lack of significant consensus in their ranking across the three classes respondents. Reliably ranked fourth in the order of sub – criteria impacting upon cost performance of project is the annual turnover which achieved a mean of 3.61 and p – value of 0.221. In spite of these variations, a common feature of the third to sixth sub variable is that they exert moderate impact on cost performance of projects. Impact of variables of financial reputation on timely completion of projects Captured in table (4) is the individual and group mean of each variables (sub – criteria) of contractors’ financial reputation and their ranking in order of impact they exert on timely completion of projects. Ranked first among these sub – criteria is financial status with group mean of 3.45 and p – value of 0.026 which affirms the moderate impact it exerts on timely completion of project save for the divergence over the importance which respondents attach to its ability to impact on project time. Ranked second, third, fourth, and sixth are financial stability, annual turnover, tax status and credit worthiness all exhibiting $p < 0.05$ implying a statistically significant variation of response among the respondents.

Table (4): Impact analysis of variables of contractor’s financial reputation on timely completion of projects.

Variables of Financial Reputation Value.	Mean item score			Group Client	Rank Mean	F	P Ratio
	Contractor	Consultant					
Financial status	3.47	3.48	3.39	3.45	1	4.986	0.026*
Financial stability	3.31	3.11	3.59	3.34	2	4.368	0.036*
Annual turnover	3.00	3.52	3.20	3.24	3	11.473	0.002**
Tax status	3.00	2.95	3.59	3.18	4	12.582	0.002*
Value engineering and financial prudence	2.98	2.80	3.20	2.99	5	1.944	0.197
Credit worthiness	2.73	2.91	3.20	2.95	6	10.517	0.003*

- Significant at $P < 0.05$.

Ranked fifth in table (4) is value engineering and financial prudence following a mean score of 2.99 and p – value of 0.197 implying that there is no statistically significant variation in the respondent’s assessment of the impact of this criterion on timely completion of projects. This implies that there is a consensus among respondents that value engineering and financial prudence exert moderate impact on timely completion of projects. Impact of variables of financial reputation on Quality of projects delivered. Captured in table (5) is the individual and group mean of each variable (sub – criteria) of contractors’ financial reputation and their ranking in order of impact they exert on quality of projects delivered. Ranked first among these sub – criteria is financial status with a group mean of 3.41 and p – value of 0.001 which affirms the moderate impact it exerts on quality of project delivered. Ranked second is tax status which achieved a mean of 3.06 and a p – value of 0.045 which also affirms the moderate impact it exert on quality of project delivered ranked third, fourth, and sixth financial stability, credit worthiness, value engineering and financial prudence



and annual turnover all exhibiting $p > 0.05$ implying no statistically significant variation of response among the respondents.

Table (5) impact analysis of variables of contractors' financial reputation on quality of project delivered.

Variables of financial Reputation	Mean item score			Group Mean	Rank	F Ratio	P Value.
	Contractor	Consultant	Client				
Financial status	3.29	3.36	3.59	3.41	1	13.897	0.001*
Tax status	3.04	2.55	3.59	3.06	2	4.006	0.045*
Financial stability	2.87	2.86	3.39	3.04	3	1.766	0.229.
Credit worthiness	3.02	2.84	3.00	2.95	4	1.890	0.206.
Value engineering and Financial prudence	2.73	2.41	3.00	2.71	5	0.937	0.489.
Annual turnover	2.31	2.50	3.00	2.60	6	0.863	0.525.

- Significant at $p < 0.05$.

Inference can be drawn from table (5) that all the variables of contractors' financial reputation exert moderate impact on quality of project delivered.

CONCLUSIONS

This study has clearly shown the contractors' financial capability is an important criterion for evaluating potential performance of construction contractor's prequalification and tender evaluation. However it was revealed that contractors' financial capability exert moderate impact on cost, time and quality performance on project. This therefore corroborates the fact that contractors' executing public projects in Nigeria no longer face cash flow problems as a result of the due process policy in public procurement of the federal government of Nigeria. in spite of this it is important to assess the financial capability of prospective contractors' to determine their financial status so that the client will have the assurance that the mobilization paid to the contractors' are secured considering the foregoing, it is therefore recommended that construction practitioners and clients should only consider financial capability of contractors to determine their level of insolvency while more emphasis should be placed on technical and management capabilities of contractors during prequalification and contract award

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