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STRATEGIES FOR A MEDIUM SIZED CONSTRUCTION COMPANIES TO SURVIVE THE CURRENT ECONOMIC CONDITIONS IN NIGERIA

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ABSTRACT

Medium sized Construction companies in Nigeria area mostly involved both in the building of new commercial and domestic buildings. In spite of the last five years of economic downturn, signs of some medium size companies recovering from the economic recession seem bright. These companies in Nigeria are currently exploring opportunities to grow their businesses and explore competitive advantages over others by studying and improving their company's bidding efficiency, strategies for selecting business, bid for mark-up strategies, and improvement of cash flow. The impact of new technologies like BIM, e-tendering, conditions of contracts and claims management strategies are used to take advantage of some other companies that do not have such strategy. Monte Carlo solution, swot analysis and average bid methods as highlighted are also recommended as strategies to achieve a competitive bidding practice for the medium sized construction company. This study reviewed strategies that are being employed by medium sized construction in Nigeria for improving their company's bidding efficiency and successful chances. New and existing strategies were also carefully scrutinized.

Keywords- *Bidding, Mark-up, Cashflows, Claims Management, Competitive Average.*

I. LITERATURE REVIEW

For the construction industry, sealed-bid auctions are contractors' main method of acquiring work. Part of this process involves formulating a bid that incorporates the cost of construction and its mark-up; accounting for the risk and profit (Dyer and Kagel, 1996). However, formulating an effective bid is complex and requires an accurate estimate of the construction cost and a suitable mark-up, considering the competitors' prices (de Neufville et al., 1977). As summarized by De Neufville et al (1977), the outcome of submitting an uncompetitive bid results is failure to attain the contract as well as forfeiting the time and cost of preparing the bid proposal. Also, submitting a highly competitive bid may result in unrealized profit. Part of this dilemma is as a result of inexact science of forecasting prices based on historical data and limited information (Flanagan and Norman, 1983).

II. COMPETITIVE BIDDING

In competitive tendering, bidding is a complex decision making process full of uncertainties, it contains two successive phases: Bidding and Pricing decision-making. On the other hand, pricing decision-making is obtained when the contractor decided to bid after a series of calculations and evaluation analyses, determining the quotation process starting from the basic goal, in order to win the bidding exercise (Yu, 2009). Bidding quotation includes the following three aspects: The nature of the project, determining the price of the bidding and quotation, and the bidding strategy and skill.

Bidding exercise forms the main foundation of contract negotiation. An approach to bidding determines if there will be profit or loss from a project, the level of risk involved in the project, and the flexibility of the project when there is change in the project requirements. A building project can reserve claim opportunity, but the damage of bidding price on the project is irreversible (Cai et al., 2010).

III. FACTORS AFFECTING BIDDING EFFICIENCY

Among the factors to be considered in bid price estimation, Runeson and Skitmore (1999) said that market conditions have a profound effect on the bidder's behavior and the price level. Investigating the effects of market conditions on construction bidders, Runeson (1988) developed a price-level forecasting model based on a market conditions index which reflects the degree of competition and capacity utilization. Also, Chan et al. (1996) in their analysis of changes in profits of construction firms considered market conditions as a function of price indexes,

GDP and inflation while Oo et al (2010) in their analysis of contractors' mark-up behavior, noted that market conditions was determined by the need for work.

Furthermore, the microeconomic forces of supply and demand have been investigated to be a suitable explanation for the changes in the bid price level (Skitmore et al., 2006; Runeson and Skitmore, 1999). Skitmore (1987) defined supply as the availability of the contractors while de Neufville et al. (1977) defined demand as the level of contractor's activity. Much research has been performed to date to describe the effect of the number of competitors on the bid price level, and all have suggested that the number of competitors has a direct effect on the bid price level (Carr, 1983; Brannman et el., 1987; and Kagel et al., 1995).

IV. INFORMATION FEEDBACKS ON BIDDING

Competitive bidding propels contractor to provide reduced bid prices that will suit the financial and construction need of the customer (Drew and Skitmore, 1997). Runeson (2000) noted that a bid offer must be equal to or above the minimum price at which a contractor is prepared to undertake. Also, considering the acceptable possibilities of profit without unacceptable risk of loss, bids at marginal differences, above or below, have also been considered good. Contractors adopt various strategies to enhance their chances of winning projects. Their experiences in the past bidding competitions play a role in offering competitive bid prices.

From the analysis on bidding data of building projects, Fu et al. (2004) found out that experienced bidders who bid frequently are more competitive than bidders who bid occasionally, while experimental learning in recurrent bidding exercise plays a key role. In other words, bidding information feedback conditions have been shown to affect the bidder's competitiveness to different degrees in sealed bid auctions, whereby affecting the revenues for those accepted bids to buy or sell (Isaac and Walker 1985; Dufwenberg and Gneezy 2002; Englbrecht-wiggans and Katok 2008). It is always important to consider and study the following: i]the changes in bidding trend over time ii] the effects of bidding feedback information on bidders' competitiveness in bidding. The study provides an insight into changes in the price of building works associated with the release of bidding feedback information.

V. EFFECTS OF INFORMATION FEEDBACK ON BIDDING IN CONSTRUCTION BIDDING

Construction bidding information can be categorized into public information and feedback information. Public information relates to publicly available information such as project type and size, project location and customer's identity whereas feedback information refers to the information provided at the end of the bidding competitions. The level of bidding feedback information given to contractors varies depending on the customer's procurement procedure. Bidding feedback information is used for four (4) different purposes:

- For deciding on whether or not to bid for future projects
- For determining mark-up for future projects
- For analyzing their bidding performance; and
- For analyzing bidding performance of their competitors.

Public information can be categorized as either a cost estimate made available by customer or as a project information such as geological data or proprietary information. First-price sealed bid auctions (highest bidder wins at the highest bid price) encourages bidders bidding aggressively when public information is released; this increases the seller's profit. Adjusting bid prices to a more accurate cost estimate shows that bidders have a strong intent of winning a bid. Lowering bid prices also increases their likelihood of winning. Bidders rely on their experiences through recurrent bidding when there is no feedback information (Neugebauer and Perote , 2008). Full information feedback condition as confirmed by Isaac and walker (1985) produces lower bid prices.

VI. COMPETITIVE BIDDING STRATEGY FOR COMPETITIVE ADVANTAGE

Low bidding: there is a possibility of awarding contract to the lowest bidder who has submitted his bid in accordance or deliberately in desperation to get the contract. Thus most of the work in the owners and contractors detriment as often it promotes disputes, cost overrun and delay scheduled.

Average bid method- This obtain where the contract if awarded to the contractor whose price is closest to the average good bids submitted. This method can be analyzed through mathematical montecarlo solution and SWOT. The lower bid model is analyzed by Friedman's model. Generally the average bid model has become more popular than the lower bid.

The advantage of the average bid method from an owners perspective is that is safeguards against fringing a construction contract for an unrealistic low bid price that almost certainly will lead to adversarial relationship during construction (Grogan, 1992). Similarly contractors are protected from lowering a bid in gross mistake or oversight. The drawback of average bid method is that it does not necessarily promote price competition that leads to lower cost for the owner but it does not discourage innovation, technology development and adaptation and cost reduction.

Mark-up in Bidding

Bidders' Mark-Up Decision

A typical bid mark-up consists of profit, general overheads and contingency (Kerzner, 2005). The decision to balance all three elements is complex, especially when uncertainty is involved. Li and Love (1999) suggests that mark-up decisions are based on past experience and unstructured problem solving activities.

According to Kim et al (2004), Mark-up is referred as the ratio of project profit and risk premium which accounts for the cost. Profit for owners can be known as allowed profit, while profit for the bidders is known as calculated profit. Risk premium for contractors is an undetermined number. There may be residual risk premium reserve If all the expected risk did not occur, this part of the surplus and profit plan together becomes a surplus. However, if the risk premium is underestimated, the profits are used to subsidize the risk. During bidding, risk premium is closely linked to the contractor whether he won the bid and a high profit margin after the bidding.

Price = Cost estimate price x (1 + Mark-up)

$$\text{Mark-up} = \frac{\text{bidding-cost estimate price}}{\text{Cost estimate price}}$$

Factors Influencing Mark-Up

Factors influencing mark-up are divided into three categories according to the characteristics of the project submitted for mark-up: Environmental factors, factors of enterprises and factors of project, and information feedback (Setyawati et al. 2002). In the above influencing factors; some factors are quantifiable factors, such as the demand for funds, duration, management fees, and the rate of return, while some of these factors are difficult to quantify, such as the location, and quality of workers (He et al., 2012). Thus, rating score method is used to quantify those elements that are not easily quantifiable. Detail of the three factors are expanded below:

- Environmental factors – Geographical factors, economic factors, profitability, place, and market conditions.
- Enterprise factors – Current tasks, future tasks, market share, and Rate of return management experience.
- Project factors – type, owner, risk, duration, and cash flow requires.

VII. EFFECTIVE CASH FLOW MANAGEMENT FOR THE CONSTRUCTION INDUSTRY

A detailed schedule is normally prepared at the inception of any project to keep it on track. Materials are purchased in advance to ensure that there are no material-related delays. (Ashwortk, 2010) From the creation of a project schedule to the daily work of the project managers, every effort is made to steer clear of any possible delays. This method is employed from start to the finish of any given project. Thus, an effectively managed cash flow is one of the critically important factors towards obtaining a successful and a delay-free project (Wiggus R 2000). The time between performance of work and collection defines the cash flow cycle. Construction companies need to ensure timely collection of receivables as well as plan for significant cash expenditures in order to effectively manage cash flows. (Raftery J 1991)

This will allow a company to avoid cash flow-related delays, get the most out of its working capital, and allow the company to weather economic storms more effectively. Below are some of the common factors that lead to cash flow problems:

- Labour-intensive work: At different points in a project, there can be periods when labour costs are inflated due to the nature of the work being done.
- Payments to suppliers and subcontractors can be made before the client pays the contractor so that work is not abandoned.
- Customers may be holding 10 percent retainage but the suppliers will not get 10 percent less than their invoice total and this increase cash demand.
- Acquisitions of new fixed aspects will affect the cash flows.
- When receivables grow old, cash from other projects is tied up satisfying debts.

- Unplanned cash expenditures: Unfavorable legal settlements and tax penalties takes out the working capital from the business operations, and should be considered in any effective planning of cash flow strategy.

The most important aspect of managing cash flow problems is to identify and address them as early as possible. If ignored, they can result in increased interest expense, increased investment of owners' capital, diminished credit ratings, inability to take advantage of new opportunities, and ultimately failure of the business. Although it is not an exact science, proper cash flow planning can help a business to make intelligent decisions regarding budgeting, capital expenditures, financing, compensation and growth. It can also make the company more efficient, and inspire the confidence of bankers, sureties, customers and other business partners, (Ashworth, 2010)

Project planning is fundamental to the task of preparing a cash flow analysis. To project the cash received and cash disbursed, the contractor must have a good understanding of when he or she is going to perform various activities that comprise the project. Billing is based on the completion of different sections of identifiable pieces of a project, and the progress of those pieces should be considered for scheduling cash flows. On the other hand, if billing is at regular monthly or other intervals, it does not make sense to install a very expensive piece of equipment in a job shortly after a requisition cutoff date. To make cash flow forecasts more meaningful and useful, information related to cash flows needs to be integrated with project scheduling, monitoring and performance. The billing schedules and even upcoming major capital outlays such as fixed asset acquisitions should be considered when preparing the job schedule. Evaluation of the cash flow impact on payment terms and retention release provisions should be considered when bidding a job, and any appropriate changes can be negotiated before the contract is signed. Although overbilling can improve cash flow but too much overbilling may be referred as a contractor trying to borrowing from one job to pay for another.

Another important strategy for general contractors is to apply retention to subcontractor payments that correspond to the retention applied by the owner. Failure to do so will inevitably lead to a certain amount of job borrowing. Additionally, when dealing with public contracts, it is safe to inquiry about substituting municipal bonds for retainage. This technique generates interest income which will boost cash flow and net profits, as well as the time it takes to collect billings. Strategies to avoid cash flow delays are as follows:

- Closing out completed projects because by leaving completed jobs open; the contractors leave themselves open to final change orders not being resolved.
- Payment requisition should be made on timely basis.
- It is important to remember than many customers are just as busy as you are, and are faced with the same cash flows issues. Consistent contact and increased pressure on slower-paying customers.
- The effective use of long-term financing strategy. Debt is an effective way of smoothing cash expenditure but it is important to also consider the added cost of interest.
- Leasing, It may be important to lease required equipment rather than purchasing them.
- Access late fees on delayed payments and delinquent change orders.
- One of any company's largest expenditures is the tax bill. Using tax planning techniques such as accelerated depreciation will serve to reduce tax bill and increase cash flows.

VIII. CONSTRUCTION CLAIMS

Causes of Contraction Claims

Construction claims can be caused by a number of factors. Understanding what causes construction claims is the first step in avoiding them. Construction claims occur because of the following (Ashworth, 2010):

- Most delays in construction and completion of the contract, delivery and suppliers of materials and failure to accurately schedule and coordinate the work.
- Request for changes from the owner or internal and external stakeholders
- Changes which occur without the consent of the owner.
- Site conditions which differ from those expected, like weather conditions that makes work becomes impossible to perform.
- Insufficient plans and specifications, i.e. poor management and administration of sites.
- Failure by stakeholder to disclose information which is important to the construction or cooperate with each other.
- Conflicts between those involved in the construction of a project or sudden termination of the contract by the owner or the contractor.

RECOMMENDATIONS FOR SOLVING CONSTRUCTION CLAIMS

Construction claims, and especially those which have resulted in arbitration or litigation are often a costly processes. Customers avoid such expenditures by performing effective risk management and try to avoid construction claims in the first place. Effective risk management for the purpose of avoiding claims involves a cost/benefits analysis at each stage of the construction, (Ashworth, 2010). The realities of the industry and the profit driven bottom line often makes it unrealistic, and not cost effective to take all or even most of the recommended steps for avoiding construction claims.

The best way to ensure that something occurs or does not occur is to put it in the contract agreement. The standard general conditions may not be adequate for various needs. This is particularly true of public entities which have special and diverse needs, and interests.

Clients should try to hire contractors and consultants with whom they have a good relationship, and who have a good reputation in the industry.

Clients should ensure that the contract allows them to have some say in the general contractor's selection of its sub contractors.

Each party to the contract should ensure that they understand their duties and obligations under the contract and that they have the ability to perform these duties and obligations as required by the contract.

Clients should ensure that a project is well planned from the onset to minimize the need for change orders or change directives. Changes to the contract work increase the risk of construction claims and decrease productivity.

Both clients and contractors should do their best to ensure proper management and administration of the project including adequate staffing and co-ordination of the project, and trades.

It may be initially attractive to a party to shift all of the risk in the contract to the other party, for matters such as insufficient plans and specifications, and unexpected site conditions, a contract which is skewed in favour of one party over the other results in a higher chance of dispute and construction claim. A contract that protects the interests of all parties, and which does not include an overly unfair allocation of risk results in a decreased likelihood of construction claims.

Acknowledge and settle claims which have merit at an early stage and ensure always of adequate process for dispute resolution.

IX. CONCLUSION

Competitive Advantage of Medium Sized Companies in Nigeria

Some companies have been lucky to survive and grow even in the harsh weather of business climate as it always get new project it services before completing old ones . Methods used by these company includes: professional enhancement and development to stay atop new and old companies competing by reviewing work patterns among others, these ensures that firm thrives on giving expert opinions, services and consultancy to its clients. The ability of a firm to strategize and identify potential competitor's capacity and competitive state, aids in improving chances of firm's success in bidding process. Building and consolidating positive image and reputation among clients strengthens and/ or builds clients confidence in firm during pre and post construction stages of projects. This has a lasting effect on company's growth, personnel development and an undated information network has an unquantifiable impact on firm's efficiency.

Flexibility in terms of strategic alliance and innovation can induce and/ or aggravate firm's growth and advantages. Key performance indicators in assessing project Progress and in evaluation of performances, when employed can boost a firm's profit margin. The following are strategies that can be employed to improve a firm's chance in a dwindling economy:

i. Utilizing bidding strategies which ranges from low, average bid methods alongside employing Monte Carlo, Friedman and Simulation method to analyze bid for completive advantage
ii. Innovation: Service- prediction innovation, originated innovation, market innovator, process innovation and resource innovation are good types of competition that can be adopted
iii. Time: Drafting updated tools of work and energetic specialists to achieve competitiveness with accurate, fast, effective method of enhancing the bill of quantities which lessen the problems during design, tender and construction supervision of construction projects.
iv. Reducing costs i.e. overhead costs, personnel expense, and maintenance expenses of capital assets to be able to offer lower fees than other consulting firms.
v. Utilizing mode of competition such as cost, quality, time and innovation to assess level of competitiveness.

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