Leveraging Capitalization for Enhanced Project Delivery in the Nigerian Construction Industry: A Sustainable Risk Management Approach

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ABSTRACT
The Nigerian construction industry grapples with challenges such as low profit margins, cost overruns, and project abandonment, necessitating robust risk management strategies. This study investigates the impact of capitalization on sustainable risk management within large construction firms in Nigeria. Data from 198 firms were collected via questionnaires, interviews, and secondary sources, revealing significant benefits of capitalization including increased turnover, risk reduction, and improved image. The findings underscore the importance of integrating risk management evaluation into construction procurement processes to optimize project delivery. This research contributes to the discourse on sustainable development in the construction sector by advocating for strategic capitalization as a means of mitigating risks and enhancing project outcomes.

Keywords: Capitalization, project delivery, risks, risk management, sustainability

INTRODUCTION
Risk management is one of the most critical project management practices to achieve project objectives in terms of time, cost, quality, safety, and sustainability. Risk has become inevitable in construction works due to project complexity, client demand, unstable climatic state, and so on to ensure successful project delivery. Managing risk is, therefore, an integral part of good management, and fundamental to achieving a successful project. Risk management thus provides a structured way of assessing and dealing with future uncertainty. Having ascertained the damage risks could do to construction projects; its proper management is essential to prevent the colossal failure of the projects which could subsequently affect the national economy adversely. The instability of Nigeria's construction sector makes it a threat-prone sector and difficult to predict. There is an inconsistency in the contribution of Nigeria's construction industry to the economy over the years [1]. Against this background, there is a need to examine the structure of contracting firms in Nigeria's industry which are dominated by small-scale operations. Poor record keeping, lack of effective management, lack of entrepreneurial skills, poor cash flow, lack of financial skills, poor annual turnover, weak staff strength, and low equipment capacity are among the factors affecting the indigenous firms' ability to ensure project sustainability and risk control in Nigeria. The aforementioned factors have made it a herculean task for these firms to compete with expatriate firms that have dominated the construction markets in Nigeria. There is a need therefore to assess capitalization as a sustainable means of controlling project risks to improve the industry's output.

LITERATURE REVIEW
Every project aims to meet the satisfaction of the client. Project execution signifies the assemblage of all materials, money, machines, manpower, and management geared towards the goal and desire of the developer, the investor, or the client. Projects' aim can be achieved by fulfilling the project's primary objectives of time, cost, quality, and sustainability [2]. Furthermore, a project has to meet the named...
Every project is time-bound. Projects are cost and quality bound also. The three objectives are connected to each other and thus give rise to sustainability, which is why none of elements should be ignored.

Performance of Construction Firms in Nigeria

All stakeholders in the construction industry must work together to overcome some difficulties. Because of the dispersion of supply chains and the transient connections between principal contractors, suppliers, and subcontractors, the sector is vulnerable to a variety of hazards [3]. The Nigeria Construction Industry on the other hand is characterized by large numbers of small contracting firms and relatively fewer numbers of large contracting firms that carry out a lot of construction work. Most of the work (totaling 235.51 billion USD) was awarded to foreign firms while a total of 68 billion USD, was awarded to local construction firms as stated by [4]. The Construction Industry in Nigeria has quite different characteristics in that they are typified by; a proliferation of small firms that form temporary alliances during the duration of that project; the separation of the design and construction activity; uncertainty due to variable demand, on site construction hampered by inclement weather and the lack of a standard project; fierce competition for work that creates low levels of commercial profitability; hundreds of stakeholders in any one project, many of whom may have conflicting business objectives; and display of considerable resistance to any change in working practices.

Economic Contribution to the national growth

The Construction sector’s share of overall Gross Domestic Product (GDP) has been unstable over a decade.
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There are essentially, three modes of financing construction contracts namely; mobilization fees, bank loans and retained earnings. Most construction works in Nigeria are funded by the clients' personal funds, which provisions are made to contractors in form of mobilization fees. Contractors rarely get bank loans to fund projects and there is low level of savings among the firms from the previous projects to fund new projects. [8], is of the view that accessibility to loan facilities is a key factor for enhancing the structure of indigenous firms in order to compete successfully with the expatriates who have taken over most of the construction activities in Nigeria. He stated, 'It is therefore imperative to create an enabling environment and framework for small-medium enterprises (SMEs), such as indigenous contractors’ accessibility to funds in Nigeria financial system. In addition, payment of mobilization fee to indigenous contractors is also essential as monetary security to ensure more competency, reliability, performance and confidence.'

Consolidation has been internationally recognized all over the world to encourage solid financial base and financial risk reduction.

A merger may be defined as the coming together (i.e. fusion) of two or more existing companies or new companies using the evidence of exchange of shares. Meanwhile sizes of the bodies coming together in the consolidation are essential for the success to be recorded. Following from this, the stipulated fact is that the only legal modes of consolidation allowed are mergers and outright acquisition or takeovers. There is need for Nigerian Construction firms just like its banking sector counterpart to embrace consolidation to achieving the minimum capital base that would ensure more competency, reliability, performance and efficiency [9]. This means that, all construction firms that have other firms as subsidiaries or have common ownership or same mission could merge and thereby have the required financial strength. Consolidation is simply another way of saying survival of the fittest that would give birth to a bigger, more efficient, more reliable, more organized and more skilled industry. Generally, capital is required to support business. But the importance of adequate capital in construction sector cannot be overemphasized. It is an essential element which enhances confidence and permits a construction firm to engage in construction of complex projects and with huge financial outlay. ‘The more capital a company has the more losses it can sustain without going bankrupt. Capital thus provides the measure for the time it has to correct for lapses, internal weakness or negative developments as affirmed by [10]. The large sized and capital, the longer the time a firm has before losses completely erode its capital.” Consolidation is not limited to amount the company operates with. It is a known fact in Nigeria that ‘all’ indigenous firms do fabricate or make up their company’s profile in order to get the job tendered for. Qualified professionals as staff, equipment at the companies’ disposal for the job, previous job executed are among the criteria of selecting a competent contractor. Many firms in Nigeria are default of this if these requirements are properly looked into. Consolidation of these firms would make it possible for these firms to meet the expectation. Consolidation is not a new system to a growing economy. Similar consolidation has taken place in many parts of the world like known big construction nations like Egypt, India, America etc. There is a strong conviction that since it works well in the countries mentioned above that have similar economic history with Nigeria; it would also be a success if practiced here. Consolidation would discourage the solely dependency on the project sponsored by the government which happens to be the biggest spender in the industry. Over dependence on government as the sole client is not helping the industry. These private developers seek consolation in the services rendered by the quack and unregistered contractors, which has brought nothing but challenge and dent upon professionalism in the countries. An example is the issue of collapse and abandoned structures at alarming rate in the country.
Capitalize in the industry apart from increasing the financial strength and offering protection against losses of the concerned companies, would also, strengthen firms’ ability to attract funds at lower cost, ability to acquire required expertise for project execution, prospect of firm’s expansion and operation beyond the owners and enhances a firm’s liquidity position; enhance participation in foreign construction works; improve workers’ welfares; ensure catalyst to innovation; ensure job security; Increase employment rate; decrease rate of abandoned projects; increases technical knowhow; encourage research activities and skill’s improvement; tax incentives in the areas of capital allowances; reduction in transaction costs; enhance ability to purchase essential heavy and costly construction plants and equipment; it makes expansion easier and brings about improvement in turnover of the company.

The primary drivers of consolidation include technological advancements, financial services liberalization, and improved intermediation, a greater focus on shareholder value, privatization, and globalized conflict. [10]. The process of consolidation has been argued to enhance efficiency through cost reduction and revenue in the long run. It also reduces industry’s risk by elimination of weaker firms and acquiring the smaller ones by bigger and stronger firms as well as more financial intermediation and diversification are made conceivable by it. There are two distinct approaches to look at the pattern of system consolidation among firms: market-driven consolidation and government-led consolidation. Notable organization that grew bigger and stronger includes Millstone Weber; AECOM and URS, ASCOT Africa Limited and Julius Berger. These organizations recorded much prospects after consolidation such as promoting confidence by the international community, development of technical knowhow, Increase in construction output and ensure strong capital base.

**METHODOLOGY**

Exploratory interviews conducted with the senior staff of corporate affairs commission whose duty includes the registration of companies (construction firms inclusive) were presented. The results were discussed from the view-point of construction stakeholders within which construction risks, its management and project delivery takes place. It allows for more financial intermediation and diversity. Market-driven consolidation and government-led consolidation are two different ways to examine the pattern of system consolidation across businesses. Respondents’ opinions and suggestions on managing construction risks by the application of capitalization for sustainable project delivery in the industry were presented in the subsequent sections. Tables, figures and charts were extensively used for data presentations, analysis and interpretation of results.

**DATA ANALYSIS**

**Take off of construction project**

In between choosing contractor and the beginning of construction there are number of activities which need consideration. It is in the contractor’s responsibility to apply for any type of necessary permits and licenses prior to construction works initiations. It is further used to plan employment and other resource utilities over time [11]. Mobilization or kickoff project on award contributes to the timely delivery or success of a project.
TABLE 1: FIVE (5) HIGHEST RANKING FOR SOURCE OF FUND FOR PROJECT TAKE-OFF

<table>
<thead>
<tr>
<th>S/N</th>
<th>Identified Source</th>
<th>F</th>
<th>WF</th>
<th>W 5 4 3 2</th>
<th>∑FX</th>
<th>X</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobilization from client</td>
<td>F</td>
<td>WF</td>
<td>65 25 10 4</td>
<td>110</td>
<td>4.28</td>
<td>1ST</td>
</tr>
<tr>
<td>2</td>
<td>Loans/Financial institutions</td>
<td>F</td>
<td>WF</td>
<td>55 10 15 110</td>
<td>4.28</td>
<td>2ND</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Transfer from ongoing work</td>
<td>F</td>
<td>WF</td>
<td>50 9 24 110</td>
<td>3.63</td>
<td>3RD</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Project pools (capital base)</td>
<td>F</td>
<td>WF</td>
<td>48 11 23 110</td>
<td>3.52</td>
<td>4TH</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Profit made from previous work</td>
<td>F</td>
<td>WF</td>
<td>40 10 23 110</td>
<td>3.37</td>
<td>5TH</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td></td>
<td></td>
<td></td>
<td>3.72</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Where,

- \( F \) = Frequency
- \( WF \) = Weighted Frequency

Table 1 shown the financial sources of starting construction projects. Based on the tabular query, it can be clearly seen that mobilization from client ranked 1st with mean score of 4.28, loans/financial institutions, transfer from ongoing work, project pools(capital base) and profit made from previous work ranked 2nd, 3rd, 4th and 5th respectively with RII of 3.81, 3.63, 3.52 and 3.37 respectively.

Form of capitalization recommended

\[ \text{[11]} \] opines that a merger is the merger of two or more independent companies to form a single business. The company that emerges from the process may adopt a new identity or become the acquirer target. On the other hand, an acquisition occurs when a company acquires control of a competitor's ownership. Upon completing of the procedure, two distinct entities or companies are frequently present. The target business joins the acquisition company as a division or subsidiary \[ \text{[12]} \].

TABLE 2: TYPE OF CAPITALIZATION RECOMMENDED

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merger of relevant firms</td>
<td>61</td>
<td>55.5</td>
<td>55.5</td>
</tr>
<tr>
<td>Acquisition of weaker firms by strong firms</td>
<td>28</td>
<td>25.5</td>
<td>81</td>
</tr>
<tr>
<td>Consolidation of firms’ capital base</td>
<td>21</td>
<td>19.0</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shown that 61(55.5%) recommended the adoption of strategy of merger of similar/relevant firms, 28(25.5%) supported acquisition of the weaker firms by strong ones while 21(19.0%) recommended the consolidation of firms’ capital base. Hence, majority of the respondents recommend the merger of similar/relevant firms. The finding indicated that most capitalization process that has succeeded emanated from the merger of two or more firms that have similar or relevant operations.

Benefits of merger

It is essential to find out the benefits of merger which is a form of capitalization to the Nigerian construction industry. The respondents indicated their appropriate opinion on what they derive from merger.
TABLE 3: BENEFITS OF MERGER

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase turnover</td>
<td>27</td>
<td>21.8</td>
<td>24.5</td>
<td>24.5</td>
</tr>
<tr>
<td>Risk reduction</td>
<td>22</td>
<td>17.7</td>
<td>20</td>
<td>44.5</td>
</tr>
<tr>
<td>Business expansion</td>
<td>19</td>
<td>15.3</td>
<td>17.3</td>
<td>61.8</td>
</tr>
<tr>
<td>Image improvement</td>
<td>27</td>
<td>21.8</td>
<td>24.5</td>
<td>86.3</td>
</tr>
<tr>
<td>Geographical spread</td>
<td>15</td>
<td>12.1</td>
<td>13.7</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

In carrying out the merger benefit analysis, it can be seen in table 3 that 27(24.5%) of the respondents supported the notion that increase in turnover is a benefit of merger, 22(20%) perceived risk reduction as their benefit, 19(17.3%) perceived business expansion as another benefit, 27(24.5%) assert that improvement/client is what they perceive as the benefit of merger and finally 15 respondents corresponding to 13.6% of the respondents perceive their benefit of merger as geographical spread. Adequate capitalized firms that are well managed are better able to withstand losses and prevent incessant cases of 'stood off' throughout the business cycle including during downturns i.e. low construction peak (raining session). Adequate capital therefore, helps to promote confidence in the system.

**Significant impact of capitalization on construction firms**

H₀: There is no significant impact of capitalization of construction firms in achieving project delivery in Nigerian construction industry.

**TABLE 4: SIGNIFICANT IMPACT OF CAPITALIZATION OF CONSTRUCTION FIRMS IN ACHIEVING PROJECT DELIVERY**

Dependent Variable: D(CF)
Method: Least Squares
Included observations: 6 after adjustments

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.046978</td>
<td>0.010864</td>
<td>4.324319</td>
<td>0.0002</td>
</tr>
<tr>
<td>CAP</td>
<td>0.086744</td>
<td>0.162976</td>
<td>0.532253</td>
<td>0.0085</td>
</tr>
</tbody>
</table>

R-squared 0.136660 Mean dependent var
Adjusted R-squared =0.007230 S.D. dependent var
S.E. of regression 0.036517 Akaike info criterion
Sum squared resid 0.040005 Schwarz criterion
Log likelihood 7.35885 Hannan-Quinn criterion
F-statistic 0.94754 Durbin-Watson stat
Prob(F-statistic) 0.463722

Where,
CF = construction firms
CAP= Capitalization

**Decision Rule**
If the probability (or significant) of the t-calculated is less than 0.05, we reject the null hypothesis but if otherwise, we do not reject the null hypotheses.

**Analysis:** The result of the estimated parameters from the computed Eviews result shows that the probability value (0.0085) is less than 0.05 level of significance, thereby justify the need to reject the null hypotheses. Therefore we accept the alternate hypothesis (H₁) and conclude that there is significant impact of capitalization of construction of firms in achieving project delivery in Nigeria construction industry. Hence there is need to apply capitalization as risk management means so as to ensure sustainability in project delivery in Nigeria.

**CONCLUSION**
Investigation reveals that the construction firms in Nigeria are financially incapable to start off project unless they are mobilized by the client (s).

Information gathered asserts that construction firms...
globally are merging to expand their business. Apart from improving the firm's image, merger of firms or consolidation assist these firms to manage risks in the industry effectively. It was discovered that most of the firms merge with those that operate similar trade/business. The data analysis deduced also that most of the stakeholders in Nigeria if given the chance would love to merge with other organizations for efficiency. It confirms the opinion that the larger the firms the more situation could be accommodated. Hence, capitalization has increased the level of their operation; establish more confidence and working relationship with clients. Merger and acquisition of firms are therefore recommended as a sustainable risk management practice to save Nigeria construction industry.

REFERENCES
4. www.nbs.ng.org