

Research Article

An Evaluation of Insolvency and Its Causes in The Construction Industry

Reuben A. Okereke, Tobechi B. Ejekwu, Victor O. Ohamma

Department of Quantity Surveying, Imo State University, Owerri, Imo State, Nigeria
Contact email: raphica2013@gmail.com, tobejekwu@gmail.com, likemindz4good@yahoo.com

Received: November 7, 2021; Accepted: December 11, 2021; Published: December 28, 2021

Abstract: This study evaluated insolvency and determined its causes in the construction industry in Nigeria. The study utilized a questionnaire as the research instrument with a sample size of 90 contractors in Imo State, and descriptive statistics such as cross-tabulation and mean ranking were used to describe and summarize the data. In addition, a one-sample-test was employed to compare and find out the most significant issues that may cause insolvency in the construction industry. The study concludes that of the 11 potential causes of bankruptcies in the construction sector, the respondents listed five as main causes, absence of entry barriers, issues with cash flow, poor financial monitoring, knock-on consequences, and onerous contract terms. The study recommends that ethical actions and procedures be considered for the construction industry and main vendors to prevent jeopardizing the financial stability of supply chain contractor firms.

Keywords: Construction Industry, Causes Insolvent, Unethical, Supply Chain.

1. Introduction

The failure of a company to fulfill unpaid financial obligations can be broadly defined as insolvency. A scenario like this generates situations for a construction company where a production corporation cannot meet its contractual obligations regarding work or the creditors owed [1]. There are signs that the incidence of insolvent situations tends to be growing under adverse conditions. This remains a subject of debate whether such unfavorable conditions and insolvencies are mutually exclusive. These financial failures seem to have negatively affected business concerns in the Nigerian construction industry.

Knowledge of business-cycle patterns is crucial in the sustainability of construction companies [2], [3], argue that businesses must tailor their approaches to their business conditions, helping them be compliant with market trends. He insists that such procedures guarantee that competitive companies work under varying conditions simultaneously.

Lansley and Langford [4], [5], reflecting over the past three decades on the global construction sector, have noted the following general patterns the 1960s – with long term building stability; the 1970s market changes during this time have been unprecedented and have been impossible to handle by well-proven methods for profitable and challenging companies. This worldwide phenomenon has been part of the indignation of the Nigerian construction industry. This research further explores the main causes of insolvency among Nigerian contractors in civil engineering.

1.1. Statement of the Problem

Construction Industry has reported the second-highest failure rate among all types of businesses [6]. The contractor is much more aggressive than his peers relative to other sectors. This analysis study is based on Nigeria and the local construction industry's greater likelihood of

business failures. Knowing the factors that lead to a recessionary business failure phase will help identify early warnings of impending financial crises [7]–[9]. The Nigerian economy has fluctuations that make it necessary for builders to forecast the financial distress of their companies and provide clear guidance to professionals in the efficiency of handling and managing risks [10].

Asogwa et al. observed that falling demand, a fall in commodity prices, a slowdown in capital markets, a decrease in foreign investors has culminated in economic growth slowing in Nigeria [2]. To prevent insolvency and bankruptcy, a suitable type of strategy is therefore needed by construction companies. The triggers of insolvency in the Nigerian construction industry, therefore, need to be identified

1.2. Purpose of the Study

The general aim of this study is to evaluate insolvency and determine its causes in the construction industry in Nigeria. However, the specific objectives are to:

- Determine the causes of insolvency in the construction industry in Nigeria.
- Ascertain the frequency of occurrence of the causes.

2. Literature Review

2.1. Insolvency in the Construction Industry

A company is said to be insolvent when it cannot pay its debts. This is a common occurrence within the construction industry, and it can be attributed to many reasons. According to Chan, Tam, and Cheung [11], some of which are as follows:

- The ease of creating construction businesses, especially its initial low capital investment, often results in very fragile arrangements. This can result in a structure that can be easily destabilized;
- Competitive tendering practices used within the industry has resulted in a high incidence of insolvency among contractors;
- The quality of management expertise within the industry is poor compared to other allied sectors. Many cases of contractor insolvency have occurred resulting from the mismanagement of a business as opposed to unfavorable external conditions.

The damage resulting from insolvency can be widespread:

- It can affect the cost, quality of work, and duration of a construction project.
- The solvency of a contractor can also affect his sub-contractors and suppliers; thus, insolvency can affect many projects. A developer's bankruptcy can create financial difficulties for the contractors and,

consequently, the sub-contractors and suppliers involved with these developments.

2.2. Liquidation

This refers to the winding-up of a company. Trading usually ceases upon liquidation; the company's assets are collected and used to offset liabilities. There are two categories of liquidation:

- a. Voluntary liquidation
Voluntary liquidation can be either members' or creditors' voluntary liquidation.
- b. Compulsory liquidation
Compulsory liquidation results from a court order for a company to be wound up. This is usually because the company is unable to pay its debts. Two tests can determine if a company cannot pay its debts. First, the going concern or cash flow test whereby a company is judged to be insolvent if it cannot pay debts as they become due. Secondly, the balance sheet test, which is a long-term test. The balance sheet test examines the value of a company's assets concerning the number of its liabilities. If purchases are less than liabilities, the company will be deemed insolvent [12].

A party is insolvent where the following apply:

- They enter an arrangement, in satisfaction of their debts (i.e., see voluntary agreements above);
- They pass a resolution for their company to be wound up without declaring that it is solvent. For example, where a solvent company wishes to cease trading and be wound up, they would be able to make a formal declaration that sufficient assets exist to pay off any liabilities; therefore, creditors would not be too concerned about such a resolution;
- A winding-up order or bankruptcy order made against them;
- An administrator or administrative receiver is appointed;
- they are subject to similar insolvency proceedings outside the country
- In the case of a partnership, all partners are subject to an individual arrangement or any of the above events

2.3. Causes of Insolvencies within the Construction Industry

There exists no comprehensive study explaining the causes of insolvency among construction companies. Moreover, research covering the subject matter has tended to identify the symptoms rather than causes. Several authors Young and Hall, Davis, Schleifer, Kangari, and Bathory, have attempted in their studies to ascertain the causes of insolvencies in the construction industry [13]–[18]. Kangari

ascribed the high failure rate amongst construction firms to the: a highly fragmented industry; industry highly sensitive to economic cycles; fierce competition as a result of an over-capacitated market; relative ease of entry; management problems; trading, including competitive quoting, outsize projects, high gearing, resistance to change or technological advance and deterioration of service; accounting, where inconsistencies occur in the financial data generated for management; increase in project size; unfamiliarity with new geographic areas; moving into new types of construction; changes in key personnel [18].

Eleven causes of insolvency in the construction industry [19], [20]. These are discussed below:

a. Diversifying

To use the cash gained from higher profits, more companies diversify building reserves as collateral for loans and seek financial protection by expanding into contra-cyclical industries. Whether moved to properties or subcontracts and supplies, failed procurements that damage a group's financial health is popular [21].

b. Lack of Entry Barriers

Because the venture into the construction business is simple, small companies with little experience in the industry are proliferating. Therefore, because there are general financial barriers to entry, the market forces are most disgusting in the sector [21]. In the business, there are only too many businessmen. This ensures that the independent companies who cannot execute the work offer contracts. When you cannot manage your work, you become insolvent.

c. Family Enterprise

Because creditors do not have to collect equity funds, the business comprises several family companies. The proliferation of family businesses has also led to a large economic instability in the sector. Incorporated practices result in financial comfort and an unwillingness to meet the growing building demand [16], [22].

d. Buy-Outs Development

Buy-outs by managers were a common way out since they are a more viable solution than in other sectors. Nonetheless, several situations followed soon by a management acquisition due partly to a large amount of debt needed to pay. The approval can be handled by naming beneficiaries for the parent company so that the target company may continue to trade during a buy-out process [23].

e. Problems of Cash Flow

Virtually everyone insolvency does so due to problems regarding cash flow. In the construction industry, cash flow causes more challenges than any other business because the normal market mechanisms are immobilized when bound to a fixed price contract [23]. The high level of insolvency in the construction industry is mainly due to cash flow problems.

f. Excessive Trading

A different path that can lead to serious cash flow problems for small businesses, such as contractors, is that they grow faster than the capital base they can support [23]. The recurring transitional fees by the primary provider can be provided by a sub-contractor or not. Nevertheless, he still must compensate during the month for supplies, plant recruiting, overheads, salaries for the workers, and repayments of loans and other debts. Funds must be drawn from the capital base as the bulk of the money of the subcontractor is tied up in securities, selling debtors, and continuing work [24].

The business can grow so exponentially that it discovers that its real cash is bound to assets, corporate debtors, and research underway. Consequently, the businessmen will not have the money to pay for additional equipment, employment, hiring plants and machinery, and repay loans to the bank. Although the business's assets can surpass its liabilities, it cannot pay its debts and become insolvent.

g. Weak Management Fiscal

Cash monitoring and discipline are perfect for effective contractors. We have used sophisticated cash flow modelling and monitoring techniques. A well-managed contractor manages comprehensive accounting, expenses, and management records that delegate responsibility to individual contracts and components in as much detail as possible. Sadly, this approach is missing for many contractors in the industry [25].

Most contractors become insolvent because of their companies' lack of proper accounting. We struggle to recover interest in specific withholdings, making it difficult to reclaim them after accrued losses. The "early pick and pay late" adage is competitive cash flow. Late payment, though, is a blade with two edges. This is a serious issue related to many building insolvencies [25].

h. Consequences of "Knock-On"

Many contractors in the sector are small companies with only a handful of employees. Small companies frequently struggle because of another supply chain company's financial loss. The insolvency of another group resulted in a significant number of insolvencies. The knock-on influence is believed to do so. This influence is related to three factors.

The knock-on influence is first and foremost experienced through the supply chain. A variety of contractors and vendors will risk the insolvency of a contractor in the chain. It may also lead a company to fail due to the deterioration of the contractor. Second, different companies within the same company will experience the impact. Concerning the third dimension, the effect on the country's economy can be felt through industrial sectors.

i. Excessive Contract Claims

It will go badly wrong if the construction contract goes inappropriately. An exceptional claim against the contractor may be sufficient to cause insolvency under one contract. An illustration of this is compensation for liquidated damages if work is not completed in due time. The greatest danger is when management is forced to concentrate on one problem contract, and the effort to extricate the company forces it to draw resources from the rest of the company or group [25].

j. Imprudent Diversification

Most contractors are searching for higher profits in other markets and companies. In the 1980s, several contractors were tempted to build land, but they have been insolvent ever since, or worse, they have withdrawn from the sector [25]. It is necessary to diversify from one sourcing process to another. An investment that turns out to be a financial responsibility could also end in insolvencies. To support, even by organized resolution of its operations and in lawsuits, a new company may incur considerable amounts to recover damages from the vendor. For some, there is a strong urge to build an empire of manufacturing. Hence, much insolvency has resulted from corporate aggrandizement.

k. Many Binding Term or Conditions of Contract

When the sub-contractor submits a quote to "as per normal sub-contract form," the approval will often be given "under general terms and conditions" in the principal contract. The subcontractor also does not want the terms of the preliminary agreement to be burdened. Nonetheless, since the sub-contractor does not want to lose his job, he often must consider it [25]. Some examples of onerous conditions include using "pay-when-paid" clauses, making contractors liable for their works until practical completion of main contract works, excessive retentions and discount percentages, and the right to hold back money on one contract unproven faults on other sub-contracts.

3. Research Methods

A questionnaire is the research tool used in this report. The demographic details segment is component A of the questionnaire. Part B of the questionnaire contains eleven factors of construction industry insolvency. Also, construction companies in Imo State, Nigeria, have been contacted. As Imo State contractors have too many population numbers to be identified completely, sampling was done in anticipation of the study.

The questionnaire was pre-tested by two consultants before the final sample was conducted. The people chosen had about five years of construction experience. Feedback on the questionnaire was collected from the pre-test. Amendments have been made to improve the application, such as swelling, revision of sentences, and deletion of repetitive questions. A total of 90 questionnaires, together with a covering letter outlining the research object and promising their privacy, were sent to randomly selected contractors. Each questionnaire was issued with a self-addressed, charged postage envelope. The questionnaires were sent to each company's chairman, vice-chairman, director, or assessment planner. The letter recipients were asked to fill out the questionnaire themselves or forward it to someone else who is qualified to answer.

Including submitting questionnaires, there have also been ten face-to-face questionnaire interviews to ensure any question is answered and explain questions with the interviewer. There were eventually 30 questionnaires, and ten face-to-face interviews were done. Thirty questionnaires were appropriate for data analysis after reviewing the completed questionnaires. The response rate was approximately 30%.

Descriptive statistics such as cross-tabulation and mean ranking were used to describe and summarize the data. In addition, a one-sample-test was employed to compare and find out the most significant issues that may cause insolvency in the construction industry.

4. Result and Discussions

4.1. Analysis and Presentation

Thirty-two contractors conducted the sample with ten face-to-face interviews. Thirty questionnaires were appropriate for data analysis following review through the completed questionnaires. As illustrated in Table 1, this produced a response rate of about 33.33%.

Table 1. Characteristics Respondents'

Working Experience	Valid Responses	Percent (%)
1 – 4 years	3.00	10.00
5 – 10 years	12.00	40.00

Working Experience	Valid Responses	Percent (%)
11 – 15 years	11.00	36.66
>15 years	4.00	13.33
Total	32.00	100.00

Thirty respondents, 21% were Grade 1, while 79% were Grade 2 contractors. In the 1 to 4 years of work category, just 13.33 percent of respondents had. In the class with five to ten years of experience in the construction industry, most respondents are roughly 40%. About 36.66 percent of participants had 11 to 15 years of experience, and 13.33 percent had more than 15 years of experience in the construction industry. Respondents who have served in the construction industry for over eleven years could more accurately determine the reasons for discrepancies between design and construction. As for those in the group of 1 to 10 years working experience, their assessment of the causes of inconsistencies was also a good representation.

Sixty percent of those polled were project managers, as shown in Table 2. Senior managers accounted for 30 percent of respondents. The executives of their companies were 10 percent of respondents. Since most respondents were highly placed at or above management level, data quality was ensured.

Table 2. Professional Respondents' Statistics

Respondents	Appointments	Responses Received
Contractors	Directors	3.00
	Senior Managers	9.00
	Project Managers	18.00
Total		30.00

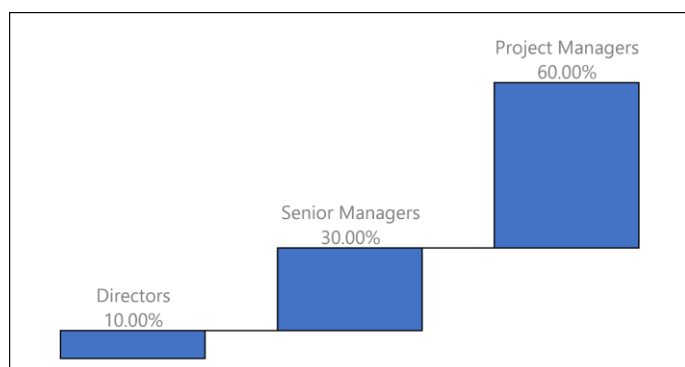


Figure 1. Professional Respondents' Percentage

4.2. Analysis of Issues Causes Insolvencies

The questionnaire listed eleven issues that may cause insolvencies in the construction industry. Each respondent was asked to rate each case according to how frequently they thought the issue would occur in the construction

industry. In addition, the respondents were also asked to rate whether unethical practices will lead to the occurrence of each case.

For the causes of insolvency, a score of 1 means that the issue never happens, and a score of 5 means that the problem occurs very often. The mean scores of these eleven issues are shown in Table 3. Of the eleven issues surveyed, the five most frequently occurring issues that may cause insolvency are: diversification, imprudent diversification, management buy-outs, family firms, and overtrading. Both diversification and imprudent diversification have the highest mean of 3.63. This may be because many local construction companies appear to lack commitment to their core businesses.

Many local companies have become insolvent because they do not focus on their core construction businesses. They tend to diversify into other construction-related works. Worst still, the moment they have made enough profits, they will diversify into an area of work unrelated to construction. Many local construction companies appear to be very profit-oriented in the short term. Management buy-outs rank in third place with a mean of 3.57. Many construction firms, especially the larger ones, have become insolvent after acquiring another company with financial difficulties. The associated debts were simply too much for them to bear.

Table 3. Frequency of Causes of Insolvency

Causes of Insolvency	Mean	Variance	t-value
Diversification	3.63	0.37	5.64
Absence of barriers	3.23	1.15	1.19
Family firms	3.53	0.60	3.76
Management buy-outs	3.57	0.25	6.15
Cash flow problems	3.27	0.75	1.68
Overtrading	3.50	0.67	3.34
Poor financial control	3.30	0.97	1.66
Knock-on effect	3.27	0.82	1.61
Overwhelming contract claims	3.43	1.15	2.21
Imprudent diversification	3.63	0.79	3.89
Onerous conditions of contract	3.27	0.89	1.54

Many construction companies are family firms that have been around for many years. Firms that are family-run seem to be more resistant to changes. This resistance may be a cause for insolvency.

The critical point for t-distribution, having a degree of freedom of 29 and a level of confidence of 95 percent, is 1.699. Table 3 shows the t-value results that have been generated using the one-sample t-test. From Table 3, it can be noted that out of the eleven possible causes of insolvency in the construction industry, only five of them

are significant. These are the absence of barriers, cash flow problems, poor financial control, knock-on effect, and onerous contract conditions. All these five causes have t-values lower than the critical value of 1.699. These five significant causes of insolvency are discussed below.

5. Conclusion and Recommendations

5.1. Conclusion

Of the 11 potential causes of insolvencies in the construction sector, the respondents listed five as the main causes. These include the absence of entry barriers, issues with cash flow, poor financial monitoring, knock-on consequences, and onerous contract terms. There are more than 70 percent answers to all these five major causes.

The respondents thought that all five big insolvency issues might arise due to unethical activities. The respondents claim there are likely to be insolvencies among contractors with corrupt practices, including intentional delay in the payment process, misrepresentation of financial status, and others.

Seventy percent have viewed the overall conduct in the construction industry as unethical, which seems to be a major problem in the field. More than 70% of respondents still found key contractors to be immoral. Nevertheless, individual insolvencies seem to have occurred owing to unethical practices.

5.2. Recommendations'

From the conclusions, the following recommendations are made:

- The research showed that the main cause of insolvency for contractors in the Nigerian construction industry was unethical activities. Therefore, ethical actions and procedures must be considered for the construction industry and main vendors to prevent jeopardizing the financial stability of supply chain contractor firms. The five significant triggers of insolvency highlighted in this report should be given special consideration to make the construction industry less expensive for contractors. Further, it is also strongly suggested that a proper code of ethics and professional conduct be developed. This would assist in addressing the undesirable state of the construction industry in Nigeria.
- Personnel and management's experience in dealing with demonstrated insolvency factors should be highly competent to minimize the risk involved in construction work and hopefully prevent the contractor from becoming insolvents.
- The possibility of creating a branch for the insurance industry to cope with construction threats could be considered. Based on their ability to provide quality

service, contractual undertakings would thus be evaluated as hazards and assured certificates. This would release resources attached to performance bonds and hopefully improve the cash flow situation in contracting companies and mitigate the spread of "opportunity," which causes reputable contractors to erode profit margins.

- Potential knock-on effects experienced by subcontractors because of insolvency by the main contractors are an area requiring further research, especially regarding the extensive use of the retention system used by principal contractors against subcontractors.

Acknowledgments

This research was supported by the Department of Quantity Surveying, Imo State University, Owerri, Imo State, Nigeria.

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