

# Project Management as a Panacea to Navigate Insolvency in Construction Contracts

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## ABSTRACT

Several construction contracts were bedeviled by legal issues in Nigeria and with many of them ending in arbitration instead of ending up with handshake as they normally started due to insolvency either from contractor or client. This paper seeks to analyse the causes of insolvency in the Nigerian construction contracts. Secondary and primary sources of data were used. 52 respondents were used in the analysis representing a return rate of 69.3%. The responses from the questionnaires were ranked using the weighted mean score and percentages. Lack of project planning and control, underbidding were ranked first and second respectively among the twenty questions. Economic recession and unethical practice were ranked 20<sup>th</sup> and 19<sup>th</sup> respectively. The analysis of the finding showed that implementation of the functional elements of construction project management namely; planning, directing, controlling, organizing, coordinating and some external influence were the cause of insolvency in the construction contracts. A number of recommendations were made to mitigate insolvency in construction contracts.

**KEYWORDS:** insolvency, construction, projects, contract, Nigeria, management.

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## I. INTRODUCTION

Construction projects can be challenging even at the best of economic times. The natural complexity of the construction process is inherently prone to risks; risk of delays, risk of unexpected additional cost and risk of design failure, modern project management process allow for sophisticated management of this risk.

Project management entails the practice of initiating, planning, executing, controlling and closing the work of a team to achieve specific goal and meet specific success criteria at the specified time, Chitkara (2009). Managing construction contracts is not rocket science, nor is a specific skill set required. It only requires the ability to manage existing information in an organized fashion and anticipate changes in the market place that will be beneficial to the company and the project. In the realm of project management, the schedule, cost and quality achievement is also referred to as the iron triangle. Project management is a function of executive leadership and provides cohesive force that binds together the several diverse elements into a team effort for project completion, Chizea (2002). Project normally will have a full time project manager who is a member of firm's top management or who reports to a senior executive of the company. When smaller contract are involved, a single individual may act as project manager for several jobs simultaneously. An important aspect of a project manager's position is that his duties normally are separate from those of field supervision.

Over the years, indigenou contractors in Nigeria have recorded a low level of participation and have often been sidelined in large scale construction activities. This has been attributed to amongst a number of factors, mismanagement of funds and working capital which makes them prone to insolvency, with poor project execution and abandonment as the likely outcome.

A company is said to be insolvent when it is unable to pay its debts. This is a common occurrence within the construction industry and it can be attributed to many reasons, namely; competitive tendering practices and quality of management expertise.

## II. PROJECT MANAGEMENT

Project management is the art and science of mobilizing and managing people, materials equipment and money to complete the assigned project work on time within budgeted costs and specified technical performance standards, Ogunde (2017). It aims at achieving the specified objectives efficiently and effectively by managing human energies and optimizing the non-human resources placed at their disposal. The characteristics of a project according to Chizea (2002) include the following:

- It is a unique one time programme
- It has a life cycle with a specific start and end time.

- Its work scope can be broken up into definite tasks.
- It will have a budget for its execution.
- It may require the utilization of multiple resources for its execution some of which may be in short supply or may be shared with other projects.

The functional areas with some adjustments on account of the special characteristics of construction projects are planning, organizing, procuring and controlling.

Planning involves deciding in advance what is to be done, how and in what order it is to be done in order to achieve the objective. Planning aims at deciding upon the future course of action. Schedule depicts when the planned activities are to be carried out.

Organizing is the process of establishing a structural relationship among functions of people so as to formulate an effective machinery for streamlining the achievement of assigned objectives. It involves dividing the work into component activities, designing job structures and allocating resources.

Procuring implies managing and keeping the positions created by organization structure and providing them the right quality resources at the right time. These resources include people, materials, machinery and money.

Directing involves influencing people so as to enable them to contribute to organizational goals efficiently and effectively. Direction implies providing, communication instructions and orders and providing a suitable climate for subordinates development.

Controlling involves monitoring of the performance and applying corrective measures in case of deviations from the plan. The process of control include specifying the factors to be controlled, stating the methods of measuring control factors, evolving systems for generating performance data, applying corrective measures and re-planning when necessary.

The prevailing cost of a project depends upon many factors such as the location, specifications, resources availability, working conditions and the political environment. While the causes of project failure due to management failure are planning, organizational, resources, directional, controlling, co-ordination and other failures, Chitkara (2009).

The success of a project depends upon the efficiency with which the projects management gets the work done by utilizing the planned resources of men, material, machines, money and time. The risks, uncertainties and complexities make project management a relatively difficult process.

### **III. CONSTRUCTION CONTRACTS**

Construction contracting is a service delivery business activity. A business activity saddled with its unique hazards and risk elements. The construction contractor for a consideration usually assumes these risks and their accompanying responsibilities. He does this by contracting, accepting to translate an owner's objective usually embodied in drawings and specifications into an accomplished and tangible product. The contractors provide the services of delivering a desired product to a buyer generally referred to as the owner or client, Arain and Low (2005).

The success of any economic venture, construction contracting inclusive depends to a great extent on the quality of its management. Some elements of defect must therefore be inherent within the management systems prevalent in the construction industry. As an economic venture, it is executed under constraints of time, cost and performance criteria. A contractor may specialize in one aspect of construction category say erection of residential buildings, which in itself does not imply all the residential buildings. Some may possess lots of similarities, but the mere fact that they were not built on the same location and under identical conditions makes them different. A construction product is executed once; the contractor's next contract may involve works at a different site, for a new owner and perhaps executed with a different work force. All these factors make construction contracting not easily malleable to the type of management process to manufacturing or merchandising business. Sometimes contractors do not go through the classical management process of organizing, staffing, directing, planning and controlling.

Uncertain environment within which the construction industry operates, dictates that management adopts varying approaches to manage change based on their experience. The strategy adopted by management in contracting firms is reflected in the quality of service delivered in terms of programme, budgetary control and conformance to specification (i.e realization of the project objectives). The nature of the construction environment has forced prudent firm to adopting a policy of sub contracting where the demand for construction services is less predictable.

Some of the constraints confronting the typical Nigerian contractor according to Chizea(2002) are viz:

- Difficulty in learning about potential market.
- Problems and cost associated with tendering procedures.
- Difficulties in understanding and interpreting contract documents.

- Inadequate skills in taking off quantities, calculating unit rates, pricing, estimating and packaging of tender.
- Insufficient expertise to plan and budget for the organization as a whole as well as to produce realistic programmes for individual jobs.
- Problems in attracting and retaining skill supervisory personnel and craftsmen.
- Insufficient commercial and technical expertise to supervise sub-contractor efficiently.
- Inability to maintain a sufficient level of financial liquidity during the course of a project as capital resources are usually scarce, and payments for work executed are generally unreasonably delayed.
- Poor office management and financial control procedures particularly handling of information storage and retirement of document, record keeping, book keeping and cost accounting.
- The tendency to sub-contract an unreasonable amount of work in order to make profit without practical responsibility.

#### **IV. INSOLVENCY**

The term insolvency means the financial failure of individuals and companies and their position before and after the start of a formal insolvency procedure, Fisk (1997). There are two different categories of insolvencies, namely short term insolvency and long term insolvency. The former means that there is a cash flow crisis, where not enough money is coming in to meet a company's outgoings and the latter means that the company is able to pay its debts as they fall due but its balance sheet shows a deficiency of assets over liabilities.

According to Udofia (2017), a contractor's insolvency may result to allocation of insufficient resources, compromise in quality of works, increase in defects, substantial time and cost overruns and non-completion of the project. Insolvency rates in the construction industry are disproportionately high when compared to those in the rest of the economy. This industry is so susceptible to company insolvency and failure and can be attributed to many reasons.

Insolvency of firms within a particular industry is not necessarily a bad thing; that natural wastage weeds out the financially weaker; less efficient and commercially reckless from the financially stronger, more entrepreneurial and commercially strong operators. While the survival of the fittest view may have some foundation, in the case of the construction industry it fails to recognise the fact that, due to the hierarchical contracting chains on construction projects, the ill-advised actions of one higher ranking officer in the chain of command can be fatal to countless other good soldiers. It is this vulnerability of those contractors lower down the contracting chain to the actions of those above which justifies regulation to ensure that principal contractors carry out business in an ethical responsible and commercially sound manner, Hafiz et al (2016).

A party is considered to be insolvent where the following apply

- They enter into an agreement etc in satisfaction of their debts (i.e. voluntary arrangement)
- They pass a resolution for their company to be wound up, without making a declaration that the company is solvent
- A winding up order or bankruptcy order made against them
- Administrator or administrative receiver is appointed
- They are subject to similar insolvency
- In the case of partnership, all partners are subject to an individual arrangement or any of the above events.

De valence (1994) stated that insolvency may be broadly defined as an inability of a business entity to meet pending financial commitments. For a construction firm, such a situation creates conditions whereby a business entity is unable to fulfill its contractual obligations with regard to work-in-progress or creditors owing. There are indications to suggest that during times of adverse conditions, the occurrence of insolvent conditions seem to be on the increase. Whether such conditions and mounting insolvencies are mutually exclusive remains a subject of debate. The occurrence of these financial failures seems to have adversely affected business concerns.

Issaka et al(2007) stated two forms of insolvency exists as recognised by law, commercial and factual insolvency. Commercial insolvency occurs where a business entity is unable to service its debts even though its assets may exceed its liabilities, whereas factual insolvency is where a firm's liabilities exceed its assets.

The terms of bankruptcy and insolvency are often deemed to be interchangeable, although they may represent the same situation their application differs. Longford et al (1991) refers to bankruptcy as a term pertaining to individuals, whereas insolvency being a broader term incorporating liquidation, receivership and administration of a company by bankers, or others with a financial stake. Liquidation is referred to also as winding-up, involves a process whereby the life of a company is brought to an end when it is unable to pay its debts. Whereas receivership involves an appointment of a receiver liquidator whose main role is to protect the assets of the insolvent company on behalf of the secured creditors.

The common challenges facing Nigerian indigenous contractors in Nigeria in the area of working capital management are low awareness of the need for working capital management are namely;

- one man business setbacks
- under capitalization
- poor funding
- cash flow problems
- high cost of construction finance
- economic recession
- reckless spending
- diversion of funds
- poor project planning and control

The factors affecting the level of working capital requirements comprises of

- inflation
- delays in interim payment
- taxation at source
- Deduction of retention funds.

Some of the insolvency problems in the construction industry include

- undercapitalised firms which are not financially resilient
- underbidding leading to the prevalence of tight or even zero profit margin
- poor payment practices
- unsecured creditor status of contractors
- illegal phoenixing activity
- Poor strategic business management skills of many particularly smaller contractors.

## **V. RESEARCH METHODOLOGY**

The data used in the research work were both primary and secondary data. The secondary data was collected from the various documentary sources and formed the basis of the questionnaire. The primary data was collected through the questionnaire distributed to the sample units.

The research work covered Imo and Abia states of Nigeria mainly Owerri, Abia and Umuahia towns. The population of the study consists of the contractors (directors, general managers and project manager) and consultants in the construction industry.

Two methods were used in the data collection; interview and questionnaire. For the analytical aspect the questionnaire was used. It was administered by hand delivery with the help of a research assistant. Hand delivery was used because most organizations and their employees were unwilling to attend to questionnaire posted by mails and the delay associated with the postal system. It also helped in clarifying some questions from the respondents.

The questionnaire consists of two sections. Section A of the questionnaire is the demographic information section. Section B of the questionnaire consists of twenty causes of insolvencies in the construction industry. In the Likert scaled questions the respondents were asked to indicate very often, often, undecided, not often and not very often. A score of 2,1,0,-1 and -2 points were assigned to the options.

Apart from asking the respondents to rate their opinion on the causes of insolvency in the construction contracts, they were asked to rate whether it was caused by project management in construction contracts. 75 questionnaires were distributed in the three major towns of Imo and Abia states and 52 were returned. The return rate is about 69.3%.

## **VI. DATA PRESENTATION AND ANALYSIS**

**Table 6.1 Demography of Respondents**

<b>Respondents</b>	<b>Working Experience</b>	<b>Number</b>	<b>%</b>
Contractors/	1-5 years	11	21.15
Consultants	6-10 years	14	26.92
	11-15 years	18	34.61
	> 15 years	9	17.31
Total		52	100

Source: Author's Field work

Out of the fifty-two respondents as shown in the information of Table 6.1 eleven respondents were between 1-5 years working experience representing 21.15 percent. 14 respondents representing 26.92% were between 6-10 years working experience. 18 respondents representing 34.16% has 11-15 years working experience. 9 respondents representing 17.31% were above 15 years working experience.

**Table 2: Response from Questionnaire (%)**

Causes of Insolvency	Very Often	Often	Undecided	Not Often	Not Very Often
Poor project planning and control	67.31	13.46	9.62	3.85	5.77
Underbidding	61.54	19.23	3.85	7.69	7.69
Diversion of funds	61.54	13.46	9.62	7.69	7.69
Cash flow problems	55.77	17.31	7.69	15.38	3.85
Poor strategic business management	53.84	11.55	15.38	13.46	5.77
High overhead cost	55.77	13.46	3.85	19.23	7.69
Poor payment practices	57.69	7.69	11.54	9.62	13.46
Misrepresentation of contract document	44.23	17.31	0	19.23	19.23
Undercapitalization	53.84	17.31	7.69	11.54	9.62
Lack of construction experience	55.77	13.46	3.85	11.54	15.38
Poor funding	61.54	7.69	5.77	7.69	17.31
High cost of construction financing	59.61	5.77	5.77	7.69	21.16
Reckless spending	51.92	9.62	7.69	5.77	25.0
One man business setback	51.92	9.62	1.92	9.62	26.92
Delays in interim payment	44.22	17.32	0	19.23	19.23
Poor labour productivity	51.92	11.54	0	7.69	28.85
Deduction of retention fund	40.38	13.46	7.69	21.15	17.32
Inflation	38.46	17.32	1.92	21.15	21.15
Unethical practices	44.23	7.69	9.62	11.54	26.92
Economic recession	42.31	7.69	13.46	13.46	23.08
Average % value	52.69	12.60	6.35	12.21	16.16

The information in Table 2 shows that fourteen out of the twenty causes of insolvency in the construction industry had more than fifty percent as very often option. The very often option is between 38.46% to 67.31% as shown in the details of Table 2. The minimum in the often option is 7.69% and the maximum is 19.23%. The undecided option is between 0% to 15.38%. The not often option is between 3.85 to 21.15%. The not very often option is between 3.85% to 28.85%. The average percentage value for very often is 52.69%, often is 12.60%, undecided is 6.35% not often is 12.21% and not very often is 16.16%. The implication is that all the identified causes of insolvency in construction project contracts were accepted by the respondents.

**Table 3: Factors causing insolvency sorted by descending weighted mean index**

Factors causing Insolvency	Standard Deviation	Weighted Mean Index	Ranking
Poor project planning and control	13.89	1.33	1
Underbidding	12.44	1.19	2
Diversion of funds	12.14	1.13	3
Cash flow problems	10.78	1.06	4
Poor strategic business management	10.01	0.94	5
High overhead cost	10.01	0.94	6
Poor payment practices	10.83	0.90	7
Misrepresentation of contract document	12.30	0.88	8
Undercapitalization	11.01	0.87	9
Lack of construction experience	10.64	0.83	10
Poor funding	11.99	0.75	11
High cost of construction financing	10.09	0.58	12
Reckless spending	10.43	0.50	13
One man business setback	10.78	0.50	14
Delays in interim payment	8.20	0.48	15
Poor labour productivity	8.20	0.48	16
Deduction of retention fund	6.47	0.38	17
Inflation	7.09	0.33	18
Unethical practices	8.08	0.31	19
Economic recession	6.77	0.31	20
Average Value	10.11	0.74	
Maximum Value	13.89	1.33	
Minimum Value	6.47	0.31	

The information in Table 3 shows the analysis of the causes of insolvency in construction contracts. From the calculation Average standard deviation for all the factors equals 10.11. The maximum value of standard deviation is 13.89 and the minimum is 6.47. Aside from that, the maximum and minimum weighted mean index is 1.33 and 0.31 respectively and the overall average of the weighted mean score is 0.74. The most ranked cause factor is poor project planning and control which carries a weighted mean score of 1.33 and a standard deviation of 13.89 and this indicates poor construction project planning and control leads to insolvency.

The second most ranked is underbidding which carries a weighted mean score of 1.19 and a standard deviation of 12.44. This confirmed to the findings of Burnett (1991) which stated that most insolvency in construction projects is due to underbidding. The diversion of funds with a weighted mean score of 1.13 and a standard deviation of 12.14 was ranked third in Table 3. Arain et al (2005) stated that many contractors diversify in order to use the cash earned from contracting higher profits, create assets as security for loans and seeks financial stability by venturing into businesses that are counter-cyclical to construction. Whether the move was into property or into sub-contracting and materials supply, failed acquisitions undermining the financial health of a group were common. The 20<sup>th</sup> in terms of ranking is economic recession. Economic recession affects every sector of the economy both in terms of materials and labour. Probably that is the reason why the respondents rated it low. The mean score of the economic recession is 0.31 and the standard deviation is 6.77. The 19<sup>th</sup> item in the ranking is unethical practice with a weighted mean score of 0.31 and its standard deviation of 8.08. Contractors who are keen to impress new clients and may often take on the completion of a contract at cheaper rates for works that have been stopped due to a contractors insolvency. It is therefore important for the construction industry as well as main contractors to pay heed to ethical behaviour and practices in order not to jeopardize the financial stability of contractors in the supply chain. Inflation was ranked 18<sup>th</sup> in the table with a weighted mean score of 0.33 and a standard deviation of 7.09. Estimates are made before the actual work is started. Most of the time the estimator relies on his knowledge of construction. Many possible errors attributable to the estimator include changing prices of labour and material. A substantial increase on the cost of labour and material can lead to the contractor's insolvency.

**Table 4: Causes of Insolvency from Project Management Perspective**

Causes of Insolvency	Very Often	Often	Undecided	Not Often	Not Very Often	Total
Planning failure	19	16	3	8	6	52
Organisational failure	20	11	2	10	9	52
Directional failure	18	10	4	12	8	52
Controlling failure	20	16	3	7	6	52
Co-ordination failure	14	13	2	12	11	52
External factors failure	10	8	4	16	14	52

The information in Table 4 shows an analysis of the causes of insolvency in the construction projects from the project management functions. The varying options shows the degree of construction experience of the respondents.

The revised column as shown in Table 5 was achieved by merging the information in Table 4 into two columns instead of 5. The new columns are only often and not often.

**Table 5:**

Project Management Functions	Often		Not Often		Total	
	No	%	No	%	No	%
Planning failure	35	67.31	17	32.69	52	100
Organisational failure	31	59.62	21	40.38	52	100
Directional failure	28	53.85	24	46.15	52	100
Controlling failure	36	69.23	16	30.77	52	100
Co-ordination failure	27	51.92	25	48.08	52	100
External factors failure	18	34.62	34	65.38	52	100

The responses from the respondents according to the details of Table 5 shows that planning failure as a project management function constitutes 67.31% of the insolvencies in the construction contract projects. The planning failure is normally due to unclear objectives and targets, unworkable plans, top management failure to backup the plans, failure to identify critical items, lack of understanding of operating procedures and policy directions, reluctance to take timely decisions and ignorance of appropriate planning tools and techniques.

Organizational failure had an often response of 59.62% and not often response of 40.38%. The organizational failure could be attributed to incorrect organizational structures resulting in conflicts, confusion of responsibility, inadequate delegation of authority at various levels, lack of stress on accountability and a tendency of people to escape responsibility by passing on the buck.

Directional failure had an often option response of 53.85% and a not often option of 46.15%. The implication is that most construction projects lack team spirit, poor human resources management. Improper choice of project manager, inexperienced staff and failure to procure and position resources as per the planned schedules.

Controlling failure had response rate of 69.23% on the often option and a 30.77% on the no often option. The inability of the project managers in construction project contracting to prevent breakdown of

communication at various levels has affected the design office and the construction site operators. The end result of such a breakdown in communication is lack of day-to-day decisions to halt insolvency problem.

External factors failure had a response rate of 34.62% on the often option and a 65.38% on the not often option according to the information in Table 5. The external factors include inflation and economic recession among others. Unforeseen bad weather and failure to adapt to the local conditions.

## VII. RECOMMENDATIONS

The project management has the advantage of helping state holders in construction projects to manage their projects effectively, enabling them to resolve problems more quickly. It takes time and money to manage a project, however the following good practices can help

- Prioritize the construction project business resources and ensure their efficient use
- Set the scope, schedule and keep cost and resources to budget.
- Improve productivity and quality of work, encourage consistent communications among staff, suppliers and clients
- Mitigate risks of a project failing
- Insolvency can have a resultant effect on the cost, quality of work and duration of the construction project.

## VIII. CONCLUSION

Construction projects consumes time and resources. The operators of construction contracts need to understand the principal functions of project management and its application to construction projects including its resultant effect on construction projects. The respondents highlighted lack of project planning, underbidding and the diversion of funds as the key element causes of insolvency. External factors like inflation and economic recession were rated low. A contractors insolvency may result to compromise in quality of work, increase in defects, substantial time and cost over runs

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