To Study the Detect & Overcomes the Problem in Project Finance

Aniket Doijod[1]
[1] PG Scholar, Department of Civil Engineering, Tatyasaheb Kore Institute of Engineering & Technology, India

Prof. S. S. Chavan[2]
[2]Prof, Department of Civil Engineering, Tatyasaheb Kore Institute of Engineering & Technology, India

Prof. B.V. Birajdar[3]
[3]Prof, Department of Civil Engineering, Tatyasaheb Kore Institute of Engineering & Technology, India

Abstract:* *The reputation of a business may suffer greatly as a result of a fraud probe. This may jeopardise the company's profitability, share price, and growth prospects. For construction firms, fraud is a major concern. Construction expenses rise dramatically as a result of corruption, which includes bribery, embezzlement, and fraud. Due to its very nature, the construction industry is among the riskiest when it comes to internal fraud. Thus, to control the fraud risk in a construction company, a robust system for fraud prevention, detection, and reaction is required. The purpose of this study was to analyze fraud risk management, determine what factors lead to fraud, and provide a framework for managing fraud in a construction organization. Adopting a case study methodology in a construction company, this study employed qualitative methods to analyze secondary data from a literature review as well as primary data from observations and interviews. This research produced three results: a study of the causes of fraud, an assessment of the maturity of fraud risk management, and a fraud risk management framework for a construction company. The fraud triangle theory was used to identify the cause of fraud risks, the fraud risk management maturity model to determine the level of fraud risk management maturity, and the fraud risk management concept to develop a fraud risk management framework.

Keywords: *Risk, project Finance, fraud, project risk*

I. INTRODUCTION

Construction companies have been found to be highly fluctuating, to have weak financial positions and to be subject to large business cycle fluctuations. Consequently, share prices tend to overheat when the economy grows quickly, and then collapse when the economy goes into recession. Performance evaluation of construction companies‟ get its importance from the fact that today's world is moving rapidly toward globalization. In this universal, many multinational companies are awarded business in other countries in which they are competing with local companies. Both multinational and local construction companies should seriously look forward to improving their performance in order to maintain their international reputation. This evaluation is useful for owners, managers, shareholders, and funding agencies of a company because it clearly draws the correct position of the company, many models are developed for evaluate companies‟ performance, but some of them consider economical and industrial changes in their models. Therefore, the main objective of this study is to develop the performance index that evaluates a company's financial current study is to develop the performance index that evaluates a company's financial position within the construction industry considering the economical factors and company size. Financial ratios quantify many aspects of a business and are an important part of financial statement analysis. There are many standard ratios which are used to evaluate the overall financial situation of an organization. Financial ratios are used by managers within a firm, by potential stockholders of a firm, firm's creditors and business analysts to compare the strengths and weaknesses of various companies. Positions within the construction industry consider the economical factors and company size.

II. LITERATURE REVIEW

1. *Chiara D'alpaos, Rubina Canesi, (2014)* Aim of the manuscript is to provide a novel valuation model to address risk and uncertainty in property investment decisions. When the future is uncertain and investments are durable and illiquid, the decision to invest at a certain point in time and the correct assessment of risks are key issues. In times of global financial crisis, investors need to know how to measure risks and identify the relationship between risks borne and risk premiums demanded. Increases in idiosyncratic and systematic risk lead developers to abandon/delay investments because de facto they feel not confident in projects riskiness and market values assessed by professionals. Risks evaluation is often left to the sensitivity and discretion of values. Rigorous risk assessment measures, based on mathematical algorithms, are here presented. We provide an operational framework to address risk and uncertainty by an integrated approach that can be easily understood by third parties and applied to different property types. The algorithms here proposed allow investors to evaluate risks and opportunities taking into consideration all the different phases of property investment projects and related risks. Investors, with different time patterns of income and desired consumption, will be therefore enabled to determine the risks they can tolerate, the return they need and it's timing.

2. *Patrick. X.W. ZOU and Guomin ZHANG, (2009)* Researchers study in manuscript aims to, from project stakeholder and life cycle perspectives provide an alternative way to scrutinize the risks associated with construction projects. In light of the AS/NZS4360 Australian/New Zealand Standard of Risk Management and ISO31000 Risk Management (Draft), a methodological framework is developed to provide step-by-step details in identifying and analysing the key risks and allocating them to the responsible stakeholders at particular project phases using two-dimensional graphical presentations. An empirical case study is undertaken to demonstrate the application of this risk management framework. The main contribution of the paper includes the proposition, development and test of a conceptual methodological framework as an alternative way to analyse and manage key risks involved in construction project procurement. In addition, with the aid of the proposed framework, 20 key risks are identified and strategies are formulated to manage the risks from the joint perspectives of project stakeholders and life cycle.

3. *Zhen Chen Sukulpat Khumpaisal, (2009)* the purpose of this paper is to introduce a novel decision-making approach to risks assessment in commercial real estate development against social, economic, environmental, and technological (SEET) criteria. It therefore aims to describe a multiple criteria decision-making model based on analytic network process (ANP) theory, and to use an experimental case study on an urban regeneration project in Liverpool to demonstrate the effectiveness of the ANP model. The paper commences with a description about risks related to commercial real estate development, and provides a list of risk assessment criteria based on literature review and experience in related areas. The ANP is then introduced as a powerful multicriteria decision-making method. An experimental case study is finally conducted with scenarios and assumptions based on a real urban regeneration project in Liverpool.
   The manuscript defines a group of risks assessment criteria against SEET requirements directly related to commercial real estate development. An ANP model is set up with 29 risks assessment criteria, and results from an experimental case study reveal that the ANP method is effective to support decision-making based on risks assessment to select the most appropriate development plan; and therefore it is applicable in commercial area.

4. *Alastair Adai, (2005)* the purpose of manuscript is to examine financial risk management. The UK valuation profession has been criticised for inconsistencies and failures to reflect risk and uncertainty in certain valuation assignments such as the pricing of urban regeneration land. Also the Investment Property Forum/Investment Property Databank specifically concluded that a new approach is needed which combines conventional analysis of returns uncertainty with a more comprehensive survey of business risks. This debate has been brought into sharper focus by the publication of the Carsberg Report, which emphasised the need for more acceptable methods of expressing uncertainty, particularly when pricing in thin markets. The paper commences with an examination of risk analysis within investment decision making and the property industry, drawing on the findings of the most recent literature that assesses the utilisation of risk management approaches. Financial risk management is examined and the workings of the D&B credit rating model illustrated. The paper explains the decision-

making framework within which the property risk score is applied. The aim of this paper is to present an alternative paradigm for the reporting of risk based on techniques utilised within business applications. In particular it applies a standard credit-rating technique, based on the D&B model, to report the level of risk within property pricing – property risk scoring (PRS).

III. METHODOLOGY

3.1 Factors Influencing The Companies' Profitability

At microeconomic level, performance is the direct result of managing various economic resources and of their efficient use within operational, investment and financing activities. To optimize economic results, a special attention should be given to the proper grounding of managerial decisions. These should be based on complex information regarding the evolution of all types of activities within the company. A synthetic picture of the company's financial position and its performance is found in the annual financial statements, which therefore become the main information sources that allow the qualitative analysis of how resources are used during the process of creating value. In order one company to run on a long-term performance way, it is needed to develop, implementation and maintaining the strategies, measures and coherent policies from economic and financial point of view, resulted from a good knowing of internal and external specific conditions in which the firm acts. The qualities of managerial options depend by the ability of identifying those elements that productively used could lead to increasing of the results and performance.
The research is to investigate how economic performance is achieved by companies in the industry. To reach this goal, we believed that the most appropriate indicators that express the aspects related to economic development and performance growth of companies should be chosen among the relative profitability indicators. The empirical study of the correlations between different impact factors and profitability has been conducted by using the information taken from the annual financial reports of a company in the Romanian chemical industry for the period 1999-2009 and by using appropriate statistical techniques. Starting from the economic content of rate of return and the information provided by various financial indicators computed on the basis of financial statements, the regression analysis helped identify an econometric model of economic performance assessment expressed as Return on total assets. This reflects a combination of elements that explain and influence the evolution of companies' return, such as: the financial result, the advantageous use of the financing structure, the size of the technical and productive infrastructure, the efficiency of current assets, etc. The statistical tests performed on variables and on the overall model validate its accuracy and the opportunity of using it in the analysis of microeconomic performance and in substantiating decision-making processes related to resources' management.

3.2 Fraud

A fraud investigation can have a profoundly negative impact on a company's reputation. This can threaten growth prospects, company share price and profitability. In certain cases a company convicted of corruption can be barred from tendering on public sector projects. Despite this, to many Construction companies doing business around the world, fraud and corruption are prevalent to the extent that they are now an 'accepted cost of doing businesses. 'Time for a new direction: fighting fraud in Construction' contains insight from Grant Thornton's forensic and investigation teams in Australia, Drawing on insights from the five countries, it explores why, when crime figures are falling around the world, fraud occurs so frequently in the Construction sector. By highlighting the scale, trends and types of fraud and corruption that affect Construction companies and the public sector, this report provides practical guidance for organisations that want to identify fraud and mitigate their risk. Responsibility must start with business leaders and their boards. This report makes a range of recommendations to the Construction industry to help it avoid being a weak link in the fight against fraud and corruption, including a phased, five-step protection process; and a robust programme of tests, responsibilities and corrective measures.

Although the numbers are a useful guide on the scale of fraud, volumes are difficult to estimate. "Most fraud is undetected so the quantum is impossible to accurately estimate. Businesses that have suffered from fraud are very reticent to let people know they have been a victim. Fraud happens, but it's another thing to report it – mainly for reputational reasons." Dealings with governments continue to attract more than their fair share of fraudulent activity. Construction fraud is front page news in Canada. The Charbonneau Commission has been investigating fraud and corruption in the awarding of public construction contracts across

Quebec. Fraud has gone to the heart of local government with one mayor being charged with 'gangsterism'. Renata Eva Milczarek, Raymond Chabot Grant Thornton Quebec, says: "The investigation is shining a light on the issue of fraud and is creating a lot of public scrutiny." Fraud is also widespread in India. The most common type is bribery related to the need to clear projects through multiple official channels. However, in a number of regions significant progress is being made in implementing controls. For example, the construction of the Olympic Park for London's 2012 Olympic Games incurred only one serious instance of fraud, compared to the 19 that occurred in the building of the city's Millennium Dome 12 years before.

IV. RESEARCH METHODOLOGY

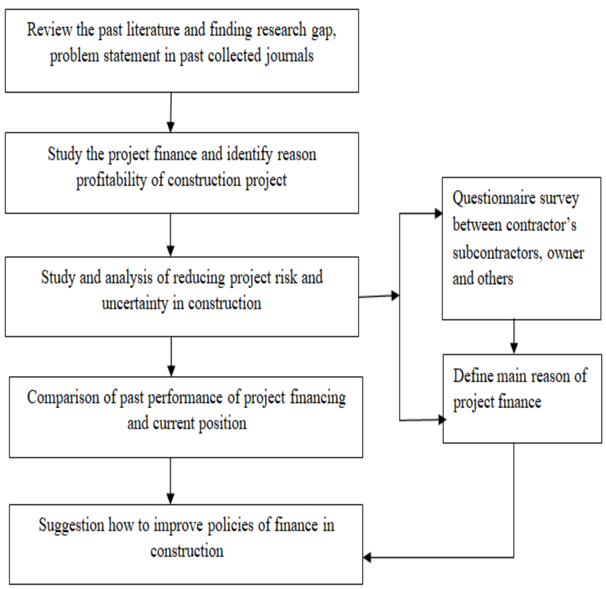

Figure 1 Research Methodology

V. RESULT AND DISCUSSION

1. The Fraud Risk Management

The Fraud Risk Management concept with the aim of developing strategies for preventing, detecting and responding to fraud risks faced by organizations. Fraud prevention policies are designed to help preventing fraud and misconduct risks. It includes leadership and governance, fraud and misconduct risk assessment, code of conduct, employee and third-party due diligence, and communication and training. Fraud detection policies are designed to find fraud and misconduct whenever they occur. It includes a mechanism for seeking advice and reporting misconduct, auditing and monitoring, and forensic data analysis. Fraud response policies aim to take appropriate corrective actions with regard to fraud losses. It includes investigations, enforcement, accountability and corrective actions.

In identifying fraud risks, interviews were conducted with the President Director, Operations Director, Project Manager and other field staffs. Observation was also done in the field activities and in the head office to obtain an overview of the business processes to identify inherent fraud risks at every business process. The fraud risks were also analyzed, and the causes were categorized into three components of fraud triangle: financial pressure, opportunity and rationalization. In this research, it is found that the root cause of most of fraud cases is financial pressure. Based on the results of the interview, it was found that before the project manager committed fraud, it was reported that he remarried secretly, so he had additional financial needs that could be categorized as financial pressures. Thus, the situation in which project managers remarry secretly, which is a non-shareable financial problem is the root cause of fraud, which is then supported by the opportunity and rationalization. Based on the interviews and observations regarding company's business processes, the fraud risks that have been identified are as follows:

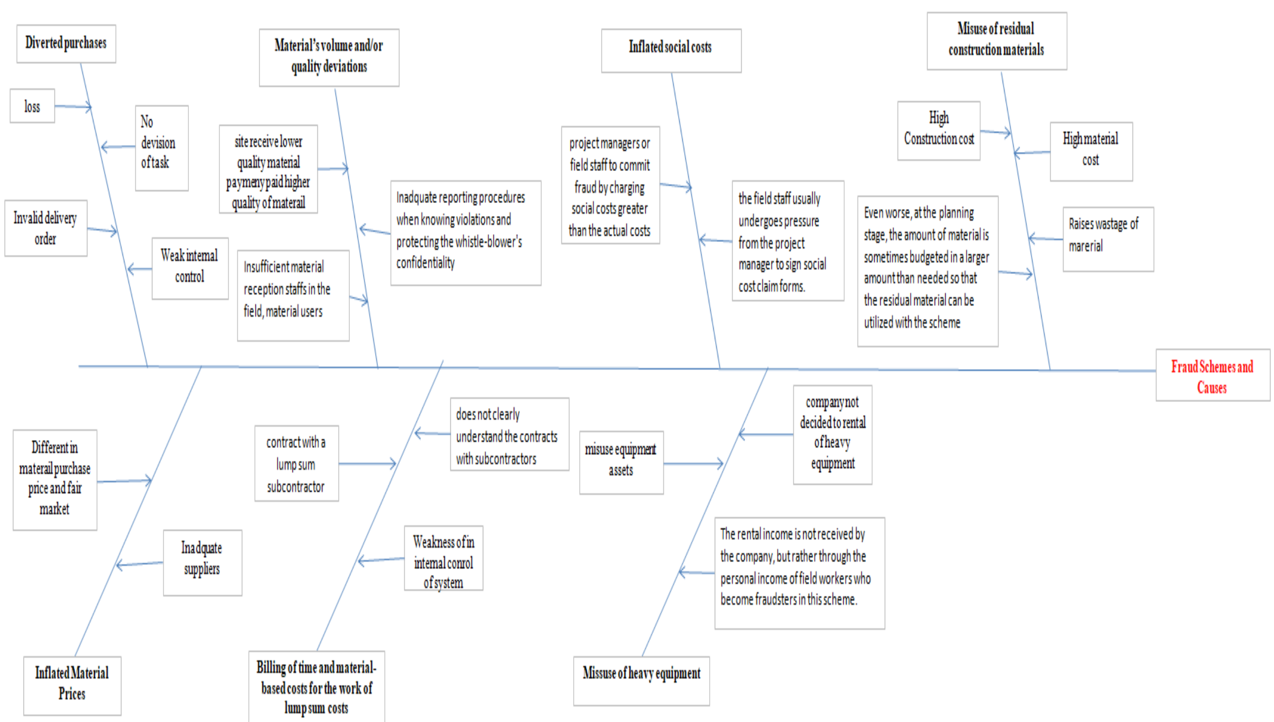

Figure 2 - Flowchart of Fraud Risk management

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 05 | May - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

2. Fraud Risk Management Framework

Table 1: Fraud Risk Management Framework

A) Fraud Risk Prevention Policy	
Risk Assessment	Description
Leadership and governance	Formal structural and process
	The behaviour of the leadership of the organization in determining the tone at the top that supports an organizational culture that has an anti-fraud spirit
	The existence of an audit committee to help ensure that the control and enforcement of compliance and antifraud policies in the organization are effective.
	The existence of chief compliance/risk officer to coordinate anti-fraud efforts, including setting acceptable policies, procedures and standards of business practices.
	Effectives of internal control system
Code of conduct	formal provision containing regulations that must be obeyed by employees, and there was only minimal communication from management to the employees,
	Use a simple, concise and positive language
	ethical decision-making tool to help employees make the right choices
	use to report problems or ask for advice without fear of retaliation
	All officials and employees periodically certify or acknowledge that they have received a code of ethics,
Fraud Risk	Identifying, evaluating and

B) Fraud Detection Policy	
Risk Assessment	Description
Mechanism for seeking advice and reporting misconduct (whistle-blowing)	Six fraud schemes, four of them could be mitigated by the existence of whistle blowing guidelines
	Fraudulent actions can be prevented from happening again in the future with the mechanism of reporting fraud and violations, including the policy of protecting reporters.
	Use of hotlines as an effective reporting tool.
Auditing and monitoring	Evaluate the adequacy of the existing controls.
	Compilation of audit and monitoring guidelines
	Planning is done based on the results of the risk assessment where the audit will be prioritized in areas with the highest risk level (risk-based audit).
	Audits are conducted periodically by special personnel who are independent of operational activities.

C) Fraud Response Policy	
Risk Assessment	Description
Investigation	Preparation of investigation guidelines
	Investigations are carried out in accordance with the guidelines of the investigation by an independent party that understands the law with adequate investigative capabilities (can use a third party) and is overseen by an audit committee independent of management.
Disciplinary Standard	Preparation of disciplinary sanctions procedures, which contain the types of violations and sanctions.
	Implementation of disciplinary sanctions in accordance with consistent disciplinary procedures.

Assessment	mitigating fraud risks.
	Fraud risk assessments carried out periodically throughout the organization, considering significant business units, processes and entity accounts
	Used to continue to make improvements and adjustments to the company's internal controls.
Communication and training	implementation of socialization and training to preventing of fraud
	Training included address the issue of fraud, with specific topics of fraud that were delivered in detail regarding prevention, red flags, reporting suspicious activities and disciplinary actions.
	Performed based on the results of fraud and misconduct risk assessments
	all employee training conducted regularly and frequently

3. Controlling fraud occurring in project finance

Table 2: Controlling fraud occurring in project finance

Sr. No	Types	Description	How to Avoid
1	Billing fraud Low	Purposely overstating the amount of labour, materials and other equipment required to complete a project.	Compare actual to budget
2	Bid/contract rigging – market collusion High	When suppliers in the market collude to fix prices or direct customers to use certain contractors. This can include bribery or kickbacks	Rules in the contract that guide the subcontractor selection process. Schemes such as bid rotation, bribes and kickbacks, false or inflated change orders, undervalued deductive change orders or phantom subcontractors that consume the buyout savings all fall under this category.
3	Bribery/corruption High	Often collusion by two parties entering into a secret agreement whereby a financial incentive is made for securing a particular outcome. Examples include the awarding of a public or private contractor purchasing property on 'favourable' terms.	
4	Fictitious vendors – falsifying payment applications Low	These are created by falsifying payment applications, covering up the purchase of personal items or diverting money to a phantom company. Activity is often controlled by an employee but can also be done by external entities through falsified company documentation or email addresses.	Pay applications from subcontractors need to be monitored and scrutinized closely for errors or irregularities.
5	Change order manipulation Med	Diverting lump-sum cost to time and material cost by initially budgeting expenses as a lump-sum then billing for time and materials related to change orders.	Accurate design specifications in the original scope of work or proper price reduction for work substitution. In any of these situations, seek additional documentation.
6	Theft or substitution of materials Low	Taking material from the work site for personal use or using lower-grade material than quoted which might result in subsequent repairing or replacement	
7	False representation Med	This might involve using undocumented workers; falsifying minority content reports, test results or insurance certificates; non-compliance with environmental regulations; and misrepresentation of small business status.	contracts require specific terms about the subcontractor's employees, insurance, purchases, etc
8	Money laundering	This is activity to legitimise money gained illegally. In real estate it could include making down payments on property and selling at a later date to give the money a legitimate origin. Tax avoidance can involve commonplace activity such as paying cash-in-hand for labour	Pay applications from subcontractors need to be monitored and scrutinized closely for errors or irregularities.
9	Manipulating Change Orders	Change orders can be problematic if they are not monitored closely. Many times, issues can be resolved based on a successful relationship between the contractor and subcontractor. Yet, even in those relationships, certain red flags should be considered as possible fraud indicators: change orders for a base contract's work scope or ones with missing scope descriptions, excess charges, and omissions of design specifications in the original scope of work or improper price reduction for work substitution. In any of these situations, seek additional documentation	Successful relationship between the contractor and subcontractor.
10	Manipulating the Schedule of Values and Contingency Accounts	Failing to update Schedule of Values (SOV) line items as buyouts or as changes are made can provide opportunity to cover up fraud. For example, a project manager or project accountant might conceal buyout savings by providing a place in the SOV to charge phony bills received from shell companies (companies that have no independent assets or operations of their own, but are used solely conduct specific business dealings) under their control.	Failing to update Schedule of Values (SOV) line items as buyouts or as changes are made can provide opportunity to cover up fraud

VI. CONCLUSION

A better management of a company profitability implies adoption of some adequate strategies which can be identified through analysis of how were manifested the phenomena in their concrete microeconomic environment. The elements on which it can intervene for improving the performance are those with a high impact, and factors that influenced negative the profitability constitute some reserves of economic increasing in the future activity.

Internal control is the most important, fundamental and effective way of managing the modern enterprise. A large number of actual cases indicate that the majority of the causes and failures of the enterprise are the lack of internal control and are largely due to ineffective internal controls. Therefore, to secure a place in the market and maintain a stable and healthy development, the enterprise must create a perfect internal control system. Internal control includes not only preventing accounting errors, but also using ethical focus on management in designing, implementing, controlling and improving business processes. Internal control should be implemented to ensure the effectiveness and efficiency of their operations and compliance with laws and regulations. Leaders at all levels should first strengthen the internal consciousness of internal control. From the chairman and general manager to the project leader, they will provide sufficient insight into the establishment and implementation of a system of internal control and strong support for the establishment of internal audit activities and the conduct of audits and audit findings. Quality of site surveillance has a major influence on the overall performance and efficiency of the construction project. Inadequate surveillance could be one of the major causes of work. Experienced and trained supervisors must have an important role in minimizing the amount of work done due to construction defects. The performance of supervisors depends on skilled communication with individual employees, and planning and directing work

Furthermore, the contractors need to develop strong audit mechanisms and control processes to avoid fraud. However, factors such as the increase in construction business complexity, high labour turnover ratio, infrequent construction projects, inadequate regulations and lack of energy due to cost reduction strategies make it difficult to develop internal audit structures. Additionally, supervision over operation was very low since operations were conducted in remote sites, mostly away from the company headquarters. Apart from that, an implementation of an independent internal and external audit program would help to identify new vulnerabilities, and to measure the effectiveness of the existing controls. Employees should also be trained about policies and procedures related to fraud, internal controls, code of conduct and ethic policies of the company. Alternatively, the enterprise can work on seminars, conferences and workshops to raise awareness of the importance of internal control systems and their role in the development of operational, financial and strategic performance in companies. For internal controls to be effective they must be constantly reviewed and evaluated for effectiveness and kept updated as business environment and technological processes are fast changed and dynamically evolved. Thus, it is apparent that internal control expression is used in a wide sense and includes internal check and internal audit besides other forms of controls.

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