

“A Review Paper on Critical Study and Analysis of Crisis Management in the Construction Industry”

Ms. Suchita Y. Suryavanshi¹, Prof. G. N. Kanade², Prof. A. B. Patil³

¹PG Student, Civil (Construction Management), Tatyasaheb Kore Institute of Engineering and Technology, Warananagar, Pin – 416113, Maharashtra, India

²Assistant Professor, Dept. of Civil Engineering, Tatyasaheb Kore Institute of Engineering and Technology, Warananagar, Pin – 416113, Maharashtra, India

³Assistant Professor, Dept. of Civil Engineering, Tatyasaheb Kore Institute of Engineering and Technology, Warananagar, Pin – 416113, Maharashtra, India

Abstract - The method developed by the organization to overcome a crisis is known as crisis management. Crisis management is essential for completing the construction project on time. It provides a theory for managing crisis management with the factors that cause a crisis in a construction project. However, the crisis management method is only effective when the workflow continues uninterrupted even during the crisis. The likelihood of a crisis in construction projects must be identified to develop an effective crisis management technique, as each factor has its effects. Major factors such as technical, labour, organizational, material, time, equipment, communication, financial, and other factors that are responsible for the cause of a project's crisis are considered. The research is carried out through a questionnaire survey analysis among various project managers from various construction project sites.

Key Words: Crisis, Crisis Management, Factors Questionnaire survey, Analysis...

1. INTRODUCTION

In a residential project, crisis management is a situation-based management system that incorporates explicit roles and duties as well as process-related organizational needs. Action in the following areas will be taken as part of the response: crisis prevention, crisis assessment, crisis management, and crisis resolution. The goal of crisis management is to be adequately prepared for a crisis, to provide a quick and adequate reaction to a crisis, to maintain clear lines of reporting and communication in the case of a crisis, and to agree on crisis termination procedures.

From recognizing the impact of the crisis on the organization to preventing, mitigating, and conquering the many sorts of crises, crisis management approaches comprise several processes. There are several facets to crisis management, including:

- Techniques for dealing with both the reality and perception of a crisis.
- Developing metrics to define which scenarios constitute a crisis and, as a result, should activate the appropriate response mechanisms.
- Communication that takes place during the response phase of an emergency management scenario.

A crisis mindset necessitates the ability to imagine the worst-case scenario while simultaneously proposing numerous solutions; trial and error is an accepted discipline, as the first line of defense may fail. It is essential to keep a list of contingency plans on hand and to be on high alert at all times. Organizations and individuals should always be prepared with a rapid response plan in the event of an emergency that necessitates analysis.

The perception of an organization's response to a crisis has a significant impact on its credibility and reputation. In businesses, the structure and communication required to respond to a crisis promptly is a difficulty. To contribute to an effective crisis-communication process, there must be open and continuous communication throughout the hierarchy.

Crisis management is also a part of risk management, albeit it is probably inaccurate to state that it is a failure of risk management because it will never be possible to eliminate the danger of catastrophe.

Identifying types of crises is critical during the crisis management process since different crises need the employment of different crisis management solutions. The categories of crises are listed below.

- Technological crises
- Financial problem
- Malevolence

- Organizational Misdeeds
- Workplace Violence
- Rumors
- Terrorist attacks/man-made disaster
- Natural disaster
- Labours issues

In this project researcher is plan to visit some construction companies which belongs to the construction of building project. The selection of the companies is based on the project they handled and worked on large-scale projects. The main aim behind this is, to find out major issues which they come across during their ongoing as well as past projects. Its is purpose to give them optimum solutions to their issues by efficiently adapting time and cost-effective measures. Therefore, in this project researcher is trying to study in detail the assessment of crisis management for residential buildings.

1.1 Crisis

A crisis is a situation that which a group or organization is unable to deal with using standard routine procedures. It can happen as a result of unforeseeable events and consequences. Because of the long-term nature of projects, both are standard features of construction companies. As a result, it necessitates their effective management in both preventing and resolving crises.

1.2 Crisis Management

The objectives of crisis management are to identify the crisis, organize a reaction, confront the problem, and find a solution to the crisis. Crisis management is a continuous process that combines proactive and reactive measures. Before, during, and after the crisis are the three primary phases of the crisis management process. It includes.

- **Pre-crisis** includes crisis planning and preparedness when the organization is kept in the dark until a crisis is started.
- **Crisis** includes the crisis-related incidents and the harm they cause.
- **Post-crisis** learning from previous experiences informs the pre-crisis stage.

2. LITERATURE REVIEW:

Arunmohan A. M., Dr. Lakshmi M. (2018) discovered that the building sector is a thriving industry with a significant economic impact on any country. The total project cost rises as the massive construction project is delayed. Uncertainties and dangers must now be taken into

consideration during the undertaking. Careful project scheduling is required for arranging and finishing projects in a financially, timely, and qualitatively responsible manner. Project success is ensured by effective project scheduling. This research focuses on qualitative and quantitative analysis, as well as risk detection. The goals are to identify the key risk factors that disrupt the project schedule, and ii) determine the likelihood of completing the project within the time frame specified. Questionnaires are distributed to 20 industry practitioners with varying levels of experience ranging from [1] to [25] years. Quantitative analysis is performed using methods such as Monte Carlo simulation (MCS) and PERT. Mhaske Aniket, Dr.Khandekar S.D (2016) this article provides information on current events. Construction projects entail complex interconnections, several technologies, and material and equipment integration, all of which increases uncertainty and risk. Today's construction industry participants, such as engineers, managers, and owners, must employ crisis management to effectively resolve such crises and prevent repeat recurrence. The many elements regulating the crisis are investigated in this article utilizing the SPSS software programmer. Any organization that can accurately predict a catastrophe through crisis management tactics may weather any storm with the fewest probable negative consequences. As a result, construction companies must deal with crises effectively through a crisis management procedure. Rajprasad. J, Thamilarasu. V, Maheshwari. N (2018) investigated how crisis management is a method developed by an organization to deal with a crisis. Crisis management is essential for completing the construction project on time. It provides a theory for managing crisis management with the factors that cause a crisis in a construction project. However, the crisis management method is only effective if the workflow continues uninterrupted even during the crisis. The likelihood of a crisis in construction projects must be identified to develop an effective crisis management technique, as each factor has its effects. Major elements such as technical, labour, organizational, material, time, equipment, communication, financial, and other aspects that contribute to project crises are taken into account. The study is conducted using a questionnaire survey and analysis conducted among various project managers from various building project sites. Sahin Selim., Ulubeyli Serdar, and Kazaza Aynur (2015) have explained crisis management is a process that includes detecting and evaluating crisis signals as well as taking and implementing the necessary precautions to overcome a crisis with minimal damage. Detecting early warning signs of a crisis helps firms avoid the crisis and survive without suffering significant financial losses. Other factors that contribute to construction firms surviving with zero defects are as follows: detecting indirect signals before a crisis, (ii) developing proactive methods to defend them against the crisis using these signals, and (iii) resolving the crisis (iv) implementing necessary measures for the firm's

recovery following the crisis, and (v) documenting the crisis's lessons learned. Construction companies that properly manage a crisis can exit with little losses and enhance their market share after the crisis is over. In other words, companies that can emerge from a crisis with minimal damage may have a strategic advantage over their competitors. In light of these considerations, this paper introduces the notion of crisis management in the construction sector, as well as related objectives and characteristics. Furthermore, both innovative crisis management approaches and the corresponding process were thoroughly discussed from the perspective of construction firms. This is a new area in the construction management literature. It can help companies manage themselves creatively and innovatively in the face of potential crises at the micro and macro levels. As a result, this study seeks to uncover how construction firms can better manage crises and return to their former positions in the short term through innovative means. Srinivasan N. P and Nandhini N (2015) this paper discuss a crisis as a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and reputational risk. The accelerated globalization required companies to differentiate themselves to compete in those situations, which resulted in the implementation of various management strategies. Within this context, the terms "crisis" and "change" must now be dealt with by the companies. Both situations create uncertainty, prompting businesses to seek new strategies to deal with those uncertainties. Construction companies that understand the importance of crisis have felt the need to incorporate crisis management to pass through such crises with as little loss as possible while gaining a competitive advantage. The primary goal of this paper is to investigate the significance of crisis management in construction projects and to analyze the factors that influence crisis management in construction projects.

3. OBJECTIVES OF THE STUDY:

- To study the concept of crisis management in the construction industry.
- To analyze the impact of the crisis on residential buildings.
- To identify the factors responsible for the crisis in residential buildings.
- To suggest alternative ways to minimize crisis in residential buildings.
- To analyze the time and cost-effectiveness in residential building areas due to crises for suggested alternative ways.

4. METHODOLOGY:

The following methodology will be adopted:

- Collection and study of literature on the crisis in construction.
- Visiting different residential projects and studying the factors creating crisis through a questionnaire survey.
- Analysis of questionnaire survey using Probabilistic distribution Method
- Suggesting action plan to minimize crises by using the Monte Carlo Simulation method.
- To carry out time and cost analysis of crisis management for suggested methods and plans.

The flow chart of the methodology of the project is shown in figure 1.

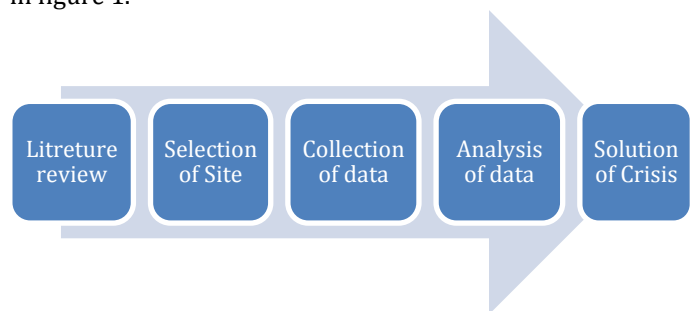


Figure1. Methodology of the project

5. STUDY PROCESS:

This study involves mainly the following process:

- Determination of objective and scope of study work.
- Review of the literature.
- Site Visits and collection of data using the questionnaire survey
- Analysis of questionnaire survey using Probabilistic distribution Method
- Suggestions to minimize crises.
- To conduct a time and cost analysis of crisis management for suggested strategies and approaches.
- Discussion of Result and Conclusion.

6. CONCLUSIONS

Crises are exceptional occurrences that pose a danger to fundamental structures and increase uncertainty. Despite the company's effort to risk management, both abrupt and cumulative influences were seen in a project as the practice of a multinational construction firm. Due to their lengthy nature, construction projects frequently experience crises.

Crises can appear as abrupt outbreaks of many small, mismanaged dangers or as the negative effects of significant risk. Supplier connections, design and technical considerations, price increases, inadequate human resource allocation, and environmental considerations are a few of the crucial elements that must be taken into account when handling crises in an organization.

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