



Risk management in building construction

Work is surveyed and analyzed: A Study

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Abstract –

To find trends and areas of focus for future study and application, the literature on construction and project risk management is studied and assessed. This analysis is done to find knowledge gaps and inconsistent approaches to construction and project risk. The study discusses the perception of risk connected with the construction industry's activities and the extent to which the industry employs risk analysis and management strategies, based on a questionnaire survey of general contractors and project management practices in Pune. The report comes to the conclusion that risk management is crucial to construction activities in order to reduce losses and increase profitability. Construction risk is typically understood as occurrences that affect the project's goals for cost, time, and quality. In construction, judgement and intuition are key components of risk analysis.

1.INTRODUCTION

One of the current hot topics for researchers and practitioners in the field of project management is the management of risk in projects. The industry is unique in that the manufacturing facility or plant must relocate to the construction site due to the nature of the projects (Hinze, 2001). The construction sector has been described in a wide variety of ways using terminology from several specialised fields. Construction encompasses such a broad range of activities that the industry's exterior limits are likewise hazy, which adds to the vagueness (Murdoch and Hughes, 2000). For instance, the phrase "construction" can refer to the building, upkeep, and destruction of a variety of objects, such as dams, offices, buildings, and homes. It's challenging to properly understand construction because of the relationships can be described as being



fragmented, It responds to changes in the economy, There is a remarkable diversity of occupations, experts, and suppliers, and it is greatly influenced by outside contexts. The construction industry more than any other demands the effective implementation of business principles. Sound business processes and decisions are required due to the numerous variables and intricate relationships between factors that must be taken into account when building a construction project. Application of good business practices on a daily basis is necessary for the coordination and use of numerous types of labour skills, materials, and equipment that are utilised to construct a project (Adrian, 1975). The building project's changeable environment made it more difficult to decide how to use personnel, supplies, and equipment.

2. Objectives

1. By reading the literature and considering potential additions from the industry's practitioners, such as contractors and owners, major risk factors that might impede construction processes can be identified.
2. Examining the importance and distribution of each risk factor indicated from the viewpoints of contractors and owners.
3. Analyzing the effectiveness of the risk management practises used in the sector for each category (contractors and owners).
4. Analyzing a construction case study to learn more in-depth information about how the identified risk variables affect the project's cost and schedule.
5. Making helpful suggestions and recommendations to upgrade the construction industry's risk management procedure and enhance owners' and contractors' performance in this

3. Research Importance

An essential component of any venture's planning and administration is risk management. the construction sector is compared to many other industries, prone to greater risk and uncertainty. It takes a long time to complete and put into use a project, starting with the investment appraisal. This research is crucial because it will identify the risk factors in the construction industry in Pune and assess the significance of each factor in terms of severity and allocation. The construction industry in Pune suffers from a lack of understanding of risk management, including risk identification, analysis, and assessment.



4. Purpose of the study

The management missions' key objective became risk management. Unfortunately, not many scholars have contributed to this topic, which addresses the building business in the local market, despite the fact that it is one of the industries with the highest risk. In this study, risk variables impacting Pune's building sector will be examined.

5. Methodology

The data for this study was obtained by means of a questionnaire. The questionnaire was distributed either personally or via e-mail to a random sample of about 50 project managers from the construction and high-tech sectors in Pune during 2016. At the end of the survey period there were 84 usable completed questionnaires. The questionnaire consisted of three main sections, each containing a number of brief questions to be answered on a 0±5 scale. The first section dealt with the extent of the contribution of individual PRM tools to the project success in general. The objective here was to identify the tools that were perceived as being the most valuable by the respondents. The second section of the questionnaire dealt with the effectiveness and efficiency of the manner in which projects are managed in the respondent's organization. With these questions we sought to investigate whether there is a relationship between the use of PRM tools and the level of performance of the project management process. The third section addressed the contribution of a risk management process to overall project success. In particular, we wished to learn about the differences in PRM tool usage between those project managers who believe that risk management is a valuable process.

6. Discussion and conclusion

Construction project risk factors have an impact on the project's timeline, budget, and quality of execution. Hence, risk management becomes an ongoing process. activities during the whole life of the project, from its start onward. According to a questionnaire survey of contractors and project management techniques within the UK construction industry, both view risk in construction as the possibility of unanticipated events



occurring that could negatively affect the project's potential completion, including in terms of cost, time, and performance quality. The construction business has handled risk management in terms of individual intuition, judgement, and experience garnered from prior contracts, even though risk management approaches have long been employed in other industries. The fact that more data and time are needed as risk analysis methodologies get more powerful and complex is a significant disadvantage. Time limits the operation of the construction sector because Most often, just-in-time production is used in the construction industry to meet customer production demands.

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