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Abstract: The construction projects are one of the most important one which plays a vital role in development of the country. It is estimated that the High-rise (or) multi storey buildings are the most important part of the construction for the greater development. The major part of the construction leads to high-rise buildings. Hence the risk involved in this part also rates higher in the construction industry. Risks in construction projects are considered one of the most common problems causing a multitude of negative effects on the construction projects. Construction risks can be minimized only when their cause are identified. The objective of this study was to study the risk assessment in the construction.

This study was carried out based on literature review. The data for this study will be gathering through a detailed questionnaire survey. The questionnaire consists of two sections and first section consists of general questions, the second section carries the list of major risks. The questionnaire form is forwarded to various construction industries through email and in personal. The objectives of the study are to successfully achieve the effect of contractors risk attitude on the construction project.

1. Introduction

The construction industry is associated with a high risk exposure and is therefore a field where risk management is crucial which largely depends upon the attitude of all the personals indulge into the construction activity mainly on the contractor’s perspective. During the last decade, the demand for risk management in civil engineering and construction has increased as a consequence of more complex projects. The development within the construction sector will continue and consequently, the complexity of projects will increase. Hence, the demand for increasingly sophisticated risk management will presumably also increase.

Risk can be defined from different perspectives and practically refers to “an event or set of circumstances that, should it occur, will have an effect on the achievement of the project's objectives”. Construction projects, due to their unique nature, involve quite a number of interacting activities that are full of risks, each of which may exert impacts, to some extent, upon the cost, time and quality.

Risk is one of the most frequently used terms to describe the characteristics of the construction business. Contractors deal with uncertainties inherent in construction projects that frequently result in unfavorable effects, e.g., cost overruns and schedule delays. Also, the construction business is a project-based or contract-based business. By contract, a contractor takes responsibility for delivering a project on schedule and on budget with specified quality for a contract price, without knowing the actual cost. The inherent uncertainties in the construction business and contractors’ diverse approaches to risk management have been key issues in the field of construction engineering and management studies. In addition to the uncertainties inherent in projects and contractors risk management at the project level to deal with cost and schedule overruns, contractors face competition in the market place. Contractors compete with each other to obtain jobs available in the market. In many cases of competition, the winner is decided through competitive bidding in which bidders come to a critical decision on whether to bid or not and/or how much to bid. Competitive bidding is the major mechanism of competition in the construction business. It has been favored in both the private sector and the public sector. Thus, one of the main tasks of all the project participants, including employers, contractors, professional advisors and
subcontractors, is to identify the discrete sources of risk, develop a risk management strategy as part of their risk management system and also cultivate the capability of carrying out such activity.

The risk management strategy, from a contractual perspective, is to allocate the risks, in the contracts, among the parties in such a way as to enable risks to be managed efficiently and effectively throughout the construction process. The level of risk increases in the beginning of a project and reaches its highest level during the tendering process where the project uncertainty is at its peak. When the production starts, risks are either actualized or expired and the level of risk will decrease as the project progresses. As a result, risk management becomes most vital in the tendering process. There is a strong relation between an early risk management and the success of a project. The volume of resources spent in risk management activities is a fundamental factor to project success.

An early involvement of risk management will create better conditions for the contractor, in both the tendering process and in the execution phase. Cost estimation is the phase of the tendering process where the contractor specifies a price on their commitment to the client. Kim et al. (2008) say that the cost estimate has to be low enough to win a project but high enough to get the required rate of return. Therefore the estimate is a consideration of the two extremes and it will become crucial to the existence of the company. A major part of the cost estimation is performed in the tendering process where risks are assessed and added to the tender price.

There are several studies showing that risks have historically either not been managed at all or assessed as a stipulated percentage of the contract sum. However, this view has changed during the years and it is seen that more than 50% of the contractors still do not use any formal techniques to assess risks in the tendering process. Because of the importance of risk management in the tendering, contractors should use structured techniques to compile more correct estimations. While the construction industry is becoming more complex, structured risk management systems can be the difference between failure and success.

With more complex projects and an increased level of information, structured and formal techniques have to be used in order to store and process the available data effectively. In order to manage these techniques, computer software tools should be used. The tools should encourage and assist the contractors to use structured risk management techniques and generate more knowledge about their estimations. However, there is a lack of available risk management support tools and the existing which tools have several disadvantages. Therefore a possible solution is to customize a support tool perfectly suited for the organizations demands regarding risk management in the tendering process.

Risk management process starts with risk identification, which is identifying the type and the source of risks. It continues with classifying the types of risks and their impact to the project. Risk analysis will filter and priorities the identified risks. Following the risk analysis, risk response plan is then developed. During project implementation, the risks identified and their responses are monitored and reviewed.

2. Literature Review

Title - A Risk Management Proposal to the International Contractors Industry from the Financial Perspective
Author - Cem Berk

Construction companies face threats from competition, the need to adapt to modern technology, and changes in customer expectations. These issues require efficient risk management techniques. However, construction companies are late adopters of total quality management, one of the major risk factors in the industry which are because of poor working environments; inadequate building safety, damaged surroundings, and a lack of insurance are issues at construction sites. This paper uses systematic risk identification, classification and analysis, measurement, and response methodologies to help international contractors obtain a quantified determination of the risks of project development and execution.

Title - Contractual Risks in the New Zealand Construction Industry: Analysis And Mitigation Measures
Author - Jasper Mbachu

While tendering for jobs, a contractor is expected to analyze the various risks in each prospective project and price them appropriately. Contingencies are included in the tender price to cater for the various risks based on their impacts on the project targets and profit margin. This has led to contractors over compensating or under compensating for risks with costly consequences. This study aimed to establish priority contractual risks in the NZ construction industry, and their mitigation measures. The research was based on a questionnaire survey of consultants and contractors. Descriptive statistics and multi-attribute techniques were used in the data analysis.
Title - Identifying Key Risks in Construction Projects: Life Cycle and Stakeholder Perspectives

Author – Dr. Patrick X.W. Zou

Managing risks in construction projects has been recognized as an important management process in order to achieve the project objectives in terms of time, cost, quality, safety, and environmental sustainability. However, until now most research has focused on some aspects of construction risk management rather than using a systematic and holistic approach to identify and analyze the likelihood of occurrence and impacts of these risks. This paper aims to identify and analyze the risks associated with the development of construction projects from project stakeholder and life cycle perspectives.

Title - Classifying Key Risk Factors in Construction Projects

Author - Pejman Rezakhani

Risk management is an important step in project success. It is the process of identifying, classifying, analyzing, and assessing inherent risks in a project. Due to the nature of the construction projects which consist of many related and non-related operations, many risk factors will contribute in a project. To have an effective risk management plan, at first step the key risk factors which have the most effect on project objectives should be identified and classified. This paper is an investigation of different risks which may be involved in construction projects. Project management functions which have the most effect on risk management plan are categorized and an analysis of key risk factors in every category is described. Finally, a hierarchical risk classification to cover all the effective key risk factors in construction projects is suggested. Case studies have shown that this classification covers the most key risks that should be taken into consideration in a risk management plan.

Title - How the Principle of Risk Management Can Be Applied to Different Types of Projects?

Author - Yuanyuan Zhang

Making the project achieve success requires many factors to be got right simultaneously. Project failure, however, may result from only one slight problem. It is obvious how important it is to adopt risk management principles for the whole process of project management. Project risk management is a process which combines the analysis and management of the risks with a project. The purpose of risk management is to reduce future damage and loss, to minimize the total cost of risk and identify, control and limit the impact of the risks.

3. Scope, Methodology and Purpose

3.1 Scope:
Following are the objectives of the proposed dissertation work.

a) To study what is risk and how it can be managed in construction projects.
b) To study and identify the factors responsible for risk in construction projects.
c) To study and understand the effect of contractors’ risk attitude on contractors’ competitive success in the construction industry.
d) To investigate the effects of organizational risk attitude on contractors’ competitive success in the construction industry.
e) To give recommendations based on the entire work after doing analysis.

3.2 Methodology:
For carrying out the proposed work, following methodology will be adopted for data collecting and analysis.

a) Literature collection and its study will be done based on risk management and contractors’ attitude towards the project.
b) To study the various factors responsible for emergence of risk in the construction project and how attitude is affected by means of qualitative methods.
c) Develop an efficient method to represent construction contractors’ different risk-taking behaviors based on the quantitative method such as Monte Carlo simulation, Delphi technique or statistical tool.
d) Based on above results severity of risk attitude on contractors’ success will be done.
e) Results and discussions.

3.3 Purpose of Dissertation:
The proposed work will help us to know the probable risk reasons in the construction projects as well as how the risk attitude can change the scenario which can help the contractor to cope with the upcoming competition.

References
