Abstract of PhD Thesis of Mr. Kamalendra Kumar Tripathi

Ensuring success in the construction business is the aim of the owners and top management of construction organizations. Previous research indicates that the presence of certain factors in an organization makes it more successful than organizations without those factors. Because the construction business is one of the riskiest businesses in the world, the identification of such factors and adoption of these factors in the work ethic of the company is of vital importance for the owner/top management. Also, like any other organization, it has become essential for organizations in the construction industry to measure their performance effectively for long-term survival in today’s competitive business environment. Therefore, it is imperative for a construction organization to know about various performance measurement factors to evaluate its performance.

Traditionally, construction organizations with a track-record of successful project completion have been considered to be successful construction organizations. However, while construction projects may have been successful, it is not always the case that the construction organization is also successful. They may even fail and go bankrupt in the near future. Therefore, there is a need to think about the success of a construction organization at a corporate level, rather than focusing only on success at the project level. Although the identification of success factors at the project level has been studied, it has not been investigated properly at the organization level. Therefore, it is important to identify the relevant factors for the success of construction at the level of the organization.

This study presents the factors that contribute to the success of construction organizations that operate in India. The research method involved seeking responses
from experts in the construction industry through a questionnaire survey. A total of 106 experts from 90 different organizations were included in the survey. Factor analysis and structural equation modeling of responses, which were related to 30 success attributes, enabled the extraction of five significant success factors, which are: 

- experience and performance,
- top management competence,
- supply chain and leadership,
- availability of information flow and resources,
- effective cost control measures.

Similarly, the factor analysis and structural equation modeling of responses that were related to 20 performance attributes enabled five significant performance factors to be extracted: 

- profitability and asset management,
- satisfaction of key stakeholders,
- predictability of cost and time,
- environment, health, and safety (EHS),
- and quality consciousness.

The top management’s competence emerged as the most critical success factor when stepwise regression analysis of the success factors was performed against various performance factors. The relative weights of each success and performance factor were assigned using a fuzzy preference relation, for which the opinions of 18 experts from 18 different construction organizations were sought. These relative weights were used to develop a computer program in VB.net to measure the success of the construction organizations against various performance factors.

The outcomes of the study will help construction organizations to efficiently manage their resources and to develop a strategy to help them succeed in the construction business. They could provide excellent value addition to professionals working in the field of construction management, by enabling them to focus on fewer factors rather than attending to numerous factors for the optimum result. The identification of success factors will provide an opportunity for construction
organizations to enhance their success by addressing weak or problem areas, the significance of which was not previously known to them.