

Critical project management success factors analysis for the construction industry of Bangladesh

Project
management for
the construction
industry

Shuvo Dip Datta, Md. Habibur Rahman Sobuz and
Mohammad Nafe Assafi

*Department of Building Engineering and Construction Management,
Khulna University of Engineering & Technology, Khulna, Bangladesh*

Norsuzailina Mohamed Sutan

*Department of Civil Engineering, Universiti Malaysia Sarawak, Kota Samarahan,
Malaysia*

Md. Nazrul Islam, Maria Binte Mannan and
Abu Sayed Mohammad Akid

*Department of Building Engineering and Construction Management,
Khulna University of Engineering & Technology, Khulna, Bangladesh, and*

Noor Md. Sadiqul Hasan

*Department of Civil Engineering, College of Engineering and Technology,
International University of Business Agriculture and Technology, Dhaka, Bangladesh*

Received 10 January 2022

Revised 12 July 2022

7 October 2022

Accepted 12 December 2022

Abstract

Purpose – This paper aims to identify the critical project management success factors and analyze those factors to achieve a sustainable construction industry in Bangladesh.

Design/methodology/approach – This study identified 41 major problematic factors from the related literature. In this research, a detailed questionnaire survey was conducted among the experts and stakeholders of the construction industry of Bangladesh. The survey was carried out on a Likert scale and ranked the critical factors using the relative importance index (RII). The 41 problematic factors were divided into five group factors and ranked by the RII index to prioritize the factors. Finally, stakeholders' opinions were analyzed with the critical assessed factors, which was a very effective technique to eliminate the risks and uncertain occurrences in the construction industry of Bangladesh.

Findings – The factors analysis revealed that cost overrun, traffic jam, low wedges, slow payment for completed works and financial issues of the owner were leading critical factors in construction projects. Moreover, the critical factors are divided into five-factor groups, namely, financial management, monitoring and feedback, competency management, communication and coordination management, and risk management, which exhibit 0.767, 0.720, 0.711, 0.710 and 0.658 RII values. After all, the stakeholders' opinion suggested that implementing modern tools and techniques can help to avoid the critical situation in the construction industry of Bangladesh.

Practical implications – The construction industry of Bangladesh is moving away from stable construction work day by day. Previously, the potential CSFs were discussed unstructured way. Hence, detecting early warning signals in a structured way has become necessary for the building firm's survival.

Originality/value – Though some scattered critical issues are discussed in different literature, the critical issues of the Bangladeshi construction industry were not investigated extensively. Therefore, this study finds

The authors would like to thank all the respondents who gave their time during the questionnaires with a full cooperative frame of mind, and the Department of Building Engineering and Construction Management of Khulna University of Engineering & Technology, Khulna-9203, Bangladesh.

Conflict of interest: In this study, the authors declared that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.



out the potential critical issues of the construction industry of Bangladesh to accumulate such harmful construction issues in a single platform so that the construction industry can have an overview of them with the help of innovative technologies.

Keywords Critical success factors, Project management, Questionnaire survey, Construction management, Project performance

Paper type Research paper

1. Introduction

Building construction is one of the world's largest and fastest-growing industrial sectors, which performs a noteworthy job to a great extent in a developing country like Bangladesh (Datta *et al.*, 2022). More than 2.4 million people are connected to the construction industry, which avails 20% of the gross domestic product (Islam *et al.*, 2015). That means the construction industry has an extensive influence on people's lives. But in recent years, Bangladesh's construction industry's activity has not been appreciable. Various adverse facts act directly or indirectly behind the critical situation in the construction industry. An adverse event is the source of the crisis and thus gradually affects construction firms in today's globalized world. These damages can happen at any time during a project, and once they happen, the construction industry ends up losing its reputation.

Critical success factors (CSFs) for project management are attributes, circumstances or variables that, when correctly sustained, maintained or managed, can have a major impact on the success of the project (Milosevic and Patanakul, 2005). Hence, critical project management success factor analysis is a combined process to identify the potential factors behind the crisis, an early plan to tackle the crisis and sort the situation with durability (Li *et al.*, 2011). Nowadays, globalization and high market dynamics significantly influence the business environment. For this, CSF management has become necessary for organizational managers (Li *et al.*, 2011). A critical situation in the construction industry lasted for a long period in today's world. This fact requires control and prediction to prevent the potential disruption of the organization's balance and stability. Sometimes, the crisis is unavoidable in construction projects as it mostly affects companies' reputations, thus giving rise to many difficulties later. However, CSF analysis for project management comprises three main management sequences: before, during and after crises. The building industry must know the fact that these factors can affect them before the start of work. Therefore, critical project management is the process of capturing and evaluating a potential crisis's warning signals (Tomastik *et al.*, 2015). The potential crisis analysis and knowledge sharing lead to subsequent organizational learning, thus playing a significant role (Dwiedienawati *et al.*, 2021). If a construction company estimates the crisis factors and executes the crisis management techniques effectively, it can easily overcome the crisis with or without minimum damage (Sahin *et al.*, 2015).

There is no doubt that the construction industry is facing too many barriers during construction work. The CSFs for the project management analysis can be an effective solution to overcome these crucial situations as they work with three different stages of a project life cycle. Among them, the most important part is recognizing the potential factors before the start-up of a project, which can be an alarming signal for any upcoming hazard in the construction industry. Moreover, there is a lack of finding out the extensive critical issues of the construction industry of Bangladesh. According to the above discussions, the study focuses on identifying the potential CSFs through a questionnaire survey and ranking them according to the responses. The ranking was done using the relative importance index analysis. Cronbach's alpha test was used on the full data set for reliability analysis. Besides, the agreement analysis was conducted to