

**Title:** Modeling the Causes and Mitigation Measures for Cost Overruns in Building Construction: The Case of Higher Education Projects

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**Abstract:** The formidable need for building projects places greater pressure on stakeholders to deliver these projects on time, within the budget, and with high quality. However, many building projects have experienced extensive cost overruns despite extensive research on their causes and mitigation measures. Thus, the effectiveness of mitigation measures is questionable. This study examines the status of cost overrun in building construction projects and develops a structural equation model to establish the relationships between causes of cost overrun and mitigation measures, using higher education building projects as a case study. This study analyzed cost overruns in 27 higher education building projects. Furthermore, 118 responses were collected using a questionnaire survey and analyzed using descriptive statistics, the Kruskal–Wallis H test, exploratory factor analysis, and partial least-squares structural equation modeling (PLS-SEM). The findings suggest that around 93% of the 27 higher education building projects experienced cost overrun, and the majority overran between 5% and 10%. The findings illustrate that bid evaluation and project planning mitigation measures positively affect efficiency and contract management- and design-related causes. Furthermore, project initiation and contractor selection mitigation measures positively affect claim management-, efficiency and contract management-, estimation and scheduling-, and design-related causes. These findings will help policymakers make informed decisions in selecting effective mitigation measures to reduce cost overrun and improve industry efficiency.

**Keywords:** Higher education, Building projects; Cost overrun; Mitigation measures; Saudi Arabia; Structural equation modeling

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