

Critical Success Factors Influencing Construction Project Performance for Different Objectives: Procurement Phase

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Abstract : Critical success factors (CSFs) and the criteria to measure project success have received much attention over the decades and are among the most widely researched topics in the context of project management. However, although there have been extensive studies on the subject by different researchers, to date, there has been little agreement on the CSFs. The aim of this study is to identify the CSFs that influence the performance of construction projects, and determine their relative importance for different objectives across five stages in the project life cycle. A considerable literature review was conducted that resulted in the identification of 179 individual factors. These factors were then grouped into nine major categories. A questionnaire survey was used to collect data from three groups of respondents: client representatives, consultants, and contractors. Out of 164 questionnaires distributed, 93 were returned, yielding a response rate of 56.7%. Using the mean score, relative importance index, and weighted average method, the top 10 critical factors for each category were identified. The agreement of survey respondents on those categorised factors were analysed using Spearman's rank correlation. A one-way analysis of variance was then performed to determine whether the mean scores among the various groups of respondents were statistically significant. The findings indicate the most CSFs in each category in procurement phase are: proper procurement programming of materials (time), stability in the price of materials (cost), and determining quality in the construction (quality). They are then followed by safety equipment acquisition and maintenance (health and safety), budgeting allowed in a contractual arrangement for implementing environmental management activities (environment), completeness of drawing documents (productivity), accurate measurement and pricing of bill of quantities (risk management), adequate communication among the project team (human resource), and adequate cost control measures (client satisfaction). An understanding of CSFs would help all interested parties in the construction industry to improve project performance. Furthermore, the results of this study would help construction professionals and practitioners take proactive measures for effective project management.

Keywords : critical success factors, procurement phase, project life cycle, project performance

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