



P21 Risk analysis of building projects

Eranga K.J.,¹ Eranda S.D.,¹ Malkanthi S.N.²

¹Graduate, Faculty of Engineering, ²Department of Civil and Environmental Engineering, Faculty of Engineering

Risk analysis is very important management aspect in almost all projects including civil construction works. Risks can influence the project's objectives in terms of time, cost, quality, safety and environmental sustainability. Most of the past researches have focused to identify the risk factors that influence the projects objectives. This research focused to categorize various risk factors according to the likelihood occurrence and impacts of these risks. Also this research aims to identify and analyze the risks influences fat different phases of the project life cycle and for different project stakeholder. Questionnaire survey was used to collect data. Based on the literature survey, thirty two major risks factors were identified to assess the risks associated with building projects in Sri Lanka. Research found these risks are mainly related to (in ranking) contractors, clients and designers, with little relation to government bodies, subcontractors/ suppliers and external issues. Among them, tight project schedule is most affected risk factor in cost related risks. Bad weather condition, lack of usage new technology, usage of unsuitable machines and less attention for safety procedures are the most affected risk factors corresponding to the time related risks, quality related risks, environmental related risks and safety related risks respectively. Reasons and solution are given for those high priority risk factors. Survey results can be used to show that the identified risks are influencing in all the phases of the project life cycle. Also one risk factor can be seen in many project phases. The results of the research shows that all the projects stakeholders acting in all the project phases should work in a cooperative manner to address the occurrence of risks and their impacts. It may lead to achieve the project objectives safely in efficient manner to the required quality.

Keywords: risk, risk analysis, construction projects, project objectives, life cycle, stakeholders