

The Impact of Lean Construction Tools on Reduction of Contractor Related Causes of Delay in Sri Lankan Construction Industry

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Abstract

Large rate of delay in project delivery is a major criticism faced by the Sri Lankan construction industry. Most of the responsibility for construction delays lies with the Contractor. Currently available delay mitigation strategies are not efficacious to mitigate delays attributable to Contractors. The goal of the Lean Construction approach is to increase project value by reducing waste and enhancing project performance. Utilizing Lean Construction Tools guarantees that a project is finished on time and within budget. This paper aims to identify the impact of Lean Construction Tools (5S, Last Planner System, Visual Management, First Run Studies) on reduction of Contractor related causes of delay. This was met by utilizing a mixed research methodology, which includes both the gathering of quantitative data through a questionnaire survey held among 40 professionals and the gathering of qualitative data by conducting semi-structured interviews with 8 construction industry specialists. SPSS software was used to analyze data collected from the questionnaire survey and content analysis was used to examine the data obtained from the semi-structured interviews. The results revealed that implementation of Lean Construction Tools can lead to reduction of Contractor related causes of delay. Further it was disclosed that 5S is the Lean Tool that has the highest impact on reduction of Contractor related delays. Findings have also revealed that lack of awareness about Lean Construction is the most critical challenge for the successful implementation of Lean Construction Tools within Sri Lanka. The results depict that to overcome this barrier, awareness on Lean Construction must be enhanced among construction industry professionals.

Keywords: *Contractor Related Causes of Delay, Lean Construction Tools, Sri Lanka*