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Lean Implementation Analysis on the Safety Performance of Construction Projects in the Philippines

Authors : Kim Lindsay F. Restua, Jeehan Kyra A. Rivero, Joneka Myles D. Taguba

Abstract : Lean construction is defined as an approach in construction with the purpose of reducing waste in the process without compromising the value of the project. There are numerous lean construction tools that are applied in the construction process, which maximizes the efficiency of work and satisfaction of customers while minimizing waste. However, the complexity and differences of construction projects cause a rise in challenges on achieving the lean benefits construction can give, such as improvement in safety performance. The objective of this study is to determine the relationship between lean construction tools and their effects on safety performance. The relationship between construction tools applied in construction and safety performance is identified through Logistic Regression Analysis, and Correlation Analysis was conducted thereafter. Based on the findings, it was concluded that almost 60% of the factors listed in the study, which are different tools and effects of lean construction, were determined to have a significant relationship with the level of safety in construction projects.

Keywords : correlation analysis, lean construction tools, lean construction, logistic regression analysis, risk management, safety
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