THE MODERATED EFFECT OF SAFETY INVESTMENT ON SAFETY PERFORMANCE FOR BUILDING PROJECTS

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Abstract
Safety investments are aimed at protecting the health and physical integrity of workers and the material assets of a contractor. A popular assumption holds that increased investment in safety improves safety performance. However, close examination of previous studies on safety investments reveals that the relationship between the level of safety investment and safety performance remains debatable. The purposes of this study are therefore to (1) test the relationship between safety investment and safety performance, and (2) identify factors influencing their relationship. The research approach for collecting the data is by means of structured interviews. The findings indicate that safety performance is positively related to safety investments when the influence of project hazard level is removed. The effect of safety investments on safety performance was found to be more significant for projects with high hazard levels than those with low hazard levels. The interactive effects of safety investments and project hazard levels on safety performance imply that in order to achieve good safety performance under different project conditions, different investment decisions in workplace safety need to be made.

Keywords
Safety; Investments; Costs; Hazard; Building projects.

INTRODUCTION
For the past few decades, efforts have been made by the government and industries in Singapore to address the problems of construction safety. The significance of construction safety is overwhelming because construction is one of the most dangerous occupations in Singapore (Imriyas, Low & Teo, 2007a). The construction industry accounts for 29% of the total number of industrial workers, but accounts for 40% of workplace accidents (Chua and Goh, 2004). The latest Workplace Safety and Health (WSH) statistics published by Ministry of Manpower, Singapore (MOM, 2008) revealed that accident frequency and severity rates are far higher than the average of all industries in Singapore (see Figure 1). Such high frequency and severity rates prompted the government to examine various strategies for enhancing construction site safety performance.