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Risk Perceptions of the Life-cycle of Green Buildings in China

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Abstract: While the numerous benefits of green construction have been widely recognized, the risks associated with green buildings have however not been addressed appropriately. In response to this knowledge gap, this study aims to assess the risk factors (including political risks, social risks, certification risks, financial/cost risks, quality/technological risks and managerial risks) of the life-cycle of green buildings in China and prioritize their importance based on probability of occurrence and degree of influence. Data were collected through a questionnaire distributed to experts in the construction industry. A Kendall's concordance test followed by a Spearman's rank correlation test was then used to test the consistency of risk ranked by experts from different groups. As a result, among 56 risk factors, 36 are perceived as key risk factors affecting the success construction of green buildings. In the ranking of risk importance, there are obvious differences between owners and contractors, owners and resident engineers, and designers and contractors. The findings present the differences of risk importance among stakeholders and provide a basis for different project participants to implement appropriate risk management strategies according to their perceptions of risk importance.

Keywords: green buildings; life-cycle; risk assessment; project participants; questionnaire survey.

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