Title: Understanding the causes and effects of low-risk management: implementation in projects using the DEMATEL algorithm

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INTRODUCTION

According to Zavadskas et al. (2010), construction projects are risky in general. In Malaysia, the construction industry can be defined as one of the most challenging and risky industries as compared to the others. The activities for construction are rife with risks and uncertainties. Oliveira (2017) stated that risk can be defined as the occurrence of possibility of either positive or negative events that happen to be recognized as uncertainties. Risks can be categorized into either external or internal risks (PMI, 2013; Zhi, 1995; Abderisak & Lindahl, 2015). External risk can be defined as the uncertainties that exist outside of the project that will be influenced by the surrounding or environment factors, while internal risks are uncertainties that exist in the project itself. External risks include economic and political factors that may affect the risk management of construction projects (Adeleke et al., 2018). However, while negative outcomes or consequences can be associated with risks to projects, they also have the possibility of being seen as chances of positive events (Adeleke et al., 2018; Farooq et al., 2018; Goh et al., 2012). According to Adeleke et al. (2018), it is necessary to manage the possible risks in order to ensure there is no threat being brought to the project to ensure project success.

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