An Assessment Model for Risk Management Capabilities in Infrastructure (RMC Model)

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Abstract

Infrastructure projects are crucial to the economy of any country, especially developing ones such as Egypt
and most African countries. According to the World Bank, a 10 % rise in infrastructure assets directly increases GDP
by up to 1 percentage point. There are many aspects to consider when dealing with infrastructure projects such as
unique characteristics, complexity, risk, public safety, financial difficulty etc. The main issue is the contractor is
burdened by and carries the risks involved in this type of project. The contractorôs risk management capability (RMC)
reflects his teamôs expertise of risk understanding and how he can manage those risks. Hence, proper assessment of
RMC may contribute to the probability of achieving project objectives. In addition, assessment of the clientôs risk
management capability (client risk sharing) can support the RMC. The objectives of this study are: (1) to identify
appropriate indices to assess the RMC of the contractorôs infrastructure project; (2) to develop appropriate weightings
for each index; (3) to develop an RMC assessment model for infrastructure project contractors and (4) to assess the
current overall RMC of infrastructure project contractors. The contractor risk management capabilities (RMC) are
categorized in three categories: (1) risk identification and assessment approaches, (2) risk response approaches (3) risk
control strategy. Each RMC in the three categories is assessed with respect to each projectôs objective including cost,
duration, quality, scope and any additional objective according to the client, project characteristics. These objectives
reflect the clientôs capacity and willingness to share the risk.

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