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Malekela, Kimata Newman

University of Dar es Salaam

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Development of a model for optimising the variations on the forecasted constructed construction cashflows

A Case of Building Projects in Dar es salaam-Tanzania

Kimata Newman Malekela

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The contingency sum is provided as the ceiling amount for absorbing variations that may occur on planned budget during execution of construction projects. However, there have been significant variations on forecasted construction cash flows which exceed the contingency sum provided. This study is therefore aimed to develop a model for optimizing the total variations in overall forecasted construction cash flows within the contingency sum provided during execution of building projects in Tanzania. Specifically, this model is used to minimize those variations within the contingency sum provided in building projects.

Data were collected through questionnaire from 284 building contractors in Dar es salaam. In addition, documentary review of historical data from contract documents of 40 recently completed building projects was conducted and supported by interviews to project participants and self-auditing to contact documents. Eight major risk factors were identified but the leading four risk factors with their overall (0.246); errors in project documents (Bills of Quantities) (0.187); consultants' lack of experience and technical skills (0.131); and poor /incomplete design (0.130).

The study concludes that the model of this study can minimize more than 60% of the total variations planned to occur in execution of building projects. It is therefore recommended that model solutions should be used in establishing the proactive risk measure for controlling variations causes by risk factors on forecasted construction cash flows of building projects.