

**MANAGING RISKS IN PROJECT COST OF FOREIGN  
FUNDED POWER TRANSMISSION LINE PROJECTS IN  
SRI LANKA**

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## DECLARATION

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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I hereby acknowledge that Mr C.Basnayke has followed the dissertation process set by the Department of Building Economics.

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## ABSTRACT

A risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on a project objective. Inherently, power transmission line (PTL) projects are riskier than most of the other construction projects. In Sri Lanka, PTL projects are in a boom, however the practice and knowledge in risk management is at minimum level in this specific area. This research work is a comprehensive study of risk factors and risk response measures related to cost aspects of PTL projects in Sri Lanka.

Risk factors and risk response measures were identified through an extensive literature survey and a pilot survey with experts in the industry. These identified risk factors were further studied through a questionnaire survey for their probability and impact with a scale ranging from very low to very high scoring from 1 to 5. Further, in the questionnaire survey, the respondents were asked to select the widely used and best proposed risk response measures for each risk factor, from the list developed by the pilot survey.

The risk rating was calculated for each risk factor using the information gathered by the questionnaire survey and classified from the range of very low to very high. According to the client's perception 'way leave clearance' became the most significant risk factor where as in view of the contractor and overall, it became 'exchange rate fluctuation'.

By using the information gathered from the questionnaire survey, a risk response framework was developed for risk factors with risk level medium or above in view of the client and the contractor. Among the response measures 'transfer risk to contractor', 'accept the risk and have a contingency plan' 'accept the risk and take no action', 'placing conditions on bid', and 'claiming for the damage if risk occurred' were the most preferred risk repose measures.

*Key words:* power transmission line projects, risk, risk factor, risk response measure.

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## LIST OF ABRVIATIONS

CEB	Ceylon Electricity Board
D&B	Design and build
FIDIC	International Federation of Consulting Engineers
H	High
L	Low
M	Medium
PTL	Power transmission line
RL	Risk level
RII	Relative importance index
(RII) <sub>p</sub>	Relative importance Index of probability
(RII) <sub>i</sub>	Relative importance index of impact
VH	Very high
VL	Very low



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