



APPROPRIATENESS OF USING SINGLE CONSTRUCTION COST INDEX FOR SRI LANKA

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Abstract

ICTAD monthly bulletin comes with the indices for cost fluctuation in construction works. These indices are used in the adjustment for the time factor in cost estimates and in calculating price fluctuations in contracts as well. The single set of adjustment indices are used in all places in the country. This study finds how appropriate it is to use a single index island-wide.

The research was designed as an exploratory simulation study with data for specific cost parameters obtained from the market. A model project was simulated for 10 different regions for the estimated price index for 24 months. The simulation was followed by a correlation study using the data generated through simulation to quantitatively test for relationships and patterns.

The study finds low correlations between the ICTAD Indices and the regional indices and between Colombo regional index with the other regions suggesting that a single index is not suited for whole country. Though, the parallelism is less among other regions too, they at least showed comparatively better correlation with each other. However, the lack of parallelism between the fluctuation patterns between the regions suggests that the use of a single coefficient multiplier location adjustment for regions is also not accurate.

Keywords: Construction Price Index, Regional Index, Estimating, Price Fluctuation, Location Cost Factor.

Study Submitted in Partial Fulfilment of the Requirements of the Degree of Master of Science in Project Management

Declaration

I hereby declare that this report submission is my own work and to the best of my knowledge it does not contain any material previously published or written by any other person or material which substantial extent has been accepted for the award of any degree or diploma of a university or other institution of higher education, except where an acknowledgement is made in the text.

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I hereby acknowledge that Mr. A.A.S.K. Abeysinghe has followed the dissertation process set by the Department of Building Economics.

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Date.

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LIST OF ABBREVIATIONS

BOQ	: Bill of Quantities
FRCS	: Fuel Reduction Cost Simulator
ICTAD	: Institute of Construction Training and Development
L1	: ICTAD Index Symbol for Skilled Labor
L3	: ICTAD Index Symbol for Unskilled Labor
M3	: ICTAD Index Symbol for Cement Local Market Price
M5	: ICTAD Index Symbol for Cement Block 400mm x 200mm x 100mm
M6	: ICTAD Index Symbol for Rubble 150mm-225mm
M7	: ICTAD Index Symbol for Aggregate 20mm
M8	: ICTAD Index Symbol for River Sand
M12	: ICTAD Index Symbol for Lime
M16	: ICTAD Index Symbol for Asbestos Sheets 10 ft long
M17	: ICTAD Index Symbol for Ceiling Sheets 1200mm x 1200mm
M20	: ICTAD Index Symbol for PVC Pipe Type 1000, 20mm
M22	: ICTAD Index Symbol for Class 1 Timber 100mm x 75mm
M26	: ICTAD Index Symbol for Electrical Wires 1/1/13 Single-100m Coil
M27	: ICTAD Index Symbol for Wall Paint
M38	: ICTAD Index Symbol for Electrical Items
mi	: Price of Material i
Mi	: Calendar Month