

**EVALUATION OF FACTORS AFFECTING
PROJECT SCOPE CHANGE
IN SRI LANKAN
BUILDING CONSTRUCTION INDUSTRY**



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CONSTRUCTION PROJECT MANAGEMENT

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August 2013

**EVALUATION OF FACTORS AFFECTING
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BY

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Supervised by



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The Dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Science.

Department of Civil Engineering
University of Moratuwa
August 2013

Declaration

I hereby certify that this dissertation does not incorporate any material without acknowledgement and material previously submitted for a degree or diploma in any university to the best of my knowledge and I believe it does not contain any material previously published, written or orally communicated by another person except where due reference is made in the text.

.....

T.M.C.H. Menike

Date:

(09/8872)

 This is to certify that this thesis submitted by T.M.C.H. Menike is a record of the candidate's own work carried out by him/her under my supervision. The matter embodied in this thesis original and has not been submitted for the award of any other degree.

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ABSTRACT

Developments of major infrastructures such as Electric Generation, Transmission & Distribution, Telecommunication, Data Services, Harbour Developments, Road Developments, and Irrigation Projects are handled by few or single organizations specialized for the purpose. Both Client and Engineer are themselves. Therefore, more professional approaches are observed. Mass scale building construction projects especially high-rise buildings too have more professional approaches. The area where less professional approaches are identified is the medium & small building constructions. This Research is an attempt to address the issue.

Scope Changes have been identified as one of top most significant reason for interrupting construction projects. Cost overrun, excessive delays, inferior quality and dis-satisfaction & conflict among stakeholders are the ultimate consequences of Scope Changes. Once Scope Change is made, the consequences are delivered to the number of stakeholders in various magnitudes. Therefore, there is a high probability to arising conflicts among stakeholders. Low professional approach in medium & small building constructions makes the problem more crucial. This is the atmosphere at which the importance of identifying the factors and causes, minimizing the Constructive Scope Changes and developing an accepted mechanism to execute Directed Scope Changes are smoothly becoming high priority.

Changes were categorized in to Directed and Constructive Changes. Directed Changes are easy to identify. A Directed Change occurs when the client directs the contractor to perform works that are different from the specified in the contract or an addition to the original scope of work. (Osman, 2009). A Constructive Change is an informal act authorizing or directing a modification to the contract caused by an act or failure to act. (Osman, 2009).

Considerable tools have been developed in project implementing mechanism of Public Sector to minimize Constructive Scope Changes and manage Directed Scope Changes. A lot of room is still available for further improvements in various levels of authorities.

The main objective of this Research is ascertaining Root Causes for Scope Changes in Public Sector Building Constructions and possible Preventive or Precautionary

Measures. No research detail is found on the subject in Sri Lanka. Hence, this is the unique research of the subject concerned.

Study of Past Records, Focus Group Interview, Experience Survey and Survey Research were utilized to collect primary data. The statistical analytical methods were utilized to check significant and correlation of views of respondents in Survey Research.

Fifty seven Significant Root Causes contributed in Scope Changes have been identified in this Research. Root Causes are either breach of Project Management Principles by any of three Key Players, change of requirement or inevitable Root Causes for Scope Changes.

This result was discussed in Focus Group Interview and Experience Survey for controllability and possible preventive measures. All the significant root Causes identified in survey research were categorized in to following three categories according to the level of controllability.

- Root causes manageable by applying Project Management Practices in key player organizations, Client, Engineer & Contractor.
- Root causes manageable by introducing regulations for Public Sector Organizations
- Root causes manageable by enforcing new laws.

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I like to share this attainment loyally with respondents of Survey Research, Engineers and Architects who contributed in Experience Survey and Focus Group Interviews.

I consign this dissertation to my spouse Eng. K. P. Prasad Indika for his co-operative dedication.



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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AR	Administrative Regulations
BSR	Building Schedule of Rate
CCTV	Closed Circuit Television
CEB	Ceylon Electricity Board
CMC	Colombo Municipal Council
EIA	Environmental Impact Assessment
FR	Financial Regulations
ICTAD	Institute of Construction Training and Development
LG	Local Government
NWS&DB	National Water Supply & Drainage Board
SDB	Standard Bidding Document
SLSI	Sri Lanka Standards Institution
SLT	Sri Lanka Telecom
SMM	Standard Method of Measurement
UDA	Urban Development Authority
VAT	Value Added Tax



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