EARN VALUE MANAGEMENT FOR PERFORMANCE MEASUREMENT IN PUBLIC HOUSING CONSTRUCTION PROJECTS IN SRI LANKA

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Degree of Master of Science

Department of Building Economics

University Of Moratuwa

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This dissertation was submitted in partial fulfillment of the requirements for the Degree Master of Science in Project Management

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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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W.D.C. Harshani Date

Department of Building Economics

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The above candidate has carried out research for the Masters Dissertation under my supervision.

....

Signature of the supervisor Date

DEDICATION

To my family and to those who gave me the support that needed

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W.D.C. Harshani

ABSTRACT

Most of construction organizations use project budget when commencing the project. but most of organizations don't properly monitor and use it as a performance measurement ool from the begninig to end of every project. There is no proper basis or standard practice in construction projects for preparing a project budget where Budgeted cost for work performed (BCWP) can be accurately calculated for performance measurement. If there is a proper framework to evaluate the budget, mainly, project team can understand the financial and physical progress of the project rather than other benefits of having a project budget.

Earned Value Management (EVM) has been used in other industries such as software and product development businesses. Its applicability within the construction industry as risk-free performance measurement tool is still been overlooked in the industry. EVM supports effective management of projects and work packages collectively and enhances management of the enterprises' project portfolio. Forecasting using these techniques provides a uniform approach to project reviews, building confidence in the project outcome as time progresses.

The concept of EVM, process of EVM, benefits & potential drawbacks have been discussed at literature synthesis. Case study approach was selected for research methodology and Semi-structured interviews, for data collection with the professionals in construction projects to investigate the basic elements which may have in a costing framework and as well as conduct a case study for evaluating the feasibility of the proposed costing framework for evaluating the project budget.

Therefore, this research intends to identify a framework to prepare a proper cost budget for public housing construction projects using which, BCWP can be accurately calculated. Usability of EVM in practice is reflected with the measurement of physical progress with the budgeted and actual cost of the housing project.

Key words: *Performance Measurement, Earn Value Management, Project Budget, Public housing*

TABLE OF CONTENT

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AC	–	Actual Cost
ACWP	-	Actual cost for the work performed
BCWP	-	Budgeted cost for work performed
BCWS	-	Budget cost of work scheduled
BOM	–	Bill of Materials
CV	-	Cost Variance
EAC	-	Estimate At Completion
EV	-	Earned Value
EVA	-	Earn Value Analysis
EVM	-	Earn Value Management
EVMS	-	Earn Value Management System
G & A	-	General & Administrative
MHBP	-	Mass House Building Projects
OBS	-	Organizational Breakdown Structure
PC	–	Percentage Complete
PM	-	Project Manager
PMB	-	Performance Measurement Baseline
PMI	-	Project Management Institute
PMP	-	Project Management Professional
PV	-	Planned Value
QS	-	Quantity Surveyor
SEC	–	State Engineering Corporation
SPM	-	Senior Project Manager
SV	-	Schedule Variance
WBS	-	Work Breakdown Structure