

# PROJECT MONITORING AND CONTROLLING USING EARNED VALUE METHOD

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**Abstract** - The procedures adopted for recording, reporting & collecting information related to the performance of project is known as project monitoring & controlling. The actual performance of the project can be able to bring planned performance by using the data of monitor activities. The following study focus on the monitoring of project process entitled "standard design factors" for a three storeyed building (G+3). So that some absent of traditional effective system for the monitoring & controlling project in some of the cost has caused a major problems due to that occurs on failures of many contractors. The study is carried out for established, An effective system for monitoring & controlling for the cost of a project, so that project cost has the main factors for success of a project (EVM) earned value management is a best technique for evaluation which is useful for the project management. This technique helps in the budget cost and actual cost the present study deals with the scheduling and project monitoring process, so that helpful for the parameters which is involved in the calculations of EVM in civil construction projects. Microsoft project V 2010 is used for EVM calculations it has been concluded that use of this software V 2010 earned value analysis calculation of projects.

**Key Words:** EVM, MSP, Monitoring, Scheduling and Controlling.

## 1. INTRODUCTION

Now days the construction of work is highly aggressive in overall world wide and the future of a various companies with their proper skill and there financial decisions. Various international companies deals with the projects every day & which has become a most important part of business hence one can see an importantly taking an

financial decisions when we issue some undertaking a various projects.

A good and well handled project has been seen that it is use daily & maintain, remedial performance is done. Than it is observed as necessary so another issue appears that if projects is not working well a correction is to be made. Project leader should be taken various different tools for it companies such as M.S project for controlling and monitoring of a project ,excel spread sheet for project planning, invoice and resource plain.

Values obtained is a type of method which is used analyse the project to be done. its been used for the scheduled to be followed. Flemming & Kopleman (1998) states that this earned value method provides a earlier signals of warning for a project managers. Prediction is made to complete the job done given in a limited range of values.

The E V M become a very important tool for project performance whether to check the project is ongoing phase correctly to study an obtained result is complete. So a various comparison as and predecessors are made. A long with that a evaluation method is executed by come a crossing the various advantage and disadvantage a tool which has been provided and this suggest that how to come across the various disadvantages by using a tool. Finally a model tail is hand out the needs of a project manager.

## 1.1 OBJECTIVES OF THE STUDY

The main aim is to examine the effectiveness commonly used monitoring and controlling system in construction industries

1. To suggest the importance and purpose of monitoring the construction work.

2. Earned value analysis & tracking design for factory of construction works.
3. To provide the basis to capture work progress assessments against the base line.
4. Relative technical, schedule, and cost performance

### 1.2 PURPOSE AND OUTLINE

To find out whether obtained readings consistent for evaluation. This could be happens only cost estimation is helpful. so earned value is best method for identifying the various cost and benefits. so proposed to find various circumstance is related to readings obtained. new propose of out come is through the paper is issued so that the companies has to monitor and evaluate which is being used by the project managers. So our aim is to design an unique part of an tamp let so that project evaluation should be suitable for both profit and its organization.

### 2. METHODOLOGY & ANALYSIS

The construction of a project work is so vast and wide in present future& and we know that it is also complex in nature so therefore for simplification of a work we are using a software which came into existence. This project is scheduled and monitored using a Microsoft project 2010 version. the steps which is involved in the construction of a building are as fallow mobilization of a site excavation pcc, steel fabrication, shuttering, concreting, curing and filling.

The WBS for a project is created and several activities are identified. The duration of the several activities are estimated on the basis of literature review, the relationship are examined and applied to activities which are involved in scheduling and monitoring a projects.

### 3. DATA ANALYSIS

As we know we are studying on a construction on a G+3 residential/commercial building at uppal Hyderabad .the main useful information has been taken from the actual project .a tender document bill of quantities and abstract sheets provide necessary data for project cost and scheduling activities. Our total area is about near10800sf. The work should be completed within an 90 days.

The main objectives of the study is to understand the role of earned value management for monitoring and

controlling in progress which time taken to complete of a construction project the project goals can be achieved through an literature review and methodology which is involved in EVM.

### 4. Earned Value

Earned value is determined basis of correct amount of physical performance beside the detailed plan to allow the correct actions, the final cost and scheduled results for given and project.

It is often used for the complex of a project so that it is required to predict final cost and time at completions. By using of earned value the project managers are more capable to control the cost a task. Hence this concept widely used its relative easy and bring the cost performance

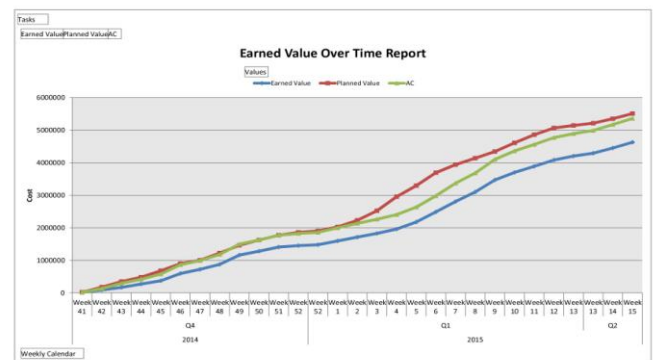


Fig 1: Earned value curve

This graph represents that if the scheduled project does not complete within the time period, then this graph show variation in earned value, planned value and Actual cost.

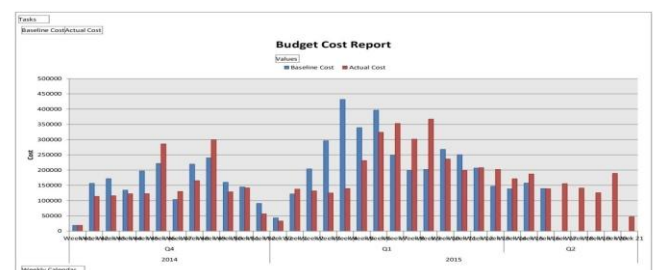


Fig 2: Budget cost report

## 5. RESULT & DISCUSSION

Earned value analysis work has been carried out and earned value management parameters are calculated. The table below shows result obtained from Microsoft Project 2010.

Actual- Cost	Rs-6,021,496
Earned- Value	Rs-4631449.6
Planned Value	Rs-5,651,251
Project budget (EAC)	Rs-5,919,201
Variance at Completion-	Rs-370,245

## 6. SUMMARY

EVM has been become an very effective tools, particular in management of large composite projects of high degree uncertainty & changes. On the other side it is not been accepted in many others diligence such as projects are convey for fixed prices contracts.

Assured value analysis build two new concepts in EVM one is assured value and the other is expected cost. Those measures permits to development of cost variances (CV), cost performance index (CPI) and estimate at completion (EAC) formulae that recognize that is achieved through an firm contracts for future projects deliverables. the use (AVA) can provide not only in calculating an estimate at completion ,but also reduces an likely hood ,the senior managers may receive an false warnings of potential cost overage in situation did not in fact significant risk. Phase Earned Value Analysis (PEVA) represents a promising variant on conventional EVM methodology, one that may prove particularly attractive to project managers who wish to implement earned value performance measurement without the inherent demands of an integrated cost/time baseline. As the name implies, PEVA focuses on performance at the end of each phase, an appropriate point for assessing and reporting project results.

The two new concepts can readily combined and can form a fully & featured methodology for evaluation and forecasting an projects progress and performances. i have termed that methodology phase-assured value analysis (PAVA).

I have addressed the value added by my new extensions to EVM, and finally the combined model termed Phase-Assured Value Analysis (PAVA), in the background of project management research and standards. While EVM

has its merits, other performance measurement techniques – such as PAVA may in the long term be more useful to many practitioners. PAVA is particularly promising as a communication tool, due to its intuitive logic and natural visualization and advantages.

## 7. CONCLUSIONS

Although that (EVA) may be the most easily related with the monitoring and evaluation of projects cost which undertaken for the establishment. It can readily may applied to some adjustments to control some project cost which performed by the contractors and vendors. however we must recognised that client and contractors will have differing prospective on actual and budget costs. Study of EVA is unique value and which can be significant value which can present an benefit to clients, and consultants industries. The two projects were analysed using the develop software.(in C#,net,& SQL server and MS PROJECT) based on earned value analysis method .CPI,PD,AD,CV,PV,AC,EV variables are selected.

The result shows an strong relationship between each software. So that the final result will be an approximately 99.5% accuracy.

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## BIOGRAPHIES



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