

# EFFECT OF PROJECT COST AND TIME MONITORING ON PROGRESS OF CONSTRUCTION PROJECT

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## Abstract

During the construction phase it is the prime responsibility of project managers to monitor cost and avoid any overruns in maintain the cost baseline. Project monitoring is an ongoing process and its importance cannot be undermined during the project life cycle. It can be monitored by using traditional approach of direct reporting of actual cost against budget. However, the comparison of budget versus actual spending does not indicate the worth of the work which is completed at any given time. This approach does not portray the true cost performance of the project. In general Construction cost control consists of simply monitoring actual performance against cost estimates and identifying variances. It has been usually seen there is a lack of systematic and automated evaluation and monitoring system in construction project. Due to these limitations, this paper discusses traditional project monitoring practices in construction industry and proposes some guideline for improving cost management in fast, complex and uncertain construction projects. Such guideline involves the integrated application of Average Index formula and S-curves. This study discusses the result of questionnaire survey conducted on various construction sectors to show how cost is compared at prime contractor in real estate sector.

**Index Terms:** Cost management, project monitoring, Average index formula.

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## 1. INTRODUCTION

Effective cost monitoring and controlling has received much attention in the construction industry due to excessive cost escalation and wasteful profit margin of some contractors. The life cycle of construction projects comprises of different phases including planning, initiation, procurement, contract award and contract management phase. [6]. Government construction client panel bench-marking study carried out in 1999 in UK shows that three quarter of the 66 projects studied on the central government construction project exceeded 50% of their contract price [4]. It is usually seen in construction sector cost and time management is given more importance.

### 1.1 Monitoring in construction

Project monitoring is the process where the construction resources of project is managed through the best methods and techniques so that the client does not suffer the losses when carrying out the project activities. According to Barrow, the main problems that account for poor cost management by traditional methods is flaws in cost estimation and cost control process ; inadequate information modelling ; and lack of integration of cost management and production management system[3]. Project monitoring is considered to be a managerial process, which aims to

generate information to support decision-making and to stimulate cost reduction ; value improvement and continuous improvement in the organization. Cost monitoring is understood as being composed of two main processes: cost estimating processes and cost planning and control processes. The objective of cost estimating process is to estimate the cost of products and processes involved in production. This requires a thorough understanding of the design, contracts and production in order to properly model the consumption of resources by transformation and flow (non-value adding) activities. This process starts usually by producing budget normally at early project phase. After cost have been estimated, the financial performance must be planned and controlled during the production phase by means of a cycle composed by two sub-processes: cost planning and cost control. Cost planning involves refining the initial cost estimate and generating a project cash flow, based on additional information that is generated along the project. The aim of the cost control sub-process is to monitor actual cost performance and identify improvement opportunities, which must be dealt by corrective actions. According to Zubair Ahmed Munim, An integrated simulation model named DCM (Digitalizing the Construction Monitoring) is developed to integrate digital images of construction scope with AutoCAD drawings and it resolves the existing project progress reporting problems. The DCM model improves the decision-making and productivity of construction activity[8].

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