

# Project Performance Analysis on Earned Value Metrics by Using Spreadsheet

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## ABSTRACT

There are many types of project management software specifically designed for project managers, however, the software packages for project management could be costly and it doesn't always fit the specific needs among different users. The user has to physically install this software before using it, and the software itself tend to take up considerable memories. This paper is aimed to discuss how to build up a system in calculating Project Performance Factor and estimate project completion time and cost. Let small and medium-sized enterprises utilize MS Excel to analyze the project performance, control the progress of project, calculate completion cost and completion time, needn't to spend money installing the other management software of special project externally. The system is built upon the fundamentals of the Ragsdale, C. T. (2001) Spreadsheet, Earned Value Management and Earned Schedule then combined the functions with the widely used Microsoft Office Excel without having to install extra software. First, use the Ragsdale Spreadsheet to calculate the Early Start Time and Early Finish Time on a simple one activity example project. Secondly, use the random generation models in Microsoft Office Excel to simulate the Actual Duration and Actual Cost of the project. Next, this paper calculate performance index for each of the project, estimate project duration and cost. Lastly, compare the standard deviation among Planned Value, Earned Duration, Earned Schedule (Vandevoorde and Vanhoucke, 2005) to determine its accuracy.

Keywords : spreadsheet ; earned value management ; earned schedule ; project performance factor ; Microsoft Office Excel

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