The effect of buffer size of critical chain on project performance

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ABSTRACT

Today firms usually are situated in a high intensity of competitive and limited environment; hence the project is the very activity for the special needs. As well known, project is inherent with various levels of uncertainty and risk. To monitor and control project performance, Pajares and Lopez-Paredes (2010) combined Earned Value Management and the concept of risks analysis and presented two indexes, called Cost Control Index and the Schedule Control Index, to provide an early warning when project execution variance exceeds the allocated buffer size at any period proposed by them. However, the allocated buffer size may be too larger or less to lead in an excess or shortage. Hence, this study proposes an index, called Optimal Control Index, to adjust the buffer size based on project execution variance. Finally the study uses a simple example to illustrate.

Keywords : Earned Value Management、Monte Carlo Simulation、Project Buffer

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