

# Review of Effectiveness of Schedule Management Planning in Project Success

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**Abstract – The execution of a project requires appropriate management and planning. This can be done using proper scheduling for the task in an appropriate way to achieve the desired results. In this context, many studies have focused on time and cost management techniques that can be performed under the plan. Other studies focused upon the problem of resource constraint which has emerged as the critical issue in the domain. In this context, the present study reviews the effectiveness of schedule management planning. Using the studies of the past 15 years, the researcher shows the effectiveness of schedule management planning in the project success.**

**Keywords: Scheduling, Critical Path Method, Schedule Management Plan**

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## 1. INTRODUCTION

Project Schedule management plan defines the sequence of tasks that must be executed in a project within a given time frame. Further, it also helps in assigning the budget or cost to each activity in a project. Apart from underlining the goals for which the project is undertaken, it also entails the results that will be delivered through the project [1].

Traditionally, project scheduling management plan used the Critical Path Method (CPM) to determine the longest time taken to execute the project. Additionally, it considers the cost allocated to each of the projects. Hence, the focus of CPM was only on time and cost effectiveness in a project. However, factors like the scale of operations of a project, the size of the project undertaken and others which also impact the schedule management plan apart from time and cost factors have not been incorporated in CPM. Therefore, CPM has been modified and new technology has been brought up to help managers of the organization to decide on aspects like the nature and the size of the project. New methods use techniques like “fast track” or “crashing the critical path” to cut down on the total time taken by the project to end. They also help in prioritizing the tasks by providing a way to determine the sequence in which the tasks need to be performed [2]. Some of the new techniques in schedule management plan are parametric estimating, three points estimates using the Project Evaluation and Reviewing Technique (PERT) and Reserve analysis [3].

Project Scheduling plans change from time to time and helps monitor the tasks continuously so that the critical path remains unchanged. It helps the managers in evaluating any changes which might impact the project completion. Without a project schedule management plan, the complete information regarding the costs involved and resources needed for the timely completion of a project, cannot be produced by a manager in an organization [4].

## 2. AIM OF THE PAPER

The aim of this study is to review the effectiveness of the schedule management plan for the success of the project.

## 3. DISCUSSION

In order to review the studies an empirical review was conducted amongst studies that used surveys and statistical analyses to explore the importance of scheduling in project success. One of the studies also used analytical method to check if the tools used under schedule management are apt and to find the fit of the right tool to the right project situation. From a few studies that explored scheduling impact on high risk projects found that scheduling is important especially in project with high risks. The tools that can be used however cannot be pre-determined and will vary according to the size and need of the project.

Author Name	Aim/Objective	Methodology	Findings
Besner & Hobbs [5]	To empirically investigate the perceptions of practitioner on the relative value of different project management practices and their potential to contribute to improved project performance.	Survey of 753 project practitioners.	The management can prioritize better in the future if the researchers are able to clearly distinguish between the project phases and processes. The nature of management and the process through which value is created will be understood better.
Urbanski, Haque and Oino [6]	To present study on the role of risk management in project planning and success by taking evidence from construction companies operating in Pakistan and UK.	A survey is conducted in the study on 152 project managers. The analysis is done using the partial least square structural equation modelling.	The findings of the study indicate that the aspect of risk management is crucial for project planning and project success in a business environment. Therefore, the construction companies in UK and Pakistan have been suggested to evaluate risk during the planning and implementation of project strategies.
Zwikael & Globerson [7]	To develop a more applicative and detailed list to be used by project managers	The impact of 16 specific planning processes on project success and identifies Critical Success Processes (CSP) to which project success is most vulnerable has been analyzed. Field study that involved 282 project managers has been conducted.	Schedule management along with other activities were found out to be critical in a planning process. The time devoted to each stage in the process by managers is not efficient.
Belout & Gauvreau [8]	To address the lack of empirical data available on Critical success factors, including the	A pre-test was carried out with 15 project management experts in more than ten Canadian organizations to test the	Personnel factor affected project success but not significantly. It was found that HRM is important, yet studies have not been able to

	personnel factor. To further investigate the impact of the life cycle stage, type and structure of a project on the relationship between the critical factors and project success.	hypothesis o the impact of 10 independent variables on project success. A questionnaire was designed for the same.	show their importance in project's progress and effectiveness.
Agarwal, Kumar & Upadhyay[9]	To study scheduling of activities in major activities involved in the aircraft maintenance .	Case study on Hindustan Aeronautics Limited, Agra	Effectiveness in the activities in the aircraft maintenance is seen by schedule management plan.
Zwikael & Sadeh [10]	To investigate the effect of improved project plan on highly risky projects.	A quality of planning index was designed including managerial and organizational aspects. Field study was then conducted on 202 project managers.	Better project plans in significantly risky projects is effective.
Patanakul, lewwongcharoen & Milosevic, [11]	To conduct an empirical research to investigate the use of project management tools and techniques.	Questionnaire was prepared for a sample of 412 project managers. ANNOVA and t-test was applied.	Project management tools and techniques have been actively used in project cycle and they contribute effectively to project success.
Kastor & Sirakoulis [12]	To analyze the quality of resource constrained scheduling of project management software	Comparing software, Primavera P6.0 and Microsoft Project 2007 before and after setting the scheduling.	CPM is ineffective in scheduling activities with a resource constraint.

#### 4. CONCLUSION

Based on the discussion above, it can be interpreted that the schedule management plan is important in the project process since it helps in prioritizing the activities in a project. CPM as a method in project schedule management plan has been declared inefficient as it only considers the time taken by each activity and the cost incurred to avail resources in a project. The new technologies like reverse analysis, parametric estimates and three-point estimates, which have replaced CPM are more efficient since they take into consideration

not just the time and cost factor of a project from the perspective of a firm but also consider social and political implications. They help in establishing the best way to complete a project based on the size, nature of a project while considering that the resources are used in the most cost effective and efficient way. There is a limitation to the application of schedule management plan of a project. Even though the effectiveness of the schedule management plan has risen but is found to be only working under certain assumptions. In the real life the projects seem to take more efforts and time in a project. The new techniques are successful in small sized projects but their implications on large projects is yet to be analyzed. The real-life scenario will have to be considered further and studies will need to incorporate assumptions accordingly. Project managers will be able to better understand the nature of the project and contribute to the success effectively.

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