

# Role of single-project management in achieving portfolio management efficiency

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Received 29 November 2005; received in revised form 17 February 2006; accepted 13 April 2006

## Abstract

This paper examines how single-project management contributes to project portfolio management efficiency. Earlier research has suggested that single-project management may be related to project portfolio-level success, but empirical evidence has been scarce. A questionnaire survey with 279 firms verifies the hypothesized role of information availability, goal setting and systematic decision making in achieving portfolio management efficiency. The results reveal a mediating and direct role of project management efficiency but reject the hypothesized link between reaching project goals and portfolio management efficiency. The results imply that understanding of portfolio-level issues needs to be considered as part of project managers' capabilities and not only a top management concern.

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*Keywords:* Project portfolio management; Managing programmes; Managing projects; Implementing strategy; Efficiency

## 1. Introduction

Not only one but several, even dozens or hundreds of projects are typically going on at the same time within a firm. This multi-project setting has been examined in a fairly independent stream of literature, often titled as “project portfolio management” [1–3]. Project portfolio is a group of projects that share and compete for the same resources and are carried out under the sponsorship or management of an organization [1,4]. Project portfolio management can be considered a dynamic decision process, where a list of active projects is constantly updated and revised [5].

Project portfolio management literature encourages evaluating, prioritizing, and selecting projects based on strategy [6–11,29]. According to portfolio management principles, organizational resources should be allocated to projects in line with strategy [12,13]. Development pro-

cesses should take into account the existence of different types of projects and their different requirements [14–17]. Furthermore, portfolio (or multi-project) management requires sharing of resources, components or platforms across a multitude of projects during project implementation [18–21]. A majority of portfolio management studies are prospective in nature, i.e. they suggest good practices for project portfolio management. The actual efficiency of project portfolio management has, so far, been a rare topic of study.

Holistic, strategy-based portfolio management methodologies and practices suggest that portfolio-level decisions should be enacted at single-project level or through development process [1,5,22–24]. How do these single-project level actions eventually contribute to portfolio management efficiency? Fricke and Shenhar [25] have identified factors in the single-project–multi-project interface, relevant to efficiency at both levels. Cooper et al. [5,22,23,26,27] have conducted survey-based studies linking the single-project and portfolio management practices to company level performance indicators. Some other studies link project portfolio management with single-project level

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outcomes [28]. These different studies provide initial evidence on the potential linkage between single-project management and portfolio management efficiency.

This paper focuses on that linkage. Our research question is: how is single-project management related to project portfolio management efficiency. Our interest is to identify how project managers, at the single-project level, can contribute towards wider business benefits in the entire project portfolio.

## 2. Portfolio management efficiency

Portfolio management efficiency as such has not been reported in the literature. However, indications of its concept and relevance are evident both in portfolio management and single-project management studies.

Portfolio management studies refer to the objectives of the portfolio, and the necessity to align projects with those objectives [3,29]. An interview study by Cooper et al. [5] with 35 companies identified that the objective of project portfolio management was to maximize the value of the portfolio in terms of company objectives, to achieve a balance of projects in terms of strategically important parameters, or to ensure strategic direction of projects. Efficiency of project portfolio management, therefore, could be determined by estimating the degree to which the portfolio fulfills its objectives: strategic alignment, balance across projects, and value maximization. In this study, portfolio management efficiency concerns organizational members' estimate of the degree to which the projects together, as a portfolio, succeed in fulfilling the portfolio objectives.

Some latter studies [2,23,26,27] have examined the reaching of the above portfolio objectives. They have found some supporting evidence concerning the link between portfolio-level results and business-level performance, and product level performance indicators.

From single-project management viewpoint, many studies indicate that project goals and benefit expectations are expanding from single-project level to the portfolio level. In theoretical analyses, project management research is

increasingly linking projects with each other and the wider business context [21,30–32]. Some empirical studies have raised benefits to customer, other stakeholders, performing organization and future as important success criteria in projects, besides reaching of the dominantly used scope–cost–time goals [33–37]. Many of such benefit expectations can be reached only if multiple mutually supportive projects reach their goals.

Although many studies touch upon the relationship between single-project and multi-project level performance, none examine it holistically in the context of different kinds of projects and industries. Although Fricke and Shenhar's [25] multiple-case study indicates how single-project level success factors may contribute at the portfolio level, their study is qualitative in nature and limited to engineering projects in manufacturing support environment. Studies by Cooper et al. [2,23,26,27] are limited to product development, and they do not specifically look into single-project management. Of the single-project management studies, none examine whether and how the benefits are actually reached at the portfolio level.

Earlier studies encourage further research in a larger sample of different companies and different types of projects [31,32,38] to verify the link between single-project management and portfolio management efficiency.

## 3. Single-project management and portfolio management efficiency

Earlier research has suggested that some single-project level factors are related to and possibly contribute to portfolio management efficiency. Table 1 summarizes some of these empirical studies.

In the qualitative, case-based studies [21,25,39,42], the focus has been on portfolio management as understood in this paper, and the approach towards portfolio management efficiency and its contributing project-management factors has been very exploratory. For example the necessity for clear goals in terms of scope, schedule, costs or resources, sharing of information, top management support and a

Table 1  
Single-project management factors and empirical research on them, related to portfolio management efficiency

Empirical evidence	Single-project management factors							
	Clear project goals	Information availability	Systematic decision making	Top mgmt ownership or support	Management by project type	Standardization of PM	Metrics and measurement	Other
Artto and Dietrich [39]	x	x	x		x		x	x
Cooke-Davies [40]							x	x
Cooper et al. [2,22,24,26,27]		x	x	x				x
Dietrich and Lehtonen [41]		x	x			x		
Elonen and Artto [42]	x	x		x				x
Engwall and Jerbrant [21]	x							x
Fricke and Shenhar [25]	x	(x)		x	x			x
Milosevic and Patanakul [38]					(x)	x	x	x
Payne and Turner [43]					x	x		

x means that some empirical evidence has been identified in the study. (x) means that a similar type of concept has been used by the authors, or that evidence is weak.

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