



The use of effectuation in projects: The influence of business case control, portfolio monitoring intensity and project innovativeness

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Received 4 February 2018; received in revised form 30 July 2018; accepted 29 August 2018

Available online xxxx

Abstract

Project management approaches are evolving to be more flexible and adaptive to meet the challenges associated with an increasingly complex and dynamic environment. However, potential changes in the underpinning logic supporting project decision making have scarcely been considered. We investigate the role of effectuation, a decision logic most commonly associated with entrepreneurship, as an alternative decision-making approach to the rational ‘causation’ logic that has traditionally underpinned project management processes. We develop and test a model to explore the portfolio- and project-level influences on the application of effectuation in project management. We find that portfolio governance mechanisms related to business case use and portfolio monitoring inhibit the use of effectuation, while project innovativeness is associated with increased use of effectuation. The paper contributes to research and practice by empirically investigating the antecedents to the use of effectuation decision-making logic in project and portfolio management through a multi-level model.

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1. Introduction

Project management approaches have largely been based on a rational decision logic that stems from its origins in meeting the demands of managing complex, technical projects (Söderlund, 2011; Turner et al., 2013). However, project environments are changing, with project management practices now applied to a wide range of projects in an increasing number of industries (Jensen et al., 2016). This shift in the project landscape is accompanied by an increasing focus on the strategic contribution of the project portfolio, and the need for enhanced levels of innovation, responsiveness and flexibility

(Kock and Gemünden, 2016; Kopmann et al., 2017). Much has been done to meet the challenges created by such demands within project and portfolio frameworks (Martinsuo, 2013); however, the reliance on the traditional ‘rational’ or ‘causal’ logic may limit the effectiveness of project decision making in such environments (Huff, 2016). Effectuation is a form of decision-making logic that has been shown to be used for entrepreneurial decision making (Sarasvathy, 2001). In this paper, we explore the role of effectuation as an alternative decision-making logic in project environments.

Decision making is a key task in project management (Stingl and Gernaldi, 2017) and project portfolio management (PPM) (Kock and Gemünden, 2016; Meifort 2016). Decisions must be made about priorities, approaches, time, and resources in order to develop or sustain competitive advantage and enhance business success (Cooper et al., 2002). Traditional project management methods and tools such as business plans,

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forecasts, financial methods, and frequent monitoring and analysis (Salomo et al., 2007) are designed for a ‘causal’ decision making mindset. However, as organizations across industry sectors are faced with increasingly complex and dynamic environments, project management approaches are evolving to meet the changing needs. The emergence of an alternative decision-making logic, effectuation, may play a part in this shift in project management approaches (Huff, 2016).

Effectuation decision-making logic is characterized by using available resources rather than pre-defined goals to shape projects, considering the level of loss that is ‘affordable’, emphasizing partnerships and networks over competitive analyses, and exploiting contingencies through flexibility and adaptability (Sarasvathy, 2001). In contrast, causation—the logic considered to underpin traditional rational planning approaches—begins with pre-defined project targets and goals, builds predictive models and then seeks to obtain the required means and to control the outcome.

First identified as a decision-making logic in entrepreneurial environments, the concept of effectuation has generated interest in a range of management fields, such as marketing (Read et al., 2009), finance (Wiltbank et al., 2009), and R&D (Blauth et al., 2014; Brettel et al., 2012). Although effectual decision making has not been studied in a PPM context, our review of the literature suggests that effectuation may provide an alternative decision-making logic to better deal with uncertainty in project-based environments. We answer the call to conduct a multi-level research study on effectuation theory (Perry et al., 2012) in our investigation of the role of effectuation in project and portfolio management. Our study measures the extent to which effectuation practices are used in projects and explores the influence of project type and portfolio governance approaches on the use of effectuation. Our multi-level model considers the innovativeness of the project as a task variable on the project level, and the use of business cases and traditional portfolio monitoring as governance principles on the project portfolio level as potential determinants of effectual decision making. The study is underpinned by the following research questions: *How does the innovativeness of a project influence the use of effectual decision making? How do business case application and monitoring on the portfolio level influence the use of effectual decision making on the project level?*

We empirically address these questions using multi-level data from 420 projects nested in the project portfolios of 108 medium to large companies. Our study contributes to research and practice in several ways. We highlight the implications for decision making from the shift away from traditional project planning tools toward a more flexible and adaptive approach and introduce effectuation as an alternative decision logic that plays a role in project contexts. We develop and test a research model to explore how portfolio- and project-level determinants influence the application of effectual decision making. Furthermore, this study is one of the first multi-level studies in the project portfolio literature (Meifort, 2016).

2. Theoretical background

2.1. The shift in project and PPM decision making

In traditional project planning, project success implies reaching a predefined goal in terms of time, cost, and quality (Atkinson, 1999). Project management methods are strongly linked to goals and prediction and a variety of project management tools and techniques exist to manage these goals (Besner and Hobbs, 2013). These tools include business plans or forecasting to calculate and minimize risks, frequent monitoring and analysis, the calculation of expected returns, and evaluation of multiple alternatives to select the best possible strategy (Turner et al., 2013).

The increasing number of projects, the extended scope of project activities and their growing strategic importance has led to the need to manage multiple projects and to the increasing use of PPM approaches. PPM focuses on how projects are aligned with strategic goals of various stakeholder groups, resources, and interdependencies between projects. Typically, the projects of a portfolio are prioritized, selected, integrated, managed, and controlled considering the impacts on other projects and the expected performance impacts. Empirical research has repeatedly shown that these activities have a significantly positive effect on project portfolio success (e.g., Cooper et al., 2002; Killen et al., 2008; Teller et al., 2012; Jonas et al., 2013; Kock et al., 2016). PPM is an important organizational capability that can provide competitive advantages to organizations (Killen et al. 2012).

Decisions in both project and portfolio management environments have traditionally been assumed to adopt a rational or ‘causation-based’ decision logic. However traditional project planning paradigms are increasingly being overturned as projects are now often embedded in fast-moving market sectors (Cooke-Davies et al., 2007), and linked with a more complex working environment (Maylor et al., 2008). Organizational and project complexity is a result of increasing risks, turbulence and uncertainties (Martinsuo, 2013) determined by the uniqueness of the project, the amount of information to be processed, the technical scope, or the interdependency between technology, people, and organizations (Engwall, 2003).

The literature emphasizes the challenge of managing projects in times of increasing complexity and change (Maylor et al., 2008) and the need for relevant supporting capabilities. This challenge is amplified for innovative projects where adaptation and evolution must be embraced to avoid stifling innovation (Salomo et al., 2007). Contingency theory proposes that management approaches will be most effective when designed to cater for the particular environment (Donaldson, 2001). This is regularly demonstrated in project management research where findings highlight that projects differ, and that project management methods provide best results when tailored to the context (Shenhar, 2001; Hanisch and Wald, 2012). Innovation, particularly the challenge of managing different levels of innovativeness, is a strong theme among literature that emphasizes the benefits of contingency

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