



Successful project portfolio management beyond project selection techniques: Understanding the role of structural alignment

Michael G. Kaiser ^a, Fedi El Arbi ^b, Frederik Ahlemann ^{c,*}

^a *odacer finanzsoftware GmbH, Dotzheimer Str. 36, 65185 Wiesbaden, Germany*

^b *KPMG AG Wirtschaftsprüfungsgesellschaft, Ganghoferstraße 29, 80339 Munich, Germany*

^c *Chair of Information Systems and Strategic IT Management, University of Duisburg-Essen, Universitätsstraße 9, 45141 Essen, Germany*

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Abstract

Project portfolio management (PPM) is a commonly employed technique to align a project portfolio with strategic goals. Prior research has mainly regarded PPM as a methodology to optimize the overall benefit of a project portfolio. While adequate project selection techniques are certainly important, we argue that successful PPM – and consequently effective strategy implementation – depends on an organization's structural alignment with the needs of PPM. Based on three cases in the German construction industry, we study the effects of fundamental strategic changes on the project selection and organizational structure. From our case analysis, we develop a substantive theory to explain how the criteria, used by a company to choose and evaluate its projects, influence the company's structure through the information requirements created by such criteria. To assess whether our theory is in line with accepted schools of thought on organizational design, we integrate it with existing organizational theories. Our contribution is twofold. First, we offer a substantive theory that integrates strategy implementation, organizational information processing, and structural adaptation. Second, we introduce a new antecedent of successful PPM, namely structural alignment, thus introducing a new perspective on PPM beyond mere project selection techniques.

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1. Introduction

When Philipp Holzmann AG, which had long been Germany's largest construction company, filed for insolvency in 1999, the public was shocked. While government intervention was able to delay its eventual demise to 2002, it became apparent that, owing to a lack of communication between headquarters and business units as well as insufficient risk management, Philipp Holzmann AG had accepted risky projects far beyond its means (Dahlkamp and Reuter, 1999).

The case of Philipp Holzmann AG shows that selecting the right projects is crucial for the success of project-based business models (Müller et al., 2008). Available project alternatives usually far exceed the number of projects that can be executed with an organization's limited resources at any given time, and choosing the right projects in a particular context is seldom easy (Engwall and Jerbrant, 2003). Therefore, academics and practitioners alike have sought to develop methods to address the project selection problem. One prominent approach is project portfolio management (PPM), which is used to keep the ratio between existing and new projects as close to an optimal state as possible (Archer and Ghasemzadeh, 1999). While financial criteria play a significant role in defining the optimal state, strategic intentions are also important (Englund and Graham, 1999). The strategic aspect of

* Corresponding author. Tel.: +49 201 183 6790; fax: +49 201 183 4021.

E-mail addresses: mgk@m75.de (M.G. Kaiser), felarbi@kpmg.com (F. El Arbi), Frederik.Ahlemann@uni-due.de (F. Ahlemann).

project portfolio management has seen increasing interest in research, and there is now ample literature on the connections between project portfolios and business strategies (Artto, 2001; Morris and Jamieson, 2005).

However, most literature takes a somewhat methodological perspective on PPM, focusing on algorithms for optimizing portfolios and the general effectiveness of PPM approaches (e.g., Doerner et al., 2006; Henriksen and Traynor, 1999). PPM is seen as a planning and controlling approach looked after mostly by project management offices or dedicated role-players in the project organization (e.g., Archer and Ghasemzadeh, 1999; Müller et al., 2008). However, while this perspective has seen much attention, we are not aware of any research into the organizational transformations necessary to implement a strategic project portfolio management regime. This is unfortunate, because organizational alignment and the ability to collect pertinent information from all organizational units is often more important to PPM success than employing sophisticated project prioritization methods or information systems (Kerzner, 2004). Indeed, the lack of research into the organizational impact of strategy implementation is not limited to project-based organizations but is a general blind spot in strategy research (Noble, 1999), even though practitioners often see strategy implementation as more risky and difficult than strategy formulation (Hrebiniak, 2006).

In our research, we study organizational alignment as an antecedent to successful PPM, using case studies in the German construction industry. Construction contractors are a typical example of project-based companies. Since their core business is the execution of construction projects, strategies must be implemented by changing how projects are selected and managed (Langford and Male, 2001). From the empirical data we gathered at three large construction firms, we derive a substantive theory of the relationships between strategy, project portfolio management, and the organizational alignment prompted by strategic PPM implementation. The resulting theory will be integrated with theories of organizational information processing (Galbraith, 1973) and contingency theory (Donaldson, 2006; Hofer, 1975) to interpret the results in the context of a more general theoretical framework.

The paper is structured as follows. After the **Introduction**, we examine the state of strategic management with a focus on the construction industry and also provide an overview of the concept of project portfolio management. We then present our research method. We illustrate our findings in the context of a short description of the current state of German construction. In the next section, we explain the substantive theory we have developed and embed it in broader theories of strategic alignment. In conclusion, we point out our study's limitations and outline future research opportunities.

2. The rise of strategic management in construction

The topic of strategic management is rarely considered in literature about project portfolio management. Strategy is often considered the preserve of top management, while project management issues are the responsibility of the project management office. This view fails to acknowledge the close relationships

between both fields, particularly in project-based businesses. On the one hand, a functioning strategic management process is a precondition for the alignment of a project portfolio with strategy (Meskendahl, 2010). On the other hand, project portfolio management is essential for the implementation of formulated strategies in these firms (Srivannaboon, 2006). As an antecedent of PPM, we will discuss the state of strategic management in the construction industry as it is documented in the literature in some detail. This will also illustrate in what context the case companies we studied operate.

While strategic management is generally studied in the abstract, and without reference to any one industry, some specificities of construction warrant the consideration of strategy implementation in this industry. More than most other manufacturing industries, construction has traditionally been a laggard in adopting strategic management methods (Hillebrandt et al., 1995; Junnonen, 1998). Several reasons have been put forward for this slow adoption. First, construction contractors' project-based business model is certainly an important obstacle: not having one relatively static organization but a plethora of temporary organizations (i.e. individual projects) inhibits the implementation of complex strategies (Chinowsky and Meredith, 2000). The dominance of small to medium-sized, owner-run firms in construction might also contribute to the slow uptake of strategic management practices, as these firms have been shown to be less conscious of strategy and more concerned with short-term management (Jennings and Beaver, 1997). Finally, it has been suggested that the educational backgrounds of construction firms' top managers lead to low awareness of strategic management. Since many construction managers have an engineering background, many lack formal training in strategy formulation and implementation methods (Pries and Janszen, 1995).

Despite lagging acceptance in construction, there is now a growing body of research on construction strategy (see Table 1). Prior research primarily reveals a slow increase in awareness of strategic management methods over the past two decades. While the strategy formulation aspect has received some attention, strategy implementation in the construction industry is still poorly researched. This leaves a gap in current research, because strategy implementation is far more industry-dependent than strategy formulation (Gupta and Govindarajan, 1984).

3. The concept of project portfolio management

Project management is linked to strategy implementation in two distinct ways. Firstly, there is the management of strategy implementation projects, an aspect that has been studied extensively (Grundy, 2000; McElroy, 1996; Pellegrinelli and Bowman, 1994). The second link is the implementation of a strategy through the modification of project management (PM) practices (Srivannaboon, 2006). This applies to all facets of single-project and multi-project management, specifically in project-based industries where projects are of paramount strategic relevance.

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