

The integrative role of the project management office in the front end of innovation

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Abstract

This research addresses management control in the front end of innovation projects. We conceptualize and analyze PMOs more broadly than just as a specialized project-focused organizational unit. Building on theories of management control, organization design, and innovation front end literature, we assess the role of PMO as an integrative arrangement. The empirical material is derived from four companies. The results show a variety of management control mechanisms that can be considered as integrative organizational arrangements. Such organizational arrangements can be considered as an alternative to a non-existent PMO, or to complement a (non-existent) PMO's tasks. The paper also contrasts prior literature by emphasizing the desirability of a highly organic or embedded matrix structure in the organization. Finally, we propose that the development path of the management approach proceeds by first emphasizing diagnostic and boundary systems (with mechanistic management approaches) followed by intensive use of interactive and belief systems (with value-based management approaches). The major contribution of this paper is in the organizational and managerial mechanisms of a firm that is managing multiple innovation projects. This research also expands upon the existing PMO research to include a broader management control approach for managing projects in companies.

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1. Introduction

The front end of innovation projects includes fostering issues and ideas before the start of the formal project development phase (Koen et al., 2001). Previous studies consider the front end to be the most troublesome and chaotic phase of the innovation process, but at the same time the front end provides the greatest opportunities to improve the overall innovative capability of a company (Herstatt et al., 2004; Reid and de Brentani, 2004).

Crucial strategic decisions related to target markets, customer needs, value propositions, expected prices and costs, the main functionalities, and the most useful technologies of new products are all made at the front end stage (Bonner et al., 2002; Smith and Reinertsen, 1998; Wheelwright and Clark, 1992). Prior empirical and conceptual front-end studies have focused on product and service innovations (e.g. Herstatt et al., 2004; Koen et al., 2001; McAdam and Leonard, 2004; Reid and de Brentani, 2004). Less research has focused on other types of innovation projects such as process, marketing, managerial or organizational innovations, which might have even greater implications for the organization.

The management control literature, starting as early as the 1970s (e.g. Lawler and Rhode, 1976; Ouchi, 1979) address the question of how executives manage their firms. Control in this stream of literature is not to be considered equivalent to vertical top-down management but also contains various autonomous and emergent mechanisms, which emphasize lateral mechanisms and softer leadership issues such as values, empowerment and

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freedom (Simons, 1994, 1995). Building on this stream of literature, the concept of ‘management control’ in this paper includes a wide range of organizational arrangements that rely on soft leadership as well as lateral and bottom–up mechanisms in the organization. The role of management at the front end of innovation is to ensure that decisions and choices serve the best interest of the company and fulfill long-term strategic needs. Management’s ability to influence strategic choices is naturally the greatest at the front end of innovation. However, executives typically become heavily involved in the initiatives too late, often just after the design phase, when development problems have become apparent and when financial commitment is needed (McGrath, 1996; Smith and Reinertsen, 1998). However, a proactive management approach is needed to make sure that the choices made at the front end are strategically feasible (McGrath, 1996; Smith and Reinertsen, 1998) and that the strategy is both effectively implemented and innovatively renewed. Due to its profound implications in the long term, we suggest that management control is of paramount importance especially in the front end of innovation. We further suggest that having management involved in the front end is important for the following reasons; yielding high quality new ideas, developing these ideas into concrete concepts and business cases, enabling cross-functional coordination, creating knowledge transfer across projects and their front ends, and achieving project synergies. This creates the challenge to finding a balance between empowerment and accountability, intended and emergent strategy, and experimentation and efficiency, which is the key in management control of organizations that need room for innovation and flexibility (Simons, 1995).

Based on the above characterization, project management offices (PMOs) or related organizational arrangements can be considered to have a key role in the management of innovation projects, especially at the front end. These offices may be formal organizational units or less formal arrangements, which may include facilitators, innovation groups, innovation processes and/or idea management and innovation software systems. Despite its significant potential implications for managing the front end of innovation, prior research has not addressed the role of PMOs as such organizational arrangements in the front ends of innovation projects. The recent research by Hobbs and Aubry (2007) and other practical-oriented literature (Hill, 2008) suggests that PMOs are specialized organizational units that play various roles and have different tasks. However, the existing PMO literature suggests that the role of a project management office is to support, coordinate and control project-related work. Based on this suggestion, it is not clear as to the appropriate manifestation of a PMO in the front end of innovation project context. Additionally, formal PMOs or related specialized units do not exist for such a purpose, which is the case in many of the case companies in our empirical study, then we can ask what other relevant organizational arrangements would help the executives to manage the front end of innovation projects.

This research addresses management control in the front end of innovation projects. We assume that the organizational arrangements for such management controls serve as an organizational

element of what constitutes an object that is comparable to a project management office. In this study, we address three gaps in the existing PMO literature. First, the existing PMO literature tends to focus on project execution, with less emphasis on specifically addressing the PMO’s role in the management of the front-end phase of innovation projects. Second, the existing PMO literature is highly practical and does not extensively use an established theoretical basis for assessing the concept of a project management office. We address this gap by using theories of organization design and management control in particular for assessing the role and the tasks of a PMO. Third, building on theories of organization design and management control, we address organizational arrangements from a wider perspective rather than focusing solely on the PMO as a specialized organizational unit. In this respect, our results show a variety of organizational arrangements outside the traditional conception of a PMO as a specialized unit, and our results show how such organizational arrangements are involved in the management of the front end of innovation projects. Such arrangements can be considered alternative mechanisms to a non-existent PMO, or to complement a (non-existent) PMO’s tasks. Therefore, our research expands the existing PMO research by including a broader aspect of organizational arrangements for the management control of projects. This paper addresses the following two research questions:

- What control mechanisms can managers use in managing the front end of innovation projects?
- How can the project management office (PMO) or related organizational arrangements be used for the management control in managing the front end of innovation projects?

We build on the theories of organization design and management control. Due to our context of innovation front end in this research, we use the innovation front end literature to understand the management control in that specific innovation context. The empirical data used in this paper is derived from four case companies.

The major contribution of this paper is related to the role of PMOs related to the organizational and managerial mechanisms of a firm in the context of managing multiple innovation projects. The research relates to the wide area of organizational and managerial mechanisms for managing multiple projects in a project-based firm (PBF; Artto and Kujala, 2008; Lindkvist, 2004; Whitley, 2006). In general, we use the term ‘project-based firm’ to refer to two types of firms; firms that conduct only a segment of their operations in project form even though their primary productive activity might be volume-based (Hobday, 2000 calls these project-led firms) and firms that organize most of their internal and external activities in projects (‘project-based’ also in the terminology of Hobday, 2000, and of Lindkvist, 2004). Project-based firms and organizations are found in a wide range of industries, such as consulting and professional services, cultural industries, high technology, and complex products and systems (Sydow et al., 2004). Management control in this paper refers to activities that maintain or alter patterns at the front-end work of projects to achieve successful results (adapted from Simons,

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