



Managing inter-organizational networks for value creation in the front-end of projects

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Abstract

Projects involve inter-organizational networks that are central to collaborative project-based value creation. Interest in value creation in the project lifecycle is mounting, and the front-end stage of projects is gaining increasing attention in the research literature. However, little is known about how network management activities facilitate value creation in the front-end and how such activities push a project toward higher end-states of value. The purpose of this research is to identify activities that facilitate the development of inter-organizational networks and augment value creation among multiple organizations in the front-end of projects. To this end, we conduct a qualitative empirical case study of the front-end of a health care campus development project. We identify four activities and five network attributes that explain how inter-organizational network can be managed for value creation in the front-end of the project. These findings contribute to research on management of the front-end of projects and management of inter-organizational networks in projects.

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1. Introduction

Current project management research considers projects as value-adding devices that create value for the stakeholders (Morris, 2013). This view emphasizes value creation instead of creating the end-product (Winter et al., 2006). Also, it perceives projects as social rather than instrumental processes (Laursen and Svejvig, 2016). Hence, projects can be understood as networked organizational forms (Hobday, 1998) set up to create value in a collaborative setting. Value is created in the development and operations of large systems, including not just technical complexity but also organizational complexity (Morris and Hough, 1987; Brady et al., 2005; Lenfle, 2011;

Scott et al., 2011). Organizational complexity arises from different and sometimes even conflicting requirements and the needs of multiple organizations participating in a dynamic inter-organizational project network (Morris, 2002; Hellgren and Stjernberg, 1995; Ruuska et al., 2011). Aligning goals, making sacrifices, but also enhancing joint benefits for all actors are considered important determinants of value creation in the project network (Ahola et al., 2008). Traditionally, the emergence of an inter-organizational project network is seen to start in the design phase of the project (Hellgren and Stjernberg, 1995). However, recent research has introduced a more comprehensive system life cycle view on projects suggesting that a network starts emerging in the very early stages of a project in the so-called front-end of a project (Artto et al., 2016; Morris, 2013).

The front-end of a project is considered a strategic pre-project stage, where value creation appears as goal alignment among the actors (Aaltonen et al., 2015; Edkins et

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al., 2013; Morris, 2013; Williams and Samset, 2010). The front-end shapes the downstream relationships within the project toward value co-production, whereby high value end-states are achieved through collaboration in an inter-organizational system (Arto et al., 2016; Davies, 2004). However, if projects should be dedicated to value creation (Winter et al., 2006), their initiation requires concrete actions and action-based entrepreneurship already in the front-end stage (Morris, 2013; Lundin and Söderholm, 1995). Regardless of these assumptions, we lack understanding of how management actions or activities create value and, more importantly, what such activities are. Therefore, in this study we address the following research question: How can project management facilitate value creation through emergent inter-organizational networks in the front-end stage of projects? We focused on identifying management activities that facilitate the emergence of an inter-organizational network and inherent value creation among multiple organizations.

Because prior research includes only little theoretical or empirical evidence on front-end networks and inherent network management activities, we chose an exploratory and theory-elaborating research approach (Ketokivi and Choi, 2014). In doing so, we developed an analytical framework based on previous literature on front-end management of projects and value creation in inter-organizational networks and utilized this analytical lens in an in-depth qualitative case study of a Rehapolis health care campus development project. In the case, we analyzed retrospectively Rehapolis' front-end stage from 1998 to the investment decision in 2002 to build two campus facilities.

The paper is structured as follows. We first introduce the theoretical background on front-end management of projects and value creation in inter-organizational networks to develop an analytical framework for our theory-elaborating case study. The used method, research process, and case background are explained in the following section. Then, we present the key finding of our case study focusing on network management activities. Findings are then discussed in the light of previous literature. We conclude by summarizing the theoretical contributions and implications for practice and suggest avenues for further research.

2. Theoretical background

To develop an analytical framework for our empirical analysis of front-end management, we explored the existing literature on front-end management of projects and value creation in inter-organizational networks.

2.1. Value creation in the front-end of projects

Morris (2013) as well as Edkins et al. (2013) suggested that the front-end of a project is a strategic pre-project stage, in which goals, requirements, and expected value of the project are defined. Furthermore, the project is connected to the environment and to essential stakeholders' business objectives. Therefore, successful alignment of the goals and formulation of

agreeable project definition are the key value-creating outcomes of the front-end stage (Morris, 2013; Edkins et al., 2013). Hence, challenges of value creation derive from the decentralized nature of the front-end, including high degrees of freedom for multiple actors requiring emergent management perspectives (Morris, 2002) and novel perspectives to decision-making to cope with the challenges of turbulent and complex project environment (Williams and Samset, 2010).

In the search for such emergent management perspectives, earlier project management research has focused on approaches associated with innovation management (Arto et al., 2011; Edkins et al., 2013), having analogies with value creation approaches in integrated solutions research such as the "joint innovation with the customer" (Davies, 2004). Furthermore, innovation research describes the front-end as a fuzzy stage (Kim and Wilemon, 2002), requiring non-linear or iterative management approaches (Koen et al., 2001; Nobelius and Trygg, 2002). These non-linear management approaches in the existing project management literature are contained in project lifecycle models: For example, Morris (1994) suggested cyclical or iterative lifecycle models for projects' innovative early front-end stages. In addition, the contemporary project management standard BS6079 (2010) broadens the project lifecycle view and discusses the front-end as an early before-the-project period in the extended project lifecycle. Arto et al. (2008) made a similar notion when emphasizing the importance of the front-end stage for the ultimate business purpose and value creation in projects. Recent research (see, for example, Aaltonen et al., 2015; Williams and Samset, 2010) has argued that the dynamic complexity caused by for example project stakeholders in the early stages requires moving managerial emphasis toward stakeholder analysis and engagement and joint sense-making, leaving traditional project management organizations and methods rather toothless.

While the proposed management approaches have proven to be valuable in project management, they tell a little about the concrete management activities in the decentralized or networked organizational context of the front-end. Previous project management research has examined project-related networks mainly as temporary organizational forms (Arto and Kujala, 2008; Hellgren and Stjernberg, 1995) for managing project delivery (Ahola et al., 2013) and project stakeholders (Aaltonen and Sivonen, 2009; Rowley, 1997). The previous project management literature is rich in theories and methods suitable for investigating the management of inter-organizational networks and stakeholders in the implementation stage of a project or achieving project goals by performing pre-defined tasks. However, the existing research has not paid sufficient attention to how emerging inter-organizational networks are managed for value creation in the front-end of a project, when neither clear goals nor planned tasks exist. Based on the reviewed research on management of the front-end of a project, it is reasonable to suggest that traditional planning-based project management methods do not apply due to high levels of fuzziness and a lack of clear goals to pursue. Hence, we suggest expanding our conceptual understanding to include relevant concepts from research on networks to comprehend value creation in the front-end of projects.

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