Chapter 43
Exploring the Conceptual Nature of e-Business Projects

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ABSTRACT

E-business projects (eBPs) can be described as endeavors which transform traditional business functions into digital and mostly automated, inter-organizational e-business functions. Although studies exist which already increased the understanding of such endeavors, there is still no conceptualization that defines eBPs as their own kind of project, summarizing and categorizing all of their characteristic topics, problem areas, and tasks. This study attempts to close this gap by exploring the conceptual nature of eBPs. A large number of practical project reports was evaluated, using a latent semantic analysis for the exploratory summarization of the textual database. As a result, the study provides a comprehensive theoretical conceptualization including 12 core concepts and 74 specific sub-concepts, structured within the context of a system development life cycle. Such a project conceptualization provides a contribution to the practical management of eBPs, as well as a theoretical framework for further establishing eBPs as a unique project type.

1. INTRODUCTION

Transforming a company into a successful e-business has become one of the central strategic goals of modern corporate management (Ash & Burn, 2003; Chen, 2001; Gloor, 2012; Lientz & Rea, 2009). Such e-business transformations are basically about developing and implementing Internet-based technologies in order to pursue modern e-business models (Barua et al., 2001; Pateli & Giaglis, 2004; Wang et al., 2012). During this process, traditional business functions (such as sales, purchasing, and logistics) are expanded by integrating digital and inter-organizational e-business functions (such as e-commerce, e-procurement, or network-based supply chain management), typically resulting in fundamental changes

to the corporate value creation chain (Burn & Ash, 2001; Combe, 2012; Jackson & Harris, 2003). There-fore, these types of endeavors – so-called e-business projects (eBPs) – are particularly complex, and do not end after the purely technical implementation of new information technologies and systems. Instead, they rather initiate and accompany comprehensive corporate transformations, which extend beyond the technical aspects of typical IT projects in several ways (Chuang & Shaw, 2005). The consequences of eBPs require companies, for example, to align their corporate strategies profoundly before integrating e-business functions into the changing value creation; to coordinate the integration of new communication channels which change the way companies interact with customers; to collaborate with new stakeholders in inter-organizational alliances, to deal with new and often extensive data volumes; and, last but not least, to fundamentally redesign their business processes and the way employees execute their work (Balakian et al., 2002; Marca, 2006; Stoehr, 2002). This large number of diverse commercial, organizational, and technical considerations – which are often interdependent – ultimately results in an increased degree of complexity in such projects (Baccarini, 1996). As a consequence, even though eBPs basically encompass the implementation of e-business technologies, they can be described as comprehensive and externally-oriented business projects rather than as technical, internally-oriented IT projects. Accordingly, project management strategies, processes, and practices must be adjusted to match such complex undertakings (Phan & Vogel, 2012; Stoehr, 2002).

Because of their complexity, it is not uncommon for ambitious eBPs to fail (McLaughlin, 2009). As a result, research has shown an increased interest in exploring eBPs as a specific and unique type of project (see, e.g., Basu & Muylle, 2013; Clarke & Doherty, 2004; Lee et al., 2007; Phan, 2003; Phan & Vogel, 2012). Such studies deal with questions concerning, for example, which characteristics define eBPs, which specific challenges they encompass, and, of course, how to meet these. Nevertheless, although previous studies have significantly increased our understanding of eBPs, there is still no overall conceptualization – such as, for instance, the many conceptualizations that exist for general information systems development projects (see, e.g., Keil et al., 2000; Xia & Lee, 2005) – that structures eBPs as their own kind of project, summarizing and categorizing all of their characteristic topics, problem areas, and tasks. Such a project conceptualization could be of assistance in coming to understand the complexity of eBPs and, ultimately, to manage it (Gregory & Piccinini, 2013). In this regard, a conceptualization of eBPs would provide a basic content-based structure for their practical project management (e.g., during requirements analyses) and theoretical explorations (e.g., during success factors research).

This study addresses the research gap described and attempts to illustrate the complexity of eBPs through a comprehensive theoretical conceptualization. In this context, the study focuses on the following core question: Which specific topics, problem areas, and tasks characterize eBPs as a complex and unique type of project? Such a thematic project conceptualization is a recommended contribution for project management (Winter et al., 2006). In this respect, the contributions of this study differ from previous studies in two ways: (1) Unlike previous studies, this study is based on an evaluation of a large number of eBPs ($N = 355$). A collection of practical project reports will serve as a database for this purpose. An automated latent semantic analysis (LSA) will be used for the exploratory summarization of the primarily textual contents (> 2,000 pages). (2) For the first time, this study characterizes eBPs using a comprehensive thematic conceptualization including 12 core concepts and a total of 74 detailed sub-concepts. These thematic concepts are embedded in the context of a typical system development life cycle (SDLC), giving the conceptualization a founding framework. Finally, subsequent discussions work out and illustrate the conceptual nature of eBPs.

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