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The dynamics of contextual forces of ERP implementation

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Abstract

This paper reports the findings of an in-depth case study of implementing Enterprise Resource Planning Systems (ERP) in a long-established multinational company within the telecommunication sector. The company streamlined its operations through an ambitious business process redesign initiative and introduced an ERP system. The study examines the emergence of the ERP system and the enactment of simultaneous changes to the system and to the company context, along with the intentions and actions of the individuals involved. The study seeks to understand the ERP implementation process, in particular, the link between the ERP implementation process and the underlying and often subtle influences within the context. By drawing on the case study the paper offers a theoretical conceptualization of triggers and consequences of the cycles of control and drift of ERP implementation. We argue that by taking account of managers' intentions, the affordance of technology and the power and cultural context, we can provide richer insights into the ERP implementation process and the dynamics of the underlying, subtle influences within the context.
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1. Introduction

This paper explores the ERP implementation process in a large multinational company by examining the emergence of its ERP system and enactment of changes to the system along with the intentions and actions of the individuals involved in their company context. The main purpose of this paper is to understand the large-scale ERP implementation in its organizational context; in particular, how we can relate the ERP implementation process

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to the underlying and often subtle influences within the context and to what extend ERP implementation can be managed.

Many early research studies concentrated on offering guidelines for the successful implementation of ERP systems. They therefore emphasised on the success factors of an implementation process (Aladwani, 2001; Dong, 2000; Holland and Light, 1999; Nah et al., 2001; Shanks et al., 2000) assuming a planned deployment into an environment, where the environmental conditions and their influences are known in advance. This rational view of the context, however, neglects the influences of unfolding events and the subtle contextual forces that are beyond the control of management and implementers (Allen and Kern, 2001; Nandhakumar et al., 2003; Skok and Legge, 2001). In many cases, these influences become the critical issues that decide the fate of the ERP implementation project (Hanseth et al., 2001). Studies suggest that potentially ERP implementation could change the infrastructure and operating practices of an organization, and therefore, the implications of ERP implementation could be fundamentally wider than of any traditional transaction, or functional, system (Bingi et al., 1999; Davenport, 2000). Furthermore, the prevailing research assumes a linear model of technology adoption process based on (Cooper and Zmud, 1986). This view of the implementation process assumes that operations of large entities can be rationalized by the use of best practices and standardized by the use of similar processes throughout the enterprise (e.g. Aladwani, 2001; Deloitte Consulting LLC, 2000; Huber et al., 2000; Taudes et al., 2000). Several authors (Hanseth and Braa, 1998; Hanseth et al., 2001) have identified the complex and mangled nature of the change occurring in both the organization and the ERP system during the implementation. They compared ERP adoption with 'unleashing' a beast into the organization that assumes its own authority over things (Koch, 2000).

In this paper, we therefore, explore the process of a large-scale ERP implementation project and the contextual issues that shaped the process, and propose a conceptualization of the emergence and consequences of control and drift of ERP implementation. We argue that the ERP implementation process is triggered by managers' intentions in response to internal and external contextual conditions. Their actions in terms of introducing new ERP modules and their use are shaped by the nature of technology (affordance), and the power and cultural settings (social structure).

The rest of the paper is structured as follows. Section 2 provides a discussion of the theoretical basis for our investigation and improvisational model of change. This is then followed by a case description of technology-related change process in a large multinational organization. The organization has streamlined its operations through a major business process redesign initiative and introduced an ERP system. Our findings on the interplay of control and drift are discussed in the fourth section. We conclude the paper with some implications for theory and practice.

2. Theoretical foundations

2.1. Related research

Studies on ERP implementation often relate the implementation process to the contextual influences through critical success factors (CSF), which are environmental