Organizational Learning Process: Its Antecedents and Consequences in Enterprise System Implementation

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ABSTRACT

This paper uses organizational learning as a lens to study how firms implement the enterprise system. The core research questions are: What are the critical organizational factors affecting organizational learning in ES implementation? How do these elements shape the learning process and thereby influence ES implementation outcomes? To address these questions, we conducted comparative case study with two organizations that have recently adopted ES and achieved significantly different results. Based on the empirical findings, we propose a framework that describes how organizational factors affect the four constructs of organizational learning in ES implementation context — knowledge acquisition, information distribution, information interpretation and organizational memory.

Keywords: enterprise systems; organizational learning

INTRODUCTION

Over the past few years, Enterprise Systems (ES) have generated much interest among researchers and practitioners as a potential means to enhance organizational agility (Davenport, 1998; Sambamurthy, Bharadwah, & Grover, 2003). While interest and investment in ES have been rising steadily, actual experiences with ES have exhibited more ambiguity. Some studies report improvements in efficiency and effectiveness from ES adoption, yet others find that the expected gains are far beyond reach (Al-Mashari & Zairi, 2000). It is imperative to conduct research that can make sense of the
apparently-inconsistent ES adoption results.

Most of extant research on ES focuses on discrete critical success factors leading to on-time and within budget implementation (e.g., Bingi, Sharma, & Godla, 1999; Holland & Light, 1999; Parr & Shanks, 2000; Sumner, 2000). Yet, to leverage the business value of ES, it is not sufficient to simply adopt and install the system. Rather, employees and the organization as a whole must learn how to apply the technology effectively while they are implementing the system (Argyris & Schon, 1978; Attewell, 1992; Cooper & Zmud, 1990; Fichman & Kemerer, 1997; Purvis, Sambamurthy, & Zmud, 2001). The learning process plays a critical role in shaping IT adoption results (Tippins & Sohi, 2003). Hence studying how different forces affect the organizational learning process allows us to understand what leads to different ES implementation outcomes.

In this paper, we use organizational learning as a lens to study how firms implement ES. Extant ES literature alludes to organizational learning sporadically and most of them do so in a cursory fashion, except the work of Robey, Ross, and Boudreau (2002) and Scott and Vessey (2000). Different from these studies, this paper studies all four constructs of the underlying learning process involved in ES implementation - knowledge acquisition, information distribution, information interpretation and organizational memory (Huber, 1991). The core research questions are: What are the critical organizational factors affecting organizational learning in ES implementation? How do these elements shape the learning process and thereby influence ES implementation outcomes? To address these questions, we collect data by conducting case studies with two firms that have implemented ES within budget and on-time, but with significant different outcomes.

This paper makes three principal contributions. First, drawing on the rich data of two organizations’ experiences, the paper generates an understanding of the organizational learning associated with ES implementation. Second, dealing with the complex links traced in context, this paper adds substantive content to our understanding of the central role played by organizational factors in the organizational learning enacted in ES implementation. Such an understanding has been absent from the research and practice discourses on ES. Third, the paper integrates our research findings with the more formal insights available from the IS implementation and organizational learning literature. It facilitates researchers and practitioners to explain, anticipate, and evaluate the organizational learning process associated with the ES adoption. This paper is organized as follows: First, we briefly describe theoretical background of this study. Second, we discuss our research methodology. Third, we present the empirical findings that emerged from our case study. Last is our discussion and conclusion.

THEORETICAL BACKGROUND

Firms’ ability to apply IT effectively in their business activity explains the different outcomes of their IT adoption