



Chapter V

Understanding the Business Consequences of ERP Systems

Lorraine Staehr
La Trobe University, Australia

Graeme Shanks
Monash University, Australia

Peter B. Seddon
University of Melbourne, Australia

ABSTRACT

This study examines the postimplementation period of an ERP implementation in an Australian manufacturing organization, with the aim of understanding and explaining the business consequences that occurred. The description of the case is followed by an analysis using the structurational model of technology. The radical change in the way users needed to understand the business in terms of the new system, coupled with insufficient training and support postimplementation, and user resistance to change, impacted on the benefits the organization gained from the system.

INTRODUCTION

Enterprise Resource Planning (ERP) systems are large software packages that provide an integrated environment based on an enterprise-wide data model with a set of software applications that allow processing of all the data of the organization (Bancroft et al., 1996). Despite collective investment by organizations worldwide in ERP systems in the order of billions of dollars (Stein, 1999), many organizations do not know if they have achieved a positive return on their investment. Few studies looked at the postimplementation period of ERP systems to determine how and why business benefits evolve over time. Of those that have (Shang & Seddon, 2000; Markus & Tanis, 2000), neither study examined the postimplementation phase of ERP implementation in a manufacturing organization in detail over time to determine its influence on business benefits in the longer term. It is of significant interest to senior management of organizations, IS practitioners, and IS academic researchers to know more about the postimplementation period of ERP systems, the business benefits that result during the period, and how and why these consequences occurred.

ERP systems have been studied from a number of different perspectives. These include project management, outsourcing, organizational knowledge, large packaged software, critical success factors for implementation, and business benefits, to name a few (Esteves & Pastor, 2001). In this study, ERP implementation and use are viewed from the perspective of organizational change (Boudreau & Robey, 1999; Davenport, 2000). The postimplementation period of an ERP implementation in an Australian manufacturing organization is examined with the aim of understanding and explaining the business consequences that occurred. The structurational model of technology is used as the lens through which the postimplementation period is analyzed. A number of researchers used or proposed the use of structuration theory to understand ERP implementation and use (Boudreau & Robey, 1999; Chae, 2001; Pozzebon, 2001; Volkoff, 1999). The structurational model of technology (Orlikowski, 1992) was used by Volkoff (1999) to analyze the implementations of ERP systems in two organizations. The research reported in this chapter is part of a larger study that aims to understand and explain how and why some organizations gain more business benefits from their ERP systems than others. The outcomes from this research are limited, because the structuration model of technology was used to analyze ERP use in only one organization.

The chapter is organized in three main sections. The first section outlines the theoretical background, followed by a description and interpretation of the case using the structurational model of technology, and finally, a discussion and conclusion section.

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