Chapter VII

Organizational Readiness to Adopt ERP: An Evaluation Model for Manufacturing SMEs

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Abstract

Enterprise resource planning (ERP) systems are now being implemented in small and medium-sized enterprises (SMEs). This chapter presents the results of a study that proposes and validates a framework for evaluating the level of readiness for ERP adoption in manufacturing SMEs. The framework conceptualizes readiness to adopt an ERP as including four dimensions: the organizational context, external forces, perception of ERP, and business processes. A field study of eleven manufacturing SMEs was conducted. The framework led to the classification of these firms in three clusters: “committed adopters” (4 firms), “uncommitted adopters” (5 firms), and “late adopters” (2 firms).
Introduction

Until recently, enterprise resource planning (ERP) technology had only been used by large-scale organizations. Over the last few years, however, ERP applications have begun appearing in small and medium-size enterprises (SMEs), and in particular, in SMEs in the manufacturing sector (Everdingen, Hillegersberg, & Waarts, 2000; Palaniswamy & Frank, 2000). Since this technology is particularly complex, applications often present significant risks—as has been demonstrated by many failed attempts at implementation in large firms (Konicki, 2001; Songini, 2002). In this regard, White (1999) has characterized ERP as “the big company solution for small companies” and Pender (2001) suggests that the challenge for SMEs is to deploy large enterprise technology without incurring large enterprise costs.

There is a growing interest by SMEs and ERP providers in the development of enterprise systems that are better adapted to this type of organizations (Gable & Stewart, 1999; Stewart, Milford, Jewels, Hunter, & Hunter, 2000; Muscatello, Small, & Chen, 2003). Yet, past experience has shown that the sole availability of an information technology, as well adapted as it may be, is not sufficient to ensure that it will be successfully implemented and appropriately used in the organization. Indeed, several studies on ERP implementation projects in large firms have shown that these projects are often fraught with difficulties and that their failure rate is high. Studies have also shown that, often times, firms do not reap the benefits that they expected from implementing an ERP (Saint-Léger, 2004). Given significant differences between SMEs and large enterprises with regard to the objectives and constraints of ERP adoption (Laukkonen, Sarpola, & Hallikainen, 2007), determining if a small company will be able to adopt the technology, that is, if it is ready for implementing it, becomes a critical issue.

To address this issue, this study attempts to answer the following questions: What constitutes the readiness for ERP adoption in manufacturing SMEs? And how can firms be characterized in terms of their readiness to adopt an ERP? The study has both a descriptive and a prescriptive aim. First, the paper proposes a conceptual framework of the readiness for ERP adoption in small manufacturing firms. After examining its appropriateness with data gathered from 11 manufacturing SMEs, the paper describes how managers can use the framework, both to assess the level of readiness for ERP adoption of their firm and, when required, to identify the areas that ought to be improved for the firm to reach an appropriate degree of readiness.
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