Obtaining Value from the Customization of Packaged Business Software: A Model and Simulation

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ABSTRACT

Businesses that purchase packaged application software – for example, an Enterprise Resource Planning system – must make choices about customization. Packaged software vendors, anecdotal evidence, and practitioner-oriented research all recommend that businesses should customize software as little as possible, and instead adapt their processes to meet the “best practices” of the software. However, businesses continue to outspend their budgets on implementing and maintaining customized software, often to a significant extent. This suggests that either these businesses are making poor decisions, or that the conventional wisdom about customization is incorrect. In this paper the authors model the primary factors in the customization decision: “fit” between the desired business process and the packaged software; costs related to development, maintenance, integration, and performance; and benefits related to increased fit, integration, performance, and user acceptance. They use simulation techniques to illustrate the conditions under which customization is likely to provide value to the organization, as well as conditions under which customization should be avoided.

Keywords: Customization, ERP, Modification, Package Business Software, Software Development

INTRODUCTION

Enterprise Resource Planning (ERP) systems are the most complex category of Enterprise Information Systems. While ERP adoption has progressed into some service industries, the vast majority of the ERP user base continues to be large manufacturing firms (META Group, 2004). Firms make the decision to implement ERP systems for many reasons, sometimes technical (Y2K or the obsolescence of old systems, for example) but predominantly to meet operational business requirements. One reason that many firms choose to implement ERP is in order to achieve competitive advantage over other firms in the same industry (Jafarnejad, Ansari, Youshanlouei, & Mood, 2012). The notion is that by following the business processes prescribed by the functionality and structure of the ERP system, business units (BU’s) within a...
A firm that implements a business software application package is naturally going to encounter some “gaps” between the functionality that the package provides and the business requirements. In these cases, a firm may choose to either adapt its processes to conform to the software package, or it may choose to customize the package itself (Soffer, Boaz, & Dov, 2005; Zarei & Naeli, 2010). Because most ERP packages are designed to be general, i.e. to be used by a wide range of businesses in different industries, they usually have some degree of customization or “configuration” built in that does not involve custom development (Chand, Hachey, Hunton, Owhoso, & Vasudevan, 2005; Negi & Bansal, 2013). Light (2005) looked at the qualities of custom development in the ERP environment in terms of context, content and process. Reasons for customization included the filling of functional gaps, making the system more appealing and acceptable to users, increasing efficiency, and facilitating a smoother implementation. Light concluded that, as with any software development, the
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