

Chapter VI

Fit Between Strategy and IS Specialization: A Framework for Effective Choice and Customization of Information System Application Modules

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ABSTRACT

As organizations implement enterprise systems, the issues of whether to “build or buy” new IT modules, and if buying, how much to customize, continue to be key concerns. In this chapter, we develop a framework in order to better understand effective information system module choice and customization from a strategy perspective. Analysis of the strategic importance of the IS module can provide general guidance for the amount of specialization that is appropriate. To illustrate these ideas we apply them to four case examples.

INTRODUCTION

Over the past decade, there has been great interest in integrating organizations’ information

resources across their multiple business functions. This integration should provide better support for business processes, more efficient resource utilization (Emery, 1975; Gustin & Daugherty,

Table 1. Module categories

Module Category	Description
ES Module	<ul style="list-style-type: none"> - part of suite of integrated modules provided by a single ES vendor - generic - uses ES vendor's integration layer
Best-of-Breed Module -	<ul style="list-style-type: none"> - provided by one of many module vendors - some specialization (e.g. towards industry) - requires separate integration layer and integration effort
Custom Module	<ul style="list-style-type: none"> - module developed for a specific organization

1995), and it should open new business opportunities (Rockart & Short, 1989; Venkatraman & Kambil, 1991). While there has been a general question about the business value of IT in the past and the so called productivity paradox (Brynjolfsson & Hitt, 1996; Brynjolfsson & Yang, 1997), more recent publications on this issue, however, provide evidence that IT can provide business value, and rather focus on how firms can apply IT to generate business value (Melville, Kraemer, & Gurbaxani, 2004). This chapter addresses an important aspect of how business value can be achieved in the context of the integration of packaged information systems.

To accomplish this type of integration, an organization has three general options. It could build its own custom information system solution to exactly meet its needs. It could purchase a collection of packaged information systems (each from a different vendor) that it would then integrate using middleware (a best-of-breed approach). Finally, it could implement an enterprise system (ES), (also known as an enterprise resource planning or ERP system¹). An ES is a collection of packaged business software modules from a single vendor that offers “best practice” business processes, a common underlying database, and tight integration across all business functions (Davenport, 2000). By choosing among these three options and by deciding how much additional customization to apply, a firm will, in effect, make a decision about how “specialized” its IS modules

will be. By “specialized” we mean how unique to a particular business context.

In this chapter, we assume a strategic perspective and focus on the problem of deciding how specialized an information system (IS) module *should* be in the context of ES implementations. We argue that from a strategic point of view, the degree of specialization has two related consequences. First, we make a case that specialization is usually necessary if a firm hopes to leverage information systems for continued competitive advantage, since unspecialized modules can be obtained by competitors with relative ease. Second, specialized modules are more likely to exactly meet business requirements, thus improving business efficiency and/or effectiveness. These two consequences are related since competitive advantage often comes from having unique and valuable business processes which are supported by effective IS modules.

However, a problem arises because specialization does not come for free; in fact it can be quite expensive (Gill, 1999; Stedman, 1998). Excessive customization, as one form of specialization, has been associated with a number of failed ES implementations (Levin, Mateyaschuk, & Stein, 1998; Stedman, 2000), while other reports blame a lack of fit with the specific business requirements of the firm (Gattiker & Goodhue, 2002; Harris, 2000) as an obstacle to ES success. Thus, finding the right balance of specialization is critical, yet difficult to achieve.

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