

Chapter 15

Analysis of the Relationship Existing between Business Commercial Information Technologies¹

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ABSTRACT

The objective of this work is to analyse the importance of firms' previous experience with different information technologies (Internet, EDI) in their implementation of e-CRM and B2B e-commerce. Moreover, we also study the role of e-CRM in B2B development. With this objective, we have analyzed 109 firms belonging to the IT sector. The results show that experience with IT such as EDI or the Internet has a direct influence on the use of e-CRM. There is also a direct and positive transmission of knowledge from e-CRM to B2B e-commerce, even though they have not yet been adopted intensively by firms. Firms need to be aware of the interrelations that exist between the different information technologies. The experience accumulated from using an IT can be considered an important aspect of organisational knowledge, which allows firms to obtain a number of benefits as a result of applying other IT that are complementary.

INTRODUCTION

At the beginning of the 21st century, firms still find it difficult to recognise the strategic value of adopting information technologies (IT) (Von Krogh *et al.*,

2000; Nonaka *et al.*, 2000). While some research considers that IT do not positively impact on firms' productivity (Carr, 2003), another states that IT are an inexhaustible source of business opportunities for the modern firm (Rayport & Sviokla, 1994). Therefore, companies could apply IT to generate

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important competitive advantages and to differentiate themselves (Grant, 1996; Teece, 2000).

Of all the IT that have emerged in recent years, the Internet has been one of those that has generated most interest. So too, clearly, has electronic commerce (or e-commerce), which derives from the Internet, and redefines some of the variables and elements of traditional exchanges (Webb, 2002). B2B e-commerce enables a business to interact with another business electronically, in particular via the web (Zeng *et al.*, 2003). There are many benefits of B2B e-commerce. We highlight the following: increasing productivity, reducing potential staff overhead, and clearing audit training (Yang & Papazoglou, 2000). In spite of these benefits, firms have not adopted B2B e-commerce unanimously and homogeneously. Observing the different levels of acceptance, some studies have suggested the need to know which factors influence on a firm's technological behaviour. One factor that appears to be of considerable importance in the implementation process is IT experience, i.e. previous knowledge obtained by the firm from other IT related to the tool being analysed.

How do existing IT affect the adoption of new IT and enable transactions between businesses? This question has been an object for concern of firms for decades and continues to increase as new IT for commercial management appear (Chatterjee & Ravichandran, 2004). The objective of the current study is to analyse the importance of the firm's previous experience with IT in its acceptance of e-CRM and in the development of B2B e-commerce. With this objective, we look into the question of whether previous use of IT is a requisite for its implementation (such as the Internet) or related to commercial management (such as e-CRM and Electronic Data Interchange, EDI) and if it generates a greater affinity and an appropriate internal structure for the successful implementation of B2B e-commerce, as has been suggested by Riggins and Rhee (1999), Watson and McKeown (1999) and Ngai and Wat (2002). If these propositions are fulfilled, technological

experience could be considered as being a key factor for organisational knowledge, which would allow firms to obtain sustainable competitive advantages as a result of applying previous IT.

EDI is defined as cooperative interorganizational systems that allow trading partners to exchange structured business information electronically between separate computer applications (Swatman & Swatman, 1992; Asher, 2007). With regards to CRM, there is no universally accepted definition of this term, so this work follows that given by Kincaid (2003): "CRM is the strategic use of information, processes, technology and people to manage the customer's relationship with your company (Marketing, Sales, Services and Support) across the whole customer life cycle" (p. 41). Consequently, e-CRM is CRM software on the Internet, or Internet-based CRM. Finally, by B2B we consider interfirm e-commerce in its more restrictive meaning, i.e., conducting commercial transactions through the World Wide Web, not including advertising on the Internet or simple e-mail.

In the following section we review the literature on the role of acquired experience and compatibility in the acceptance of other IT. Moreover, we look further into the characteristics of the main IT considered in the study: EDI, Internet, e-CRM and B2B e-commerce. In the following sections, we detail the empirical analyses carried out, the results obtained and the conclusions that we draw from them.

TECHNOLOGICAL EXPERIENCE

The implementation of the Internet as a distribution and supply channel has been a key change in the evolution of many firms in recent years. Internet and other online IT are considered as a major accelerator in realizing closer forms of collaboration between business partners (Legner, 2008), so they create enormous opportunities for improving the scope and strength of B2B customer relationships

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