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Integrating information technology and marketing: An examination of the drivers and outcomes of e-Marketing capability

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ABSTRACT

This research examines the performance implications of integrating information technology with marketing capabilities and other firm-level resources. Specifically, this study introduces and empirically tests a model that conceptualizes e-Marketing as the integration of complementary technology, business and human resources that, when combined, positively influence firm performance. The results from a survey of 522 Belgian firms highlight the importance of how market and technology orientation leads to e-Marketing capability and that this capability is shown to positively influence firm performance by improving customer retention and satisfaction. The results suggest that researchers and practitioners should pay special attention to the complementary resources that are needed to successfully implement IT-enabled marketing initiatives and that an emphasis on the technology alone may not be sufficient.

1. Introduction

Marketing managers have turned to information technology (IT) to cope with the ongoing challenge of getting more from marketing resources while simultaneously meeting greater expectations to establish durable relationships with customers. Recent studies suggest that organizations can improve customer acquisition and retention by integrating IT into their marketing practices to foster rich interactions with their customers (Brodie, Winklhofer, Coviello, & Johnston, 2007; Coviello, Milley & Marcolin, 2001). This assimilation of IT and marketing, commonly referred to as *e-Marketing*, encompasses a broad set of interaction-enabling technologies that are frequently used in industrial business-to-business (B2B) markets including customer relationship management (CRM) software, sales force automation (SFA), e-commerce websites, and extranets (i.e., private websites set up specifically for a customer). While researchers have presented empirical evidence that relates IT-enabled customer interactivity to firm performance (Brodie et al., 2007; Wu, Mahajan & Balasubramanian, 2003), there remains a gap in our understanding of how IT and marketing resources are combined to develop new capabilities. Given the pervasive use of IT within marketing today, it is critical to further expand our knowledge of the drivers of e-Marketing capability and how this capability has the potential to enhance firm performance and generate a competitive advantage.

The resource-based view (RBV) provides a sound foundation for examining how IT and complementary resources can be bundled to form advantage-generating capabilities (Wade & Hulland, 2004). While researchers have since used the RBV to examine IT-enabled marketing capabilities (Lai, Wong & Cheng, 2010; Nath, Nachiappan & Ramanathan, 2010), to our knowledge little research grounded in the RBV has examined outside-in capabilities that connect a firm to its environment and foster strong relationships with customers. The purpose of this study, therefore, is to build from the foundation provided by past research on e-Marketing and extend this knowledge by examining e-Marketing as a dynamic firm-level capability. Furthermore, we examine the direct role of resource endowments on capability development as well as the interactive effects of these resources and the competitive environment. These interactive effects have received little attention in the IT-RBV literature in general (Wade & Hulland, 2004) and, to our knowledge, have not yet been examined within the marketing technology context specifically.

We aim to contribute to the growing body of literature emphasizing a capabilities-based view by developing and testing a model that informs future theoretic and empirical examinations of e-Marketing capability. To achieve this goal, the current study presents and empirically tests a model of how several idiosyncratic resources can be exploited to positively

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influence customer relationship performance and, ultimately, organizational performance. Specifically, our focus is on how information technology resources are integrated with a firm's complementary human and business resources to create competency in connecting and interacting with interorganizational customers resulting in higher customer satisfaction and retention. With the capabilities-based view serving as the primary conceptual lens, literature from marketing, information systems and strategic management is used to develop our conceptual model of the firm-specific capability of e-Marketing along with its antecedents and outcomes.

2. Theoretical background

2.1. Resource based view and dynamic capabilities

Day (1994) posits that distinctive capabilities, defined as the unique bundling of skills and resources that facilitate the execution of business processes, are what ultimately contribute to a sustainable competitive advantage and superior performance. This view asserts that distinctive capabilities 1) deliver superior customer value or allow the firm to deliver value in a more cost-effective way and 2) cannot be readily matched by rival firms. It is further suggested that distinctive capabilities facilitate adaptation to changes in the environment (Boynton & Victor, 1991) and provide a firm with an advantageous position (Day & Wensley, 1988). Day (1994) goes on to suggest that "a direct connection exists between the mastery of distinctive capabilities and superior profitability" (p. 40).

In parallel with the marketing literature's attention toward the strategic importance of capabilities, Teece, Pisano and Shuen (1997) introduce the dynamic capabilities view in the strategic management literature. This perspective, which highlights how some firms develop and sustain competitive advantages and superior profitability, is an extension of the resource-based view (RBV) of the firm. The RBV states that resources that are valuable, rare, inimitable and non-substitutable make it possible for businesses to maintain a competitive advantage (Barney, 1991; Wernerfelt, 1984). The extension provided by the dynamic capabilities view emphasizes the key role of management to appropriately adapt, integrate and reshape organizational skills and resources as well as internal and external functional competences. Competitive advantage is described in light of this theory as "not just a function of how one plays the game; it is also a function of the 'assets' one has to play with, and how these assets can be deployed and redeployed in a changing market" (Teece et al., 1997 p. 529).

Capabilities are dynamic when they provide firms with the ability to implement new strategies to adapt to changing market conditions (Teece et al., 1997). From a marketing strategy perspective, the dynamic capabilities view suggests that marketing resources or capabilities must be combined and integrated with other complementary capabilities to generate and sustain a competitive advantage (Menguc & Auh, 2006). Dynamic capabilities are embedded in a firm's managerial and organizational processes aimed at the creation, coordination, integration, reconfiguration or transformation of its resource position (Teece et al., 1997).

Several studies have taken a capabilities-based view to emphasize how capabilities created by the continual reconfiguration of existing resources can be deployed to create a competitive advantage (see Cavusgil, Seggie & Talay, 2007 for a thorough review). Nath et al. (2010) find that marketing capabilities dominate business performance and that these capabilities depend on the ability to understand customer needs and create long term relationships. Menguc and Barker (2005) suggest that the specific marketing resources of salespeople selling skills and intra-organization collaboration can be coupled to increase sales performance. Griffith, Noble and Chen (2006) introduce a model that demonstrates how knowledge resources can be combined with entrepreneurial proclivity to create a dynamic capability of market responsiveness which leads to increased firm performance. Lai et al. (2010) demonstrate that logistic activities can be integrated with information technology resources to create advantage-creating "digitized bundles" that can lead to increased performance. Research on market orientation also suggests that the positive influence that market orientation has on firm performance is only visible when market orientation is coupled with firm innovativeness (Menguc & Auh, 2006). In this relationship, market orientation alone is not a distinctive capability and must in fact be bundled with complementary capabilities such as innovativeness to lead to a sustained advantage.

Furthermore, the efficient deployment of resources can also lead to improvements in an organization's ability to adapt to its competitive environment. Adaptability stresses the extent to which a firm can use a variety of organizational capabilities (Sanchez & Mahoney, 1996) to implement changes in its strategic position (Oktemgil & Greenley, 1997). A critical premise of the resource-based view of the firm is that flexibility and adaptability in buyer–seller relationships will assist in the speed and ease of responding to new technologies or market changes (Young, Sapienza & Baumer, 2003; Connor & Prahalad, 1996; Sanchez, 1995). Organizational adaptability involves a firm's ability to identify and capitalize both emerging markets and technological opportunities (Chakravarthy, 1992). Organizations enter into a "state of adaptation" when they achieve fit with their environment (Tuominem, Rajala & Moller, 2004). One of the strategic focuses for an organization to remain adaptable is its technological focus, which includes seeking new applications as well as implementing these applications (Tuominem, et al., 2004).

Despite the increased attention to the capabilities approach, to our knowledge no studies have investigated the antecedents, dimensions or outcomes of e-Marketing capability. With this in mind, our focus is placed on how bundling existing marketing and complementary resources can lead to a distinctive capability of e-Marketing that facilitates not only the ability to respond quickly in a turbulent environment, but also allows for rich interactions with customers leading to enhanced relationship outcomes and, ultimately, improved firm performance.

3. Conceptual model and hypotheses

In order to empirically test the interrelationships between several firm-level constructs, we develop a conceptual model that is guided by the market orientation, information systems (IS) and strategic management literatures. Given our emphasis on the IT-enabled capability of e-Marketing, we draw theoretic support from Melville, Kraemer and Gurbaxani (2004) integrative model of IT business value. This resource-based model, in addition to its emphasis on resource configuration, suggests that intermediate capabilities and business processes should be examined along with the moderating influence of competitive environment. Additionally, based on the premise that new capabilities are a form of innovation, our model is informed by a conceptual framework introduced by Lawson and Samson (2001) in the management literature. Their framework is based on the extensive innovation literature and case studies of the innovation capability of high tech firms. Within the marketing literature, Wilson and Daniel (2007) found qualitative evidence of the key elements of Lawson and Samson's framework in their case study research examining multi-channel transformation. Together, these two theoretically grounded and complementary frameworks provide a solid foundation for our proposed conceptual model.

As shown in Fig. 1, this study examines the formation of a key distinctive capability of e-Marketing by focusing on the key constructs of market orientation, technology orientation, customer relationship performance, and organization performance. The following is a description of these constructs and a discussion on their interrelationships.

3.1. e-Marketing capability

As stated earlier, e-Marketing capability represents a firm's competence in using the Internet and other information technologies