

COMPLEMENTARITY OF INFORMATION TECHNOLOGY AND MARKETING CAPABILITIES

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Abstract

This paper study the relation between information technology and marketing capabilities. The interface between marketing and information technology forms the subject of numerous empirical and conceptual research. The expanding adoption of information technology in marketing implies the knowledge about the e-marketing capabilities development factors and the potential of these capabilities to generate competitive advantage and to improve firm's performance. The results of recent studies highlight that organizations witch integrate information technology in marketing processes can improve results in customer acquisition and retention processes, also provides other benefits like share growth and cost reduction and it also improve the firms marketing functions. The aim of this exploratory research is to identify the antecedents of e-marketing and technological capabilities of the firm. Understanding this link is arguably one of the key challenges facing organizations in today's highly dynamic environment.. It is also critical for marketing managers not only for determining strategic investments of resources but also for demonstrating marketing return on activities. E-marketing not only has a tremendous potential for growth but also poses unique challenges for all organisations, incumbents or new entrants.

Keywords: marketing capabilities, e-marketing capabilities, information technology, e-marketing orientation

JEL Classification: M31;

1. Introduction

Marketing managers are turning to information technology (IT) to meet the challenge of using marketing resources more efficiently, while satisfying customer needs at a higher level and to establish durable relationships with customers. Continuous integration of information technology in contemporary marketing practices is critical. Innovation can also be crucial for the growth and success of a company in today's dynamic environment, global markets and blurring industrial boundaries. There is a particularly interesting perspective on innovation capabilities, which focuses on the company's ability to innovate and develop competitive advantage. This capability perspective refers to firm's resources and the capability of supporting organizational innovation.

2. Technology information and marketing orientation

According to recent studies the consequences of adopting information technology in marketing have the effect of attracting and retaining customers in the company's marketing processes in order to develop a complex interaction with their customers. (Brodie, Winklhofer, Coviello, & Johnston, 2007; Coviello, Milley & Marcolin, 2001, Trainor et al., 2011). This integration of IT and marketing is commonly referred to as e-Marketing, and comprises a broad set of interaction-enabling technologies that are commonly used in industrial markets, including customer relationships management (CRM) software, sales force automation (SFA), e-commerce websites and extranets (private websites, build specially for the customer). While others have presented empirical evidences which relates IT-enable customer interactivity with firm's performance (Brodie et al., 2007; Wu, Mahajan și Balasubramanian, 2003), there still remains a gap in understanding the way in which IT capabilities and marketing resources are combined to develop new capabilities. Taking into consideration the growth of using IT in marketing it is critical to extend our knowledge concerning the drivers of e-marketing capability and how this capability have the potential to enhance firm performance and generate competitive advantage (Trainor et al. 2011). The resource base theory (RBV) offers a theoretical foundation to examine the way in which IT and complementary resources can be boundled to form advantage-generating capabilities (Wade & Hulland, 2004).

Understanding marketing capabilities

Day (1994) defines distinctive capabilities as complex bundles of skills and accumulated knowledge, exercised through organizational processes, that enables firms to coordinate activities and make use of their assets. Distinctive capabilities are those that deliver superior values in a more cost efficient way and cannot be matched

by competition. It is suggested that this distinctive capabilities facilitate adoption to environmental changes (Boynton & Victor, 1991) and provides a firm with a more advantageous positions (Day & Wensley, 1998). Day (1994) suggest that “a direct connection exists between the mastery of distinctive capabilities and superior profitability”. (p. 40)

Teece, Pisano & Shuen (1997) developed the dynamic capabilities theory in strategic management literature. This perspective, which underlines how some firms develop and sustain competitive advantage and superior profitability, is an extension of resource base view (RBV) of the firm. Resources that are valuable, rare, inimitable and non-substitutable allow businesses to maintain a competitive advantage (Barney, 1991; Wernerfelt, 1984). From strategic marketing perspective, dynamic capabilities view emphasize that marketing resources capabilities must be combined and integrated with other complementary capabilities to generate and maintain competitive advantage (Menguc și Auh 2006).

Trainor (2011) conducted an study on how marketing and complementary resources can be bundled to lead to distinctive e-Marketing capabilities which facilitate not only the ability to respond quickly to environmental turbulence, but also enable a rich interaction with customers and ultimately to better firm performance.

2.1. E-marketing capabilities

E-marketing capabilities represents a firm’s abilities to use the Internet and other information technologies to facilitate rich interaction with customers. These interactions provide consumers with access to the firm’s resources and information while the firm gains access to information about its customers (Trainor 2011). Some researchers limit the definition of e-Marketing to internet (Hooley, Saunders & Piercy, 2004), while others include other technologies such as Electronic Point of Sale (EPOS), electronic customer data bases (Strauss, El-ansary, & Frost, 2006). However, most of the definitions share a common ground which is that e-marketing is accomplished or facilitated via electronic information and communication technologies. The internet is currently the main enabler of e-marketing. (Shaltoni & West, 2010).

E-marketing has the potential to create value in two ways. The first way is through providing a close connection to a company’s business processes and direct access to firm resources. One example of e-Marketing that connects customers to the firm business process is when a firm provides customized support for its customers through extranets (Trainor 2011). Usually, these extranets offer customers access to relevant information, product documentation and direct electronic communication with engineers. In this regard, customers become tightly integrated with the company’s product development lifecycle leading to much greater customer-firm information sharing and interaction. The extranet not only provide customers with a direct interface to firm’s resources, but also provides product management with a rich set of information regarding customer demands and product usage. This form of information exchange plays a critical role in developing and maintain a strong relationship with consumers (Jayachandran et al. 2005). E-marketing capabilities also create value by allowing employees to improve their focus on customers by synchronizing their activities and information in the organization. Outside-in information’s can be integrated with other customer records to improve overall sales productivity and organizational efficiency (Kim & Jae, 2007). Moreover, this valuable customer information can be used by marketers for a better understanding their customers expressed and latent needs (Slater & Narver, 1999). Trainor (2011) conceptualizes e-marketing capabilities as a multi-dimensional construct: Information Technology, Human and Business Resources.

The first dimension, IT resources, represents a firm’s implementation and usage of a specific set of e-marketing technologies that can facilitate rich dialogs and interactions with customers. This set of technologies includes e-commerce websites, intranets, extranets, customer relationship management systems and sales force automations. The term e-business adoption has been used to describe the implementation of these types of technologies by firms and have a positive influence on the performance outcomes of customer satisfaction, sales performance and relationship development (Wu et al., 2003; Trainor, 2011).

Human resources represents the managerial support for technology initiatives and organizational culture which include these initiatives. This dimension play a significant role in ability to generate value from implementation of information technology (Henderson și Venkatraman, 1993; Powell și Dent-Micallef, 1997; Srinivasan, Lilien și Rangaswamy, 2002; Wu, et al., 2003). Henderson & Venkatraman (1993) argue that successful implementation of information technology requires the support of top management which are committed to new technology and can provide visionary leadership and clearly articulate the need for the technology across the organization. An open and flexible organizational culture and supports the new technology integrations across the organization (Wu et al., 2003). Lawson & Samson, (2001) state that an adequate culture and climate across the organization is vitally important for innovation success. Research shows that innovative organization have employees which are not only open to implementing new processes, but also opened to experiment and make the necessary adjustments for improving the processes (Wilson & Daniel, 2007). Additionally, in the e-commerce context, having a flexible culture leads to increased e-commerce performance (Saini & Johnson 2005).

Business resources dimension comprises the level of integration of technology into the organization. Powell and Dent-Micallef (1997) view the management’s plan of integrating new capability within the main business

process as a form of business resource. This is supported by empirical evidence which suggest that IT strategy is critical to the success of new information technology initiatives. In their study of IT deployment amongst retailers, Powell and Dent-Micallef (1997) define IT strategy as “integration of IT planning with the overall goals, strategies, and strategic planning processes of the firm and attempt to fit IT into strategic objectives rather than adopt Its for their own sake” (p.384). The importance of this business resource for a new capability is argued by Lawson and Samson (2001) which suggest that the success of capability development can only be achieved in the presence of “clear articulation of a common vision and the firm expression of the strategic direction” (p.389) and that such strategy is critical in directing organizational attention. Trainor (2011) successful development of e-marketing capabilities have a positive and direct influence on firm profitability, cost positioning and return of investments and also an impact through enhanced customer relationship performance. This findings are consistent with previous research results developed highlight that e-Marketing can simultaneously bring benefits by expanding revenue (e.g. via increased customer retention and satisfaction) and cost reduction (e.g. improved organizational efficiency). Market orientation and technology orientation are shown to be important drivers for customer-centric capability of e-marketing. Competitive environment have a strong direct influence upon e-marketing capabilities. Based on their research Trainor et al. (2011) state that companies which have developed these capabilities are more capable to run their activities in a turbulent environment to achieve higher performance. In turbulent markets, firms are capable to leverage new capabilities to help stimulate rich interactions with customers. Similarly, in situations of intense competition, these capabilities are found to provide a form of competitive advantage over other firms within their industry.

3. Adoption of e-marketing orientation.

E-marketing, is associated with two main sets of benefits. The first is related to raising profitability through increasing revenues or cutting costs and the second is connected to improving marketing function. For example, solutions like e-CRM can help increase customer satisfaction by providing new and innovative ways of delivering services. Chaffey et al. (2006) identified the existence of different levels of e-marketing adoptions, suggesting that the adoption can be seen as a continuum starting from the basic presence in online environment like brochures and rising at a high level of implication. Hanson (2000) suggests that this analysis can be made on three levels. The Publication Stage (one-way communication), the database and forms stage (simple interaction including e-commerce), and the customization stage (complex interaction). Different levels of adoption according to Shaltoni and West (2011) can be seen in the (fig no. 1).



Figure no.1- Theoretical Framework for e-marketing orientation measurement
(Shaltoni, West, 2010 p. 1097-1102)

Regardless the level, e-marketing occurs as a result of new devices or systems and can cause changes in marketing functions. Thus it is reasonable to consider e-marketing first of all as an organizational innovation. Many studies have employed this rationale and have utilized well-established innovation theories as a theoretical foundation for identifying and classifying factors that can affect the e-marketing assimilation. This can be observed in the context of technological innovation (Tomatzky & Fleischer, 1990) and the diffusion of innovation (Moore, 2004 & Rogers, 1995). An example of these factors is perceived compatibility which reflects the degree to which e-marketing is perceived to be in accordance with organizational culture and existing IT infrastructure. Another popular theory, the Technology Acceptance Model (TAM) (Davis, Bagozzi & Warshaw 1989), refers to the impact of perceived utility and information technology ease of use on attitudes which affect behavioural intentions and the behaviours of adopters.

Organizational orientation represents a different approach in understanding e-marketing adoption. Organization with different approach have different ways of doing business. For example an innovation-orientated company focuses on inventing superior products that can lead to innovative breakthroughs in the market. In contrast, a customer-orientated company focuses on identifying and satisfying the needs of its existing customers (Berthon, Hulbert & Pitt, 1999). This can provide a reach source in understanding why organizations vary in E-marketing adoption. However, despite examples in other fields, surprisingly not many scientific papers have employed the orientation perspective in researching e-marketing phenomena.

Fang, Mahajn, and Balasubramanian, (2003) have found that customer-orientation together with another set of factors provide a positive effect in internet adoption. Other studies which follow the same course include Chaston and Mangles (2001), Jones, Hecker, Holland (2003). An exploratory research effort has been made by Shaltoni (2006) in which the organizational orientation towards e-marketing has been studied through interviews with the marketing academics and practitioners. The result has indicated that e-marketing orientation manifests in behavioural and philosophical components. The behavioural component is akin to the organizational orientation identified by Kohli and Jaworski (1990) and Dang and Dart (1994) leading to a high level of e-marketing involvement along the behavioural component, two main levels of e-marketing orientation could be identified. First the initiation level when e-marketing ideas and intentions are transformed into formal and planed projects. This includes activities like information acquiring on e-marketing from different sources, evaluation of different adoption alternatives, planning the adoption and taking the adoption decision. The second level, the implementation, refers to all the activities involved in implementing e-marketing, for example, updating or improving the company website and employing qualified staff (tab. no. 1).

Table no.1: **E-Marketing adoption levels** (Sursa: Shaltoni 2011, pag: 1098)

	Communication level (basic adoption)	Transaction level (intermediate adoption)	Transformation level (advanced adoption)
Description	Simple extension of the marketing communication department	Organizations start conducting marketing transactions using e-marketing resources.	Organizations empower themselves by using e-marketing strategy to drive corporate strategy.
Example	Establishing a static web site to provide products and company information or receiving enquiries via online form.	Selling products and accepting payments via web sites, online customer service, conducting market research on the Internet.	Allowing customers to configure and order products online according to their specifications.
Characteristics	Limited interactivity, no e-marketing strategy, lack of resources committed to e-marketing activities.	The interaction is more complex and personalized, e-marketing strategy starts to evolve, availability of some financial resources and skilful staff.	High levels of interactivity, clear and solid e-marketing strategy, availability of enough resources to conduct e-marketing functions.

Organizations that belive in importance of e-marketing for achieving success will make an continuous effort for improving e-marketing activities, and can be described as having a high level of e-marketing orientation.

According to Ajzen and Fishbein (1980) and Davis et al., (1989) beliefs and attitudes are considered a major determinant of behaviours.

Shaltoni (2011) suggest that e-marketing orientation represents a synthesis of philosophical components and combines the attitudinal and behavioural organizational perspectives. Arguing that there are similarities between e-marketing orientation and marketing orientations (Kohli and Jaworski, 1990). The initiation stage in e-marketing orientation includes activities connected to information gathering from different sources, information dissemination across departments, evaluation of different adoption and planning alternatives. Similarly, the e-

marketing implementation stage, which includes activities as installing new technologies and employing e-marketing personnel resembles to responsiveness dimension. In conclusion, e-marketing orientation includes the philosophical component that reflects the organizational beliefs towards e-marketing, being consistent with the attitudinal aspect of organizational orientation. Narver, Slater, and Tietje (1998) stated that market orientation has to be understood as organizational culture, not only as a set of processes and activities

4. Conclusions

In this paper we contributed to identifying and understanding theoretical perspectives of the relation between marketing and information technology. Firstly we analysed if there exists a pattern of how e-marketing capabilities are formed by integrating different complementary capabilities. These e-marketing capabilities are seen as innovations which lead to customer satisfaction and retention. It is important to note that market sensing capability is critical in developing e-marketing capability and managers can develop long lasting relations with customers through IT enabled marketing processes.

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