Industrial Marketing Management 40 (2011) 1305–1318

Contents lists available at SciVerse ScienceDirect

Industrial Marketing Management

Marketing capabilities and innovation-based strategies for environmental sustainability: An exploratory investigation of B2B firms

Babu John Mariadoss [a,1], Patriya Silpakit Tansuhaj [a,1], Nacef Mouri [b,*]

[a] Department of Marketing, College of Business, Washington State University, Pullman, WA 99164-4730, USA
[b] Department of Marketing, School of Management, George Mason University, Fairfax, VA 22030, USA

ARTICLE INFO

Article history:
Received 31 December 2010
Received in revised form 23 September 2011
Accepted 26 September 2011
Available online 8 November 2011

Keywords:
Marketing capabilities
Innovation
Sustainability
B2B firms

ABSTRACT

While emerging literature on sustainability shows that environmentally responsible strategies can contribute to competitive advantage and enhanced financial performance, little is known about specific marketing capabilities that lead to sustainable consumption behavior, and whether implementing such strategies leads to firm competitive advantage. Using the case method approach, this study explores marketing-related strategies and practices pertaining to sustainable consumption as reported by leading sustainable firms in the B2B context. We examine case studies of forty seven B2B firms and identify key marketing capabilities that tie to innovation-based sustainability strategies, sustainable consumption behavior and firm performance. We use our findings to develop a conceptual framework linking marketing capabilities to innovation strategies for firm sustainability, sustainable consumption behavior and firm competitive advantage, and put forward propositions for future research.

Published by Elsevier Inc.

1. Introduction

"The only hope for sustainability is to change *forms* of consumption. To do so, we must innovate."

World Business Council for Sustainable Development (WBCSD, 2002).

Rapid rise in global population growth, consumption patterns associated with global affluence, as well as a consumerist culture among different income groups have put unsustainable stress on environmental ecosystems. According the World Bank, sixty percent of the earth's ecosystem has been degraded in the past 50 years, while natural resource consumption is expected to rise to 170% of the Earth's bio-capacity by 2040. Consequently, businesses are coming to the realization that the issues of sustainability and sustainable development can no longer be sidestepped, and have identified several important areas for sustainable development, one of which consists of innovation-based strategies (WBCSD, 2008a). While academic and managerial research has suggested that sustainability and sustainable development can lead to competitive advantage for firms (Berns et al., 2009; Bilgin, 2009; Wagner, 2005), research studying the role of marketing capability in innovation-based competitive strategy has been limited (Weerawardena, 2003), and no study to date has examined the specific capabilities that can drive innovation-based sustainable development strategies. Our study addresses this gap in the literature with a focus on Business-to-Business (B2B) firms.

In a recent issue of *Journal of Marketing*, Kotler (2011) states that the need for sustainable marketing practices means new challenges to marketing scholars and marketing practitioners, and highlights major research imperatives in the area of sustainability including the following issue: "What factors lead companies to compete on the basis of sustainability? What changes in marketing practice does sustainability seem to require?"(p. 135). We derive our motivation for this study from past research arguing that firms' quest for sustainability helps them develop distinct competencies that drive innovations (Nidumolu, Prahalad, & Rangaswami, 2009), and hence competitive advantage (Day and Wensley, 1988; Hurley & Hult, 1998; Porter, 1990). Research also suggests that basic competencies and internal capabilities should precede development of sustainability-based managerial practices (Christmann, 2000; Darnall & Edwards, 2006; de Ruyter, de Jong, & Wetzels, 2009; Hart, 1995).

Based on extant research in strategic marketing (Weerawardena, 2003), we contend that firm marketing capability influences the development of innovation-based sustainable strategies, while also facilitating the success of such innovations in the marketplace, leading to firm competitive advantage. Though marketing capabilities have the potential to generate innovation-based sustainability strategies, the functional role of marketing in the strategy dialog has been overlooked by marketing and related disciplines. This oversight is even more acute in the B2B context. Though B2B

* Corresponding author. Tel.: +1 703 993 1769; fax: +1 703 993 1809.
E-mail addresses: bjohnmar@wsu.edu (B.J. Mariadoss), tansuhaj@wsu.edu (P.S. Tansuhaj), nmouri@gmu.edu (N. Mouri).
[1] Tel.: +1 509 335 0924; fax: +1 509 335 3865.

0019-8501/$ – see front matter. Published by Elsevier Inc.
doi:10.1016/j.indmarman.2011.10.006

transactions represent a majority of all marketing activities outnumbering Business to Consumer (B2C) transactions, i.e., purchases by end-consumers (Polonsky, Broks, & Henry, 1998), limited academic research has addressed the issue of how B2B firms address sustainability challenges within their new product development processes (Geffen, 1997; Pujari, Peattie, & Wright, 2004). The managerial practice also reflects a similar gap (Joshi, 2009; Stoiber, 2011).

The present study bridges this research gap by exploring whether different types of marketing capabilities can help generate innovation-based sustainability strategies in B2B firms. We argue that firm marketing capabilities are a key driver to sustainable development. We define sustainable development as one that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is a process of change in which "the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs" (WCED, 1987). Specifically, our exploratory study investigates the relationship between marketing capabilities and the innovation-based strategies intended to promote sustainable consumption behavior in the B2B context. Borrowing from the United Nations Commission on Sustainable Development, we define sustainable consumption behavior as a range of social, economic and political practices at the individual, household, community, business and government levels that support and encourage the consumption of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations (OECD, 2002).

Understanding the relationships between marketing capabilities and innovation-based sustainability strategies is both theoretically and managerially relevant. Theoretically, we integrate the literature on marketing capabilities, innovation and sustainability to develop a conceptual and testable framework on the relationship between marketing capabilities and innovation-based strategies for sustainable development in the B2B context. From a managerial perspective, a key question facing firms that engage or plan to engage in sustainability business practices relates to how they can leverage the firm's capabilities to enhance sustainable consumption behavior. This study attempts to shed some light on the specific capabilities that managers must seek to develop in order to attain desired sustainable behavioral outcomes in a B2B environment.

The fundamental premise of this study is that different types of marketing capabilities can be a catalyst to different types of innovation-based sustainability strategies. Based on findings from our case analysis, we formulate propositions that relate marketing capabilities of firms that pursue sustainability to both technical (product and/or services, and production process technology) and non-technical (managerial, market, and marketing) innovations. Further, we also propose that such innovation-based sustainability strategies are positively associated with sustainable consumption behavior and firm competitive advantage.

Our paper is organized as follows: first, we review the extant literature on marketing in the context of sustainability and innovation and make the case that marketing capabilities are positively associated with innovation-based sustainability strategies that lead to firms' competitive advantage. Based on the literature review, we develop the specific research questions that guide our study. Next, using the case research method, we systematically examine forty seven firms to identify B2B firms that practice sustainable development, and develop a conceptual framework linking marketing capabilities to innovation-based sustainability strategies, sustainable consumption behavior and firm performance. We then put forward propositions for future research and discuss the findings, managerial implications, and conclusions.

2. Literature review

2.1. Marketing and sustainability

The last two decades have seen an increasing number of firms advocating the goal of sustainability. Academic research on sustainability/sustainable development has also grown in parallel. Yet, although the idea of sustainability has been widely endorsed by major companies, agreeing about what it means and how to achieve it has proven to be elusive. While some have criticized the vagueness of the term (Lele, 1991; Mebratu, 1998), there is relative agreement among academics that sustainable development encompasses environmental, economic, as well as social (equity) sustainability (Rogers, Jalal, & Boyd, 2008), referred to as the 3 Es that constitute the "triple bottom line" (Hunt, 2011; Savitz & Weber, 2006), or sustainability's three-legged stool (Newport, Chesnes, & Lindner, 2003). While the ecocentric term "environmental sustainability" has dominated the sustainability literature (e.g., Sheth, Sethia, & Srinivas, 2011), and the environment has traditionally had primacy in the discourse on sustainability (Newport et al., 2003), recent academic and practitioner literature (e.g., Newport et al., 2003; Holliday, 2001) have noted the importance of embracing the three components of sustainability. For example, the Dow Jones Sustainability Index (Sustainability Asset Management Group, 2002) transcends the environmental fixation in its prospectus by "…embracing opportunities and managing risks deriving from economic, environmental and social developments."

While we acknowledge that the three dimensions of sustainable development are important in their own right, we deliberately limit the scope of our research to focus on the environmental component of firm sustainability initiatives in marketing, owing to the following reasons (in addition to practical considerations): first, the topic of environmental sustainability has particularly attracted increased research attention from marketing scholars (e.g., Baker & Sinkula, 2005; Banerjee, Iyer, & Kashyap, 2003; Drumwright, 1994; Menon & Menon, 1997; Strong, 1997), some of whom have recently highlighted the pressing challenges that environmental sustainability poses for marketing academics and practitioners (e.g., Kotler, 2011; Scott, 2005). For example, Kotler (2011) singles out the environmental agenda as the one likely to have a "profound influence…on marketing theory and practice" and notes that marketing "will have to reinvent its practices to be environmentally responsible" (p. 132). Second, given the B2B focus of this research, it should be noted that environmental sustainability initiatives in the B2B context engender various benefits for the partners involved, both in terms of supply and demand management (Berth, 2011). Sharma, Iyer, Mehrotra, and Krishnan (2010) note that "environmentally-conscious supply management would enable better waste management and inventory control through lean manufacturing, reuse, remanufacture, and recycling, as well as a focus on product design for disassembly" while "environmentally-conscious demand management would require strategies that would reduce reverse supply, including better product design, precision in demand forecasting, and customized development and delivery" (p. 331).

While the B2B environment is characterized by marketing activities of organizations exchanging commerce transactions with other organizations along the value chain (Turnbull & Leek, 2003), the practitioner literature reports that B2B firms engage in both environmental and social stewardship using their supply chain, and that B2B firms also use social sustainability initiatives to cement B2B buyer–supplier relationships (Perkins and Brewer, 2010). Reflecting this managerial practice, the academic literature defines sustainability as comprising both environmental and social components. Though no specific definition of sustainability for the B2B context exists, attempts at defining the concept have been made in the supply chain management context. For example, Carter and Rogers (2008) define sustainability as the "strategic, transparent integration and achievement of a firm's