

12 Leveraging organizational capital for innovation

The process of marketing knowledge co-creation

Florian Kohlbacher

Introduction

This chapter deals with organizational capital and processes for innovation from a marketing and knowledge management perspective. Knowledge has frequently been identified as a crucial enabler for innovation (e.g. Bounfour, 2003; Drucker, 1985; Hanvanich *et al.*, 2003; Ichijo, 2002). At the same time, marketing affairs are one of the most knowledge-intensive functions of a corporation, and marketing processes like customer relationship management/customer knowledge management and new product development are very closely related to innovation (cf. e.g. Gibbert *et al.*, 2002; Kohlbacher, 2007; Leonard, 1998; Nonaka and Takeuchi, 1995). Speaking from the knowledge-based view of the firm (e.g. Nonaka and Toyama, 2005), which sees knowledge and competencies as decisive foundations for the performance and abilities of organizations, and building on Kohlbacher's (2007) framework of knowledge-based marketing, this chapter presents and analyzes the organizational process of marketing knowledge co-creation for generating innovation.

Theoretical background

The theoretical foundation of this chapter is Nonaka's theory of organizational knowledge creation (Nonaka, 1994; Nonaka and Takeuchi, 1995) and Kohlbacher's (2006; 2007) framework of knowledge-based marketing and knowledge co-creation in the business ecosystem. Kohlbacher identified and described four core marketing processes in which knowledge (co-)creation plays an essential role (cf. Figure 12.1). Of course, many more marketing processes can be identified and analyzed in a similar way, as well as more entities in the business ecosystem involved in the joint creation of knowledge and value. The models in Figures 12.1 and 12.2 are meant to illustrate only the core processes and actors. Note that the marketing knowledge base and the marketing processes together represent a firm's organizational capital in marketing.

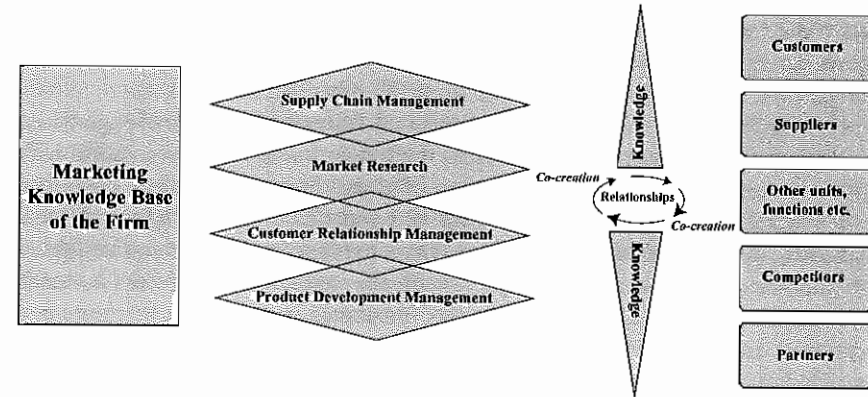


Figure 12.1 Knowledge-based marketing processes.

Source: Kohlbacher, 2007a: 117

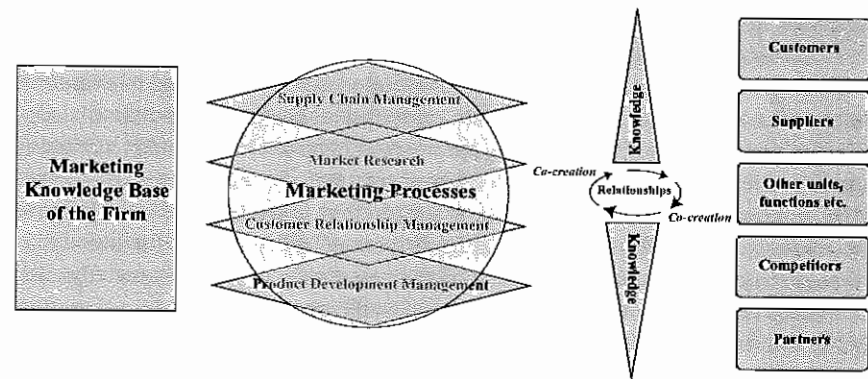


Figure 12.2 Knowledge-based marketing processes (integrated model).

Source: Kohlbacher, 2007a: 118

Marketing knowledge and knowledge-based marketing

Despite the fact that the theory of organizational knowledge creation has been applied to numerous fields (cf. e.g. Nonaka *et al.*, 2006b), this does not seem to be the case for marketing and marketing research. Indeed, even though "marketing functions lend themselves particularly well for an investigation of knowledge transfer within MNCs," "there is a dearth of research on knowledge transfer in the field of marketing" (Schlegelmilch and Chini, 2003: 220–221). Yet, in an

increasingly global business environment, the creation and transfer of marketing knowledge and intra-firm collaboration through knowledge-based approaches to marketing will become more and more crucial as a determinant for corporate competitive advantage and survival of firms (Kohlbacher, 2007).

Kohlbacher (2007) developed a conceptual framework of knowledge-based marketing and the essential processes of marketing knowledge co-creation with the main actors in the business ecosystem of global firms – customers, suppliers, competitors, business partners (cf. Figure 12.1 and 12.2 above). While traditional marketing approaches have focused overly on explicit knowledge and neglected the important role of tacit knowledge, specifically in international (cross-cultural) settings, his approach aimed to adjust this imbalance in the extant literature and proposed a new knowledge-based marketing paradigm, with knowledge and knowledge co-creation being the key to sustainable competitive advantage in the global network economy. Facing the current global business environment and fierce competition, knowledge-based marketing has already become crucial as a determinant for corporate competitive advantage and as such a *sine qua non* for leading MNCs. Besides, as large parts of marketing knowledge are tacit and hard to codify, face-to-face communication and the integration of local staff into marketing processes and decision-making is an important factor for global marketing knowledge sharing that leads to successful marketing and sales achievements (Kohlbacher, 2007).

According to Schlegelmilch and Chini (2003: 226) “it is high time to include marketing into the research agenda for knowledge management and to overcome the paradox that marketing functions are neglected in the discussion on knowledge transfer.” As a matter of fact, “[b]eing among the first to internationalize, marketing functions are key to the development of knowledge transfer processes in a dispersed MNC context” (ibid.). However, despite the obvious importance of knowledge to the marketing discipline, the marketing literature has struggled for more than 10 years to come to an understanding of the nature of marketing knowledge and there does not seem to be a common ground unifying scholars (Kohlbacher *et al.* 2007; Kohlbacher, 2006). Kohlbacher (2007: 96) defines marketing knowledge as “all knowledge, both declarative as well as procedural, concerning marketing thinking and behavior in a corporation.”

Knowledge-based marketing processes

Hanvanich *et al.* (2003: 124) argue that while marketing scholars have been interested in the topic of marketing knowledge, “they have focused mainly on how firms acquire, disseminate, and store knowledge,” with related research areas being market orientation and organizational learning. Taking a new approach to re-conceptualizing marketing knowledge and innovation, Hanvanich *et al.* (2003: 130) proffer that “marketing knowledge resides in three key marketing processes: product development management (PDM), customer relationship management (CRM), and supply chain management (SCM).” This notion is based on the framework of Srivastava *et al.* (1999) that redefines marketing as a phenomenon

embedded in the three core marketing processes of PDM, SCM and CRM. Bjerre and Sharma (2003: 140) seem to agree when they posit that the “important thing is not one specific piece of knowledge, but an entire package that includes knowledge about clients, competitors, local institutions, suppliers etc.”

I will subsequently discuss each of the three core processes of PDM, SCM and CRM from a marketing knowledge perspective. Kohlbacher’s (2007) framework presented in Figures 1 and 2 includes market research as a forth process. But a discussion of market research would go beyond the scope of this chapter. In a sense, it could also be viewed as a sub-process of customer knowledge management (see below, CRM) or as an antecedent of PDM.

Supply chain management

Supply chain management might actually be the least obvious process to analyze from a marketing knowledge perspective. However, suppliers are able to generate and provide valuable insights and knowledge about competitors, customers, and customers’ customers; and they can play an important role in product development processes, help to cut costs, and provide superior value propositions to customers. Indeed, suppliers must be “prepared to develop team-based mechanisms for continuously exchanging information about needs, problems, and emerging requirements, and then taking action” because in a successful collaborative relationship, joint problem solving displaces negotiations (Day, 1994: 45). Suppliers must also be prepared to participate in the customer’s development processes, even before the product specifications are established. That is why the channel bonding capability has many features in common with the customer-linking capability, and hence the same skills, mechanisms, and processes might be readily transferred between those related domains (Day, 1994: 44fn).

Ahmadjian (2004: 227) contends that “[k]nowledge creation occurs not only within firms, but also through relationships between firms.” In fact, customer-supplier partnerships (Konsynski and McFarlan, 1990) as well as strong supplier networks, have frequently been put forth in this context (cf. e.g. Chaston, 2004; Cusumano and Takeishi, 1991; Dyer and Hatch, 2006; Dyer and Nobeoka, 2000; Lincoln *et al.*, 1998). In the latter case it was notably those of Japanese companies, and here again especially the ones in the automotive, but also the electronics sector. These networks or strong relationships between firms in Japan have frequently been termed and analyzed as so-called *keiretsu*, described as “the webs of relations that envelop many Japanese companies” (Lincoln *et al.*, 1996: 67) or as “clusters of interlinked Japanese firms and the specific ties that bind them” and their “long-term, personal and reciprocal character” (Lincoln *et al.*, 1992: 561). Furthermore, “the openness and richness of networks are believed to foster a fertile environment for the creation of entirely new knowledge” (Lincoln *et al.*, 1998: 241). However, it must not necessarily only be big firms that successfully manage and share knowledge in the supply chain. Glisby and Holden (2005) for example, present the case of a Danish small specialist manufacturer that applied knowledge management concepts to the supply chain and thus managed to co-create the market with their

Japanese business partners through a synergistic process of knowledge sharing (cf. also Kohlbacher *et al.*, 2007).

Customer relationship management

The continuous need to learn from and about customers and competitors, and to exploit such knowledge to stay ahead, has frequently been stressed and discussed (cf. e.g. Chaston, 2004; Davenport *et al.*, 2001; Davenport and Klahr, 1998; Gulati and Oldroyd, 2005; Li and Cavusgil, 1998). Indeed, "customer focus," "customer knowledge co-creation," and "customer interaction" are crucial keywords in this context (cf. e.g. Griffin and Hauser, 1993; Gulati and Oldroyd, 2005; Prahalad and Ramaswamy, 2004b; Thomke and von Hippel, 2002; Vandermerwe, 2004).

Wikström and Norman (1994: 64) argue that because marketing is no longer "a clearly delineated function at the end of the production chain" and that since nowadays "there are many functions and people who influence the customer relationship," then it is not logical to have marketing handled solely by a specialist department. Thus, knowledge about customers needs to be shared throughout the organization (Bennet and Gabriel, 1999). Indeed, "knowledge on customers and their preferences must be located or solutions for a particular kind of customer problem need to be identified" (Schlegelmilch and Penz, 2002: 12). For the latter task, CRM and data mining tools for decision support have proven useful and effective – CRM is "critically dependent upon having accurate and up-to-date knowledge about customers" (Chaston, 2004: 225). However, even though tools and technology are important, they are not enough (cf. e.g. Davenport *et al.*, 2001; Gulati and Oldroyd, 2005). In fact, although CRM has received much scholarly and management attention, it frequently does not go beyond the surface and remains restricted to collecting and managing mere data and information, but not knowledge – especially tacit knowledge – despite its importance (cf. also Zaltman, 2003). Indeed, Gouillart and Sturdivant (1994: 117) criticize that "most managers do not understand the distinction between information and knowledge" and that even if they "include information from all points on the distribution channel, most general market data do not show a manager how each customer relates to the next or how customers view competing products and services." Besides, CRM has been traditionally popular as a means to tie customers to the company through various loyalty schemes, but it left perhaps the greatest source of value under-leveraged: the knowledge residing in customers (Gibbert *et al.*, 2002: 464).

A relatively new approach that tries to overcome the short-comings of CRM is "customer knowledge management" (CKM) (e.g. Davenport *et al.*, 2001; Desouza and Awazu, 2005; Gibbert *et al.*, 2002; Wayland and Cole, 1997). According to Gibbert *et al.* (2002: 461), CKM differs from CRM and knowledge management in general, as customer knowledge managers "require a different mindset along a number of key variables." "Customer knowledge managers, first and foremost focus on knowledge *from* the customer (i.e. knowledge residing in customers), rather than focusing on knowledge *about* the customer, as characteristic of customer relationship management" (Gibbert *et al.*, 2002: 461, original emphasis). Indeed,

customer-driven companies need to harness their capabilities to manage the knowledge of those who buy their products (Davenport and Klahr, 1998; Gibbert *et al.*, 2002).

Nevertheless, CRM still plays an important role as market driven organizations "develop intimate relationships with their customers, instead of seeing them as a means to a series of transactions" and these capabilities are "built upon a shared knowledge base that is used to gather and disseminate knowledge about the market" (Day, 1999: xi). Indeed, as buyer-seller relationships "continue their transformation, a customer-linking capability – creating and managing close customer relationships – is becoming increasingly important" (Day, 1994: 44). The customer-linking capability "comprises the skills, abilities, and processes needed to achieve collaborative customer relationships so individual customer needs are quickly apparent to all functions and well-defined procedures are in place for responding to them" (Day, 1994: 49). I therefore view CKM as one – from a knowledge-based perspective essential – process within CRM.

Product development management

Obviously, market research and CKM are – or at least should be – closely related. In a similar vein, knowledge from market research and customer knowledge and its management are not only essential for understanding customers and their needs to successfully advertise and market products, but also as early as in the product development process. Indeed, as marketing organizations serve as corporate links between customers and their organization's manufacturing and R&D operations (Riesenberger, 1998), the integration of and knowledge exchange between R&D and marketing has also been treated as an important issue (e.g. Griffin and Hauser, 1996; Song and Parry, 1993).

According to Bell *et al.* (2002: 82), product development is "a particularly salient area for organizational learning inquiry for a number of reasons": it is often a team-based pursuit, it requires a high degree of interfunctional coordination, and it is frequently project based. Indeed, there is a strong body of literature that deals with product development and product introduction for an organizational learning, Knowledge Management or market orientation perspective (cf. e.g. Baker and Sinkula, 2005; Kusunoki *et al.*, 1998; Madhavan and Grover, 1998; Schulze and Hoegl, 2006, to name but a few). But, product development is often difficult because "the 'need' information (what the customer wants) resides with the customer and the 'solution' information (how to satisfy those needs) lies with the manufacturer" (Thomke, 2003: 244). Traditionally, "the onus has been on manufacturers to collect the customer need information through various means, including market research and information gathered from the field," a process that "can be costly and time-consuming because customer needs are often complex, subtle, and fast-changing" (*ibid.*).

Nonaka and Takeuchi (Imai *et al.*, 1985; Takeuchi and Nonaka, 1986) have already discussed the issues of learning and transferring knowledge in product development projects more than twenty years ago, and the theory of organizational

knowledge creation is thoroughly grounded in and backed up by empirical research on such projects (Nonaka and Takeuchi, 1995; Nonaka *et al.*, 1996). In fact, even though many vital processes of innovation, change, and renewal in organizations can be analyzed through the lens of knowledge conversion (Nonaka *et al.*, 2006b), knowledge creation and transfer in product development projects seem to be particularly important, as the research focus by eminent Western scholars has also shown (cf. e.g. Leonard, 1998; Leonard and Sensiper, 1998; Leonard-Barton, 1992; von Hippel, 1994). Indeed, "the ability to import knowledge from the market" is a principal component of the product development process (Leonard, 1998: 179). Baba and Nobeoka (1998), in their study on the introduction of 3-D CAD systems, even speak of "knowledge-based product development." Moreover, Nonaka *et al.* (2006b) suggest that members of a product development project share ideas and viewpoints on their product design in a *ba* – a shared context – that allows common interpretation of technical data, evolving rules of thumb, an emerging sense of product quality, effective communication of hunches or concerns, and so on.

One way of capturing customer needs and translating them into a product concept has been termed "empathic design" (Leonard, 1998; Leonard and Swap, 2005). Leonard (1998: 194, emphasis removed), defines empathic design as "the creation of product or service concepts based on a deep (empathetic) understanding of unarticulated user needs." It is "a set of techniques, a process of developing deep empathy for another's point of view and using that perspective to stimulate novel design concepts" (Leonard and Swap, 2005: 82). Empathic design differs from contextual inquiry precisely because it does not rely on inquiry; in the situations in which empathic design is most useful, inquiry is useless or ineffective (Leonard, 1998: 288fn). The more deeply a researcher can get into the mindset, the perspective, of a prospective or actual user, the more valuable is the knowledge thus generated (Leonard, 2007).

Obviously, the knowledge gained and generated through market research, empathic design and product development etc. should not vanish after the project finishes. Indeed, it is essential to retain vital knowledge and share and transfer across functions, between projects as well as generations of projects and products (e.g. Aoshima, 2002; Cusumano and Nobeoka, 1998; Nobeoka and Cusumano, 1997). As Cusumano and Nobeoka (1998: 175) put it: "In addition to overlapping projects and using cross-functional teams, companies have various organizational and technological mechanisms to help them capture knowledge about designs or manufacturing processes and then transfer this knowledge across different projects or different generations of products." Indeed, successful new product development at least partially depends on the ability to understand technical and market knowledge embodied in existing products, and the adaptation of this knowledge to support new product development (Aoshima, 2002; Iansiti, 1997; Iansiti and Clark, 1994).

Knowledge-based innovation

"Knowledge is a crucial enabler for innovation, that is, corporate transformation, which requires the involvement of all organizational members" (Ichijo, 2002: 478). Viewing innovation as a continuous process of re-invention, Bounfour (2003) places knowledge creation at the heart of innovation, and Drucker (1985: 107) proffers that "amongst the history-making innovations, knowledge-based innovations rank high." Hanvanich *et al.* (2003: 126) maintain that "knowledge plays a critical role in innovation generation" (cf. also Cavusgil *et al.*, 2003) and Chaston (2004: 150) contends that innovation "involves the application of knowledge to create new products and/or services." Kogut and Zander (1992) argue that innovations are products of a firm's "combinative capabilities" to generate new applications from existing knowledge. Teece *et al.* (1997) term such capabilities "dynamic capabilities," i.e. a firm's ability to use existing firm-specific capabilities and to develop new ones. Dynamic capabilities provide a firm with the basis for its sustainable advantage over time and, according to Teece (1998: 62), a "critical dimension of knowledge management has emerged: capturing value from innovative activity."

For Leonard (1998: 4) the "starting point for managing knowledge in an organization is an understanding of core capabilities," which "constitute a competitive advantage for a firm" and "have been built up over time and cannot be easily imitated." It is exactly these core competencies that are building and sustaining the sources of innovation in organizations. Together, these capabilities and competencies form the organizational capital of a firm. Finally, "[i]n a world where other firms are seeking to expand their market share, successful firms often can only stay ahead of the competition by exploiting new knowledge to offer improved products or processes that deliver new forms of added value to their customer" (Chaston, 2004: 155). However, it is important to note that "the knowledge necessary to come up with valuable innovations is neither in-house nor nearby" (Santos *et al.*, 2004: 37), or at least this is not necessarily the case.

According to Leonard and Sensiper (1998: 116), "[t]he process of innovation is a rhythm of search and selection, exploration and synthesis, cycles of divergent thinking followed by convergence." Besides, "[i]nnovation, the source of sustained advantage for most companies, depends upon the individual and collective expertise of employees" and creative cooperation is critical (Leonard and Sensiper, 1998: 112). Indeed, knowledge building for an organization occurs by combining people's distinct individualities with a particular set of activities, and it is this combination that enables innovation (Leonard, 1998: 8). On a global scale, there is a need for a process for innovating "that transcends local clusters and national boundaries," becoming what Santos *et al.* (2004: 31) have termed "metanational innovators." This is a strategy of utilizing localized pockets of technology, market intelligence and capabilities, and which has provided a powerful new source of competitive advantage: more, higher-value innovation at lower cost (Doz *et al.*, 2001; Santos *et al.*, 2004). According to Santos *et al.* (2004: 31), it is the "logical next step beyond augmenting in-house R&D with external ideas" in what has been called the "era of open innovation" (e.g. Chesbrough, 2003). Indeed, Chesbrough

(2006: 15) argues that in "a world of widely distributed useful knowledge, one can only sustain innovation by actively licensing in external ideas and technologies alongside developing and deploying one's own ideas." As firms look to advance their technology, they can or should use both external ideas and internal ideas, and both internal and external paths to market. Companies should make much greater use of external ideas and technologies in their own business, while letting their unused ideas be used by other companies. Open innovation is a paradigm that offers the prospect of lower costs of innovation, faster times to market and the chance to share risks with others (Chesbrough, 2003, 2006). This shares commonalities with the idea of leveraging external knowledge from entities in the business ecosystem.

The process of marketing knowledge co-creation

As Kohlbacher (2007) has shown, applying knowledge management concepts and practices to the knowledge-intensive field of marketing, and to marketing functions, bears out particularly efficient and effective. Especially when introducing new products or when entering new markets, knowledge creation and transfer, and intra- as well as inter-firm collaboration, prove critical for the success of the projects. It is especially the process of knowledge co-creation – joint knowledge creation – which is of outmost importance in this context.

Knowledge co-creation

Knowledge co-creation, and especially knowledge co-creation with customers, is at the heart of knowledge-based marketing. Indeed, as Nonaka (2007: xiv) puts it, "[f]irms and managers have to take the standpoint of the customer, and collaborate with them and dwell in them to share and co-create tacit knowledge." However, Sawhney (2002: 96, original emphasis) notes that even though "[c]ollaboration has become an established way of doing business with suppliers, channel partners and complementors," with a few exceptions, "working directly with customers to co-create value remains a radical notion." But a "critical aspect of creating a successful market is the ability to integrate the customer into every key process" and collaborators "may play a major role in initiating knowledge creation in the marketplace" (Kotler *et al.*, 2002: 36, 38).

According to Achrol and Kotler (1999), the creation of marketing know-how is the most important function of marketing in the global knowledge-based economy. Indeed, "in marketing, a wide array of knowledge needs to be created" and "knowledge on customers and their preferences must be located or solutions for a particular kind of customer problem need to be identified" (Schlegelmilch and Penz, 2002: 12). Most of the time the knowledge creation or application is only conducted in a unilateral, one-sided way. Firms generate, collect and analyze knowledge about customers, customers' needs, competitors, suppliers etc. Customer knowledge from customers can be seen as a little exception to this, but here as well, the knowledge might be communicated unilaterally from the customers to the firm. But the real

challenge and source of essential knowledge for competitive advantage is to go beyond knowledge creation and application as a unilateral concept. In fact, interactions and knowledge co-creation become more and more crucial.

Therefore, knowledge and value co-creation with customers – but also with suppliers and other business partners – has also received significant attention recently (cf. e.g. Doz *et al.*, 2001; Gummeson, 2002; Lawer, 2005; Prahalad and Ramaswamy, 2000; Prahalad and Ramaswamy, 2004b; Prahalad and Ramaswamy, 2003; Sawhney and Prandelli, 2000b; Sawhney, 2002; Thomke and von Hippel, 2002; Wikström, 1996; Zack, 2003). According to Prahalad and Ramaswamy (2000: 80), the market has become "a forum in which consumers play an active role in creating and competing for value," with the distinguishing feature of this new marketplace being "that consumers become a new source of competence for the corporation" (cf. also Prahalad and Ramaswamy, 2003; Prahalad and Ramaswamy, 2004b). Indeed, "co-creation converts the market into a *forum* where dialogue among the consumer, the firm, consumer communities, and networks of firms can take place" (Prahalad and Ramaswamy, 2004b: 122, original emphasis). According to Zack (2003: 71), anyone who can help the business – customers, trading partners, suppliers, consumers, interest groups – should be involved to create the knowledge the company needs. In fact, as discussed above, the "array of relationships in the set has been expanded from the dyad of seller and customer to include partners up and down the value chain (e.g., suppliers, the customers of customers, channel intermediaries)" (Day and Montgomery, 1999: 4).

Gibbert *et al.* (2002: 463) contend that since CKM is about innovation and growth, customer knowledge managers "seek opportunities for partnering with their customers as equal co-creators of organizational value." According to Prahalad and Ramaswamy (2003), the value of products or services is in the co-creation experience that stems from the customer's interaction with the product and/or the firm (cf. also Prahalad and Ramaswamy, 2004b). Gummeson (2002: 8) further notes that "[e]specially in services and often in B-to-B, customers are co-producers." Lovelock and Gummeson (2004: 29) use the term "coproducer" in the narrow sense of "a transfer of work from the provider to the customer" and contend that "[i]n its purest form, coproduction means that customers engage in self-service, using systems, facilities, or equipment supplied by the service provider." However, research in this area is still rather scarce, and as Lawer (2005: 11) has noted, "the organizational learning or marketing literature does not yet adequately define or empirically identify the nature or scope of the capability changes required for co-creation of knowledge with customers." Indeed, "the challenge is to view customers as co-producers of knowledge" (Desouza and Awazu, 2005: 143) and in order "to be successful at co-producing knowledge, the organization must seek customers who have open knowledge-sharing cultures, are willing to engage in learning and knowledge-creating activities, and are willing to take a certain degree of risk" (Desouza and Awazu, 2004: 15). Finally, companies must "redesign their businesses from a customer-driven starting point, so that they gather deep knowledge about customers and then have the capacity to offer customized products, services, programs, and messages" (Kotler *et al.*, 2002: 164).

Furthermore, customer interactions (Furukawa, 1999b, 1999a; Vandenbosch and Dawar, 2002), customer experiences (Berry *et al.*, 2002; Carbone and Haeckel, 1994; Pine II and Gilmore, 1999; Prahalad and Ramaswamy, 2000; Prahalad and Ramaswamy, 2004b; Prahalad and Ramaswamy, 2003), and communities of creation (Sawhney and Prandelli, 2000a) have become key terms in this context. In fact, “[h]igh-quality interactions that enable an individual customer to co-create unique experiences with the company are the key to unlocking new sources of competitive advantage” (Prahalad and Ramaswamy, 2004a: 7). Prahalad and Ramaswamy (2003: 15) propose the concept of “experience environment,” which “can be thought of as a robust, networked combination of company capabilities [...] and consumer interaction channels [...] flexible enough to accommodate a wide range of individual context-and-time-specific needs and preferences.” The network creates an experience environment with which each customer has a unique interaction. The consumer actively co-creates his or her personalized experience, which forms the basis of value to that consumer (Prahalad and Ramaswamy, 2003: 15). Because we must continually co-create new knowledge to co-create value continually, so-called “knowledge environments” for managers resemble experience environments for consumers (Prahalad and Ramaswamy, 2004b: 171). To be effective, “a knowledge environment must engage the total organization, including multiple levels, functions, and geographies,” and the knowledge environment “is also where *the manager, as consumer, interacts with the experience network to co-create value*” (Prahalad and Ramaswamy, 2004b: 179, 185, original emphasis).

Customers’ ideas – specifically those of so-called “lead users” (e.g. von Hippel, 1986; von Hippel, 1977) – and the ideas of those that interact directly with customers, or those that develop products for customers, have become important (cf. e.g. Leonard, 1998, 2007; Zaltman, 2003). “Lead users have foresight (knowledge) to help an organization better plan for product innovations” and organizations have “begun to host user conferences for the specific purpose of getting to know how their customers utilize their products and how they have customized or modified them to meet their needs” (Desouza and Awazu, 2004: 14). In the 1970s, von Hippel (1977) found that most product innovations come not from within the company that produces the product, but from end-users of the product. Note that lead users can be part of or can also form networks and share their ideas and knowledge within them (Furukawa, 1999b, 1999a). More recently, Thomke and von Hippel (2002) suggested ways in which customers can become co-innovators and co-developers of custom products (cf. also Gibbert *et al.*, 2002; Thomke, 2003). Indeed, “[c]ontrary to the mythology of marketing, the supplier is not necessarily the active party” and in B-to-B, “customers initiate innovation and force suppliers to change their products or services” (Gummesson, 2002: 15). As Prahalad and Ramaswamy (2004a: 10–11, original emphasis) put it: “In the co-creation view, all points of interaction between the company and the consumer are opportunities for both value creation and extraction.”

The process of marketing knowledge creation

A key issue in the literature on organizational learning and knowledge management is how successfully firms learn when they are exploiting current knowledge and skills versus exploring new knowledge and skills, and a long tradition of research suggests that these are competing strategies (Kyriakopoulos and Moorman, 2004; March, 1991; Miller *et al.*, 2006). But this view has also been challenged, with the argument that firms must engage in both strategies (e.g. He and Wong, 2004; Jansen *et al.*, 2005; Kyriakopoulos and Moorman, 2004; Levinthal and March, 1993; Lewin and Volberda, 1999). Levinthal and March (1993: 105) put it like this:

An organization that engages exclusively in exploration will ordinarily suffer from the fact that it never gains the returns of its knowledge. An organization that engages exclusively in exploitation will ordinarily suffer from obsolescence. The basic problem confronting an organization is to engage in sufficient exploitation to ensure its current viability and, at the same time, to devote enough energy to exploration to ensure its future viability. Survival requires a balance, and the precise mix of exploitation and exploration that is optimal is hard to specify.

Kyriakopoulos and Moorman (2004) identified research in various fields that has recently shifted focus from whether to how firms can achieve a complementarity of the exploitation and exploration strategies: Brown and Eisenhardt (1997), e.g. introduce semi-structured and time-paced strategies as managerial tools to achieve this dynamic balance in product innovation. Likewise, the integration of exploration and exploitation is central to work examining dynamic or combinative capabilities (Grant, 1996; Kogut and Zander, 1992; Teece *et al.*, 1997). In the product development literature, scholars often study the degree of fit between a new product and prior activities (e.g. marketing and technological synergy, Henard and Szymanski, 2001; Montoya-Weiss and Calantone, 1994; Moorman and Miner, 1997; Song and Parry, 1997). Kyriakopoulos and Moorman (2004: 220) contribute to this literature by suggesting that a firm’s market orientation can systematically promote synergies between exploratory and exploitative marketing strategy activities because “a firm’s market orientation reduces the tensions between exploration and exploitation strategies and creates the opportunity for cross-fertilization and complementary learning between the two strategies.”

While knowledge exploitation “means enhancing the intellectual capital of a company with existing knowledge”, knowledge exploration “is a strategy for a company to increase its intellectual capital by creating its unique private knowledge within its organizational boundary” and therefore “means enrichment of the intellectual capital that a company achieves by itself” (Ichijo, 2002: 479–478). According to Ichijo (2002), both knowledge exploitation and knowledge exploration are indispensable for a company to increase its competitive advantage and Kyriakopoulos and Moorman (2004: 234) found that – despite the common assumption that these are competing strategies – “market-oriented firms can

gain important bottom-line benefits from pursuing high levels of both strategies in product development." In fact, "[i]n a world where other firms are seeking to expand their market share, successful firms often can only stay ahead of the competition by exploiting new knowledge to offer improved products or processes that deliver new forms of added value to their customers" (Chaston, 2004: 155). If we interpret Chaston's expression "exploiting new knowledge" to be a mix of exploiting old knowledge and exploring new knowledge, we might well conclude that his statement is consistent with the above. Vicari and Cillo (2006: 195) follow Kyriakopoulos and Moorman (2004) and define market knowledge exploitation strategies as "those that imply a leverage on existing knowledge to refine marketing strategies, without exiting the existent path." On the other hand, they define market exploration strategies as "those that enact new approaches in the relationship with the market, by challenging existent convictions and routines of the organization" (Vicari and Cillo, 2006: 195–196).

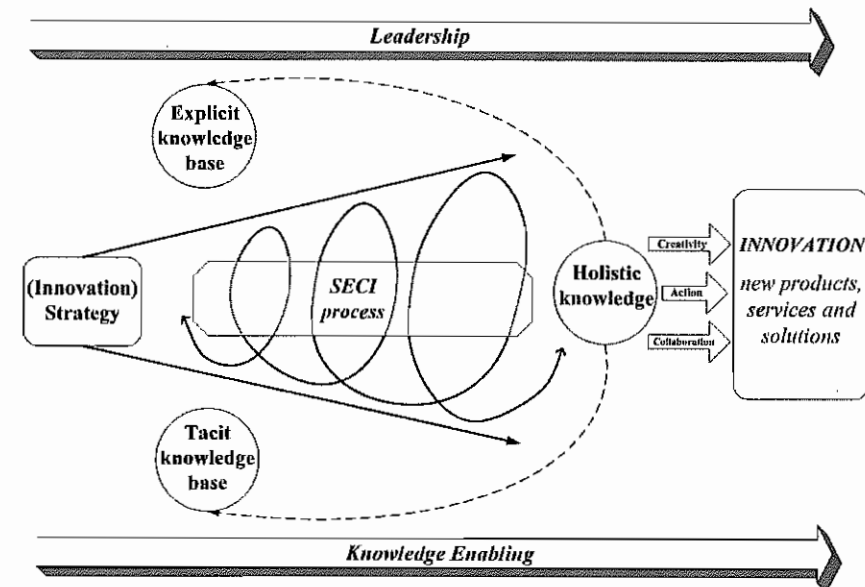
Dynamic capabilities enable "both the exploitation of existing internal and external firm-specific capabilities and developing new ones" (Teece *et al.*, 1997: 515; cf. also Eisenhardt and Martin, 2000). Kyriakopoulos and Moorman (2004: 222) – who build their concepts of marketing exploitation and exploration on the resource-based view of the firm – conceptualize a firm's market orientation as "a dynamic capability that facilitates a firm's ability to explore and exploit knowledge and skills." Indeed, dynamic capabilities are rooted in both exploitative and exploratory activities (Benner and Tushman, 2003). Kyriakopoulos and Moorman (2004: 235, 236) finally conclude that "as a dynamic capability to sense market changes and relate to markets, a firm's market orientation helps it reconfigure and integrate knowledge generated from both strategies to serve existing and future customer needs" and that "market orientation is one important firm-level factor that allows high levels of both marketing exploitation strategies (improving current knowledge and skills) and marketing exploration strategies (developing new knowledge and skills) to be used profitably by firms." The ability to pursue both exploration and exploitation at the same time – and/or within the same organization – has also been termed ambidexterity (e.g. O'Reilly III and Tushman, 2004; Tushman and O'Reilly III, 1996).

Based on the above, Kohlbacher (2007: 103) defined knowledge-based marketing as "a knowledge management approach to marketing that focuses both on the exploitation (sharing and application) and exploration (creation) as well as the co-creation of marketing knowledge from contexts, relations and interactions in order to gain and sustain competitive advantage." Knowledge-based marketing therefore asks for ambidexterity. Figure 12.3 illustrates the interconnected processes of organizational knowledge creation and innovation, i.e. the marketing knowledge (co-)creation process. Through the SECI process – the process of organizational knowledge creation defined and explained by Nonaka (Nonaka, 1994; Nonaka and Takeuchi, 1995) – new knowledge is constantly created and refined over time, lifting the knowledge from the tacit and explicit organizational knowledge base to a higher dimension, namely in the form of holistic knowledge. In a sense, this holistic knowledge bridges explicit and tacit knowledge and can therefore be seen as a kind

of synthesis of both. Indeed, bridging the gap between explicit and tacit knowledge means bridging the gap "between the formula and its enactment." Taylor (1993: 57) contends that the "person of real practical wisdom is marked out less by the ability to formulate rules than by knowing how to act in each particular situation." Note that the tacit and explicit knowledge base and the holistic knowledge created from them are crucial organizational capital, as is the process as a whole.

Dixon (2000: 13) defines knowledge "as the meaningful links people make in their minds between information and its application in action in a specific setting" and states that it "is always linked to action", as it is "derived from action and it carries the potential for others to use it to take action". In a similar vein, tacit knowledge refers to a kind of knowledge which is highly personal, hard to formalize and thus difficult to communicate to others, as it is deeply rooted in action (Nonaka and Takeuchi, 1995). In fact, in management, "knowledge about situations is of prime importance [...] not just knowledge about facts or people or technology, et cetera, but situational knowledge that combines all these factors" (Ghosn and Riès, 2005: 175).

Note that the marketing knowledge co-creation process in Figure 12.3 is exactly the knowledge co-creation process – and actually also an exploration and exploitation process – that can be found in the model of knowledge-based marketing processes (cf. Figures 12.1 and 12.2). In a sense, this model of the marketing knowledge co-creation process explains on the micro level and in



© Florian Kohlbacher 2007

Figure 12.3 The marketing knowledge co-creation process.

Source: Author's own illustration

greater detail what is shown in the macro model of knowledge-based marketing processes in general.

The marketing knowledge creation process is an iterative process that starts with setting an innovation strategy and constantly loops back again. The final outcome is innovation in the form of new and innovative products, services and solutions. The continuous process of creating and refining concepts, ideas and knowledge through direct communication and interaction fosters the emergence of innovation and competitive advantage. Put differently, the whole process could also be described as a process of building up, refining and re-creating organizational capital. Indeed, organizational capital is both the input and the output of the process, as well as the ability to execute the process. Finally, the knowledge creation process is supported and nurtured by leadership – usually by middle managers (Nonaka and Takeuchi, 1995) and knowledge activists (von Krogh, Ichijo, and Nonaka, 2000) – as well as certain enablers or enabling conditions (von Krogh *et al.*, 2000).

Last but not least, as shown by Nonaka and associates (Nonaka, Toyama, and Konno, 2000; von Krogh *et al.*, 2000), organizational knowledge creation needs a shared context/*ba* or it is least enhanced by it. Figure 12.4 takes this fact into consideration and incorporates *ba* into the model. The knowledge creation process takes place in *ba* and is at the same time nurtured by it. For the case of the interaction and subsequent knowledge exchange and creation between firms and customers, Furukawa (1999b; 1999a) proposes the concept of ‘meeting *ba*’ (*deai no ba*). This meeting *ba* needs to be designed to communicate actively with customers

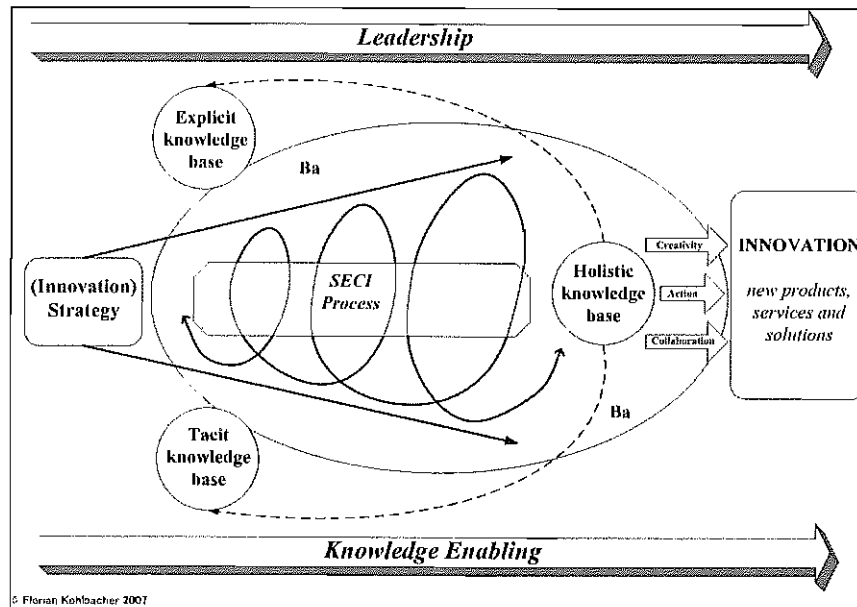


Figure 12.4 The marketing knowledge co-creation process and *ba*.

Source: Author's own illustration

and consumers within the social network. In a similar vein, Nonaka (2007: xiv) emphasizes the importance of *ba* and contends that a “theory of knowledge-based marketing must also be one of contextual marketing.”

Knowledge-based marketing in practice

Despite the growing recognition of the need for knowledge-based approaches to marketing and systematic, strategic marketing knowledge (co-)creation, there are only few pioneer firms that are already taking or trying to take such an approach (Kohlbacher, 2007; Kohlbacher *et al.*, 2007). These firms face the challenge of an increasingly global business environment with fierce competition, and they take up and master the challenge with the help of knowledge-based marketing. The most outstanding example is probably Toyota. Indeed, Toyota has often been found to be very strong at organizational learning and knowledge creation and sharing (cf. e.g. Ichijo, 2007; Ichijo and Kohlbacher, 2007; Liker, 2004; Spear, 2004; Spear and Bowen, 1999). One aspect that has particularly been under the scrutiny of researchers is knowledge sharing and learning within its supplier network and the way Toyota leverages this co-created knowledge for both itself and its suppliers (e.g. Dyer and Hatch, 2004; Dyer and Nobeoka, 2000; Evans and Wolf, 2005; Liker and Choi, 2004). Additionally, Toyota also learns from its competitors and co-creates new knowledge with them. In particular, the joint venture between Toyota and GM – New United Motor Manufacturing, NUMMI – has already become legendary and has repeatedly been discussed from a knowledge-based perspective (cf. e.g. Badaracco, 1991; Easterby-Smith and Araujo, 1999; Inkpen, 2005; Liker, 2004, to name but a few). More recently, Toyota has established an international joint venture between with PSA Peugeot Citroën in Kolín, Czech Republic (Toyota Peugeot Citroën Automobile Czech, TPCA). This joint venture enables Toyota to pursue a marketing strategy perfectly suited for the emerging markets in Eastern Europe, and the collaboration with PSA also resulted in mutual learning, marketing knowledge co-creation, and other advantages for Toyota's European operation and its strategy of using external, local resources (Ichijo and Kohlbacher, 2007b; Kohlbacher, 2007; Ichijo and Kohlbacher, 2008).

Kohlbacher (2007) reports Swiss-based Schindler Elevator's knowledge-based marketing strategy for the market introduction of a new escalator product into Asian markets (cf. also Kohlbacher *et al.*, 2007). This case, for example, showed that even for a large MNC with its vast network of subsidiaries that are well connected by e-mail, intranet, databases, telephone and video conferences, the sharing of tacit knowledge on a personal level is still a very reasonable – or even indispensable – approach. In fact, a combination of both a codification and a personalization strategy for marketing knowledge management in order to leverage both tacit and explicit knowledge proved highly successful and led to the co-creation of crucial marketing knowledge. Similarly, Hewlett Packard (HP) Consulting and Integration leverages both tacit and explicit marketing, sales and application knowledge from its field people – consultants and system engineers – through communities of practice and the process of knowledge co-creation through them (Kohlbacher and Mukai, 2007).

Last but not least, German conglomerate Siemens – like HP, frequently featured as a company with a strong background in knowledge management – leverages competitive advantage and new business opportunities through a cross-selling and marketing knowledge sharing and co-creation project that spans the boundaries of its different business divisions (Kohlbacher, 2007).

As for knowledge-based new product development management, Nonaka *et al.* (2006a) give an account of how Mazda enabled empathic design in developing the third generation Roadster Miata that won the Japan Car of the Year Award 2005/2006 (cf. also Kohlbacher, 2007). The product development team was indeed able to capture customer needs and translate them into a successful product concept because of their capacity to leverage even tacit customer needs and knowledge, and to achieve a high level of experience co-creation between the customers and the product. Finally, Maekawa Manufacturing Ltd – famous for its decentralized structures and project-based management approach (e.g. Peltokorpi and Tsuyuki, 2006) – found that producing and selling industrial parts is not enough any more. Through co-creation of common contexts and knowledge with its customers it was able to combine its products with its process knowledge to offer an integrated service including consulting. However, they do not simply offer pre-defined process and manufacturing models, but actively co-create the solutions together with their customers (Kohlbacher, 2007), an achievement that helped them to escape the red oceans of cutthroat competition and create new market space (blue ocean), yet “untainted by competition” (Kim and Mauborgne, 2004: 77). Indeed, as Prahalad and Ramaswamy (2004b: 12, original emphasis) state, the future of competition “lies in an altogether new approach to value creation, based on an individual-centered co-creation of value between consumers and companies.”

Even though discussing the concrete process of marketing knowledge co-creation in detail for each of these best practice companies would go beyond the scope of this chapter, it should have become clear that knowledge-based marketing and marketing knowledge (co-)creation can successfully be applied in practice and indeed lead to sustainable competitive advantage.

Conclusion

Building on Kohlbacher (2007), this chapter presented and discussed a knowledge-based approach to essential marketing processes and offered a model of marketing knowledge co-creation for generating innovation. However, as is the case with Nonaka's SECI process of organizational knowledge creation, it is important to note that there is no silver bullet or single right approach. Indeed, depending on each company's individual circumstances, the process may look different, and a particular knowledge-based approach to marketing will have to be developed and strategically managed. Nevertheless, at the least, the following five general conclusions can be drawn (cf. also Kohlbacher, 2007: 193–194):

- As knowledge has become a critical source for competitive advantage, marketing – and management in general – has to become knowledge-based.

- Marketing scholars and practitioners have focused too much on explicit marketing knowledge in the past. Combining and synthesizing both tacit and explicit knowledge and, subsequently, leveraging holistic marketing knowledge, is a sine qua non for corporate success and the source of innovation.
- Marketing knowledge needs to be co-created. Not only inside the firm, or across different units of a corporation, but also together with other stakeholders – most importantly customers, but also with suppliers, partners and competitors.
- Managers have to perceive their firms as interconnected in the global network economy, and thus have to take relationship marketing and the co-creation of knowledge and value with other entities in the business ecosystem seriously.
- Building, re-creating and sustaining organizational capital in the form of knowledge and knowledge-creating processes is a crucial driver of innovation.

Aligning a knowledge-based innovation strategy with the micro processes of generating and co-creating knowledge will be a major challenge for corporations in the network economy of the twenty-first century. As a result, organizational capital in the form of knowledge and knowledge-based marketing processes will become decisive for competitive advantage and thus corporate success and survival. Further research needs to be done to identify and analyze full-fledged best practices, but the “next practices” (Prahalad and Ramaswamy, 2004b) mentioned above show that at least some truly global, leading companies are on their best way to successfully implement and leverage knowledge-based marketing and marketing knowledge (co-)creation to gain and sustain competitive edge.

References

- Achrol, R. S. and P. Kotler, ‘Marketing in the network economy’, *Journal of Marketing* 63(4) (1999), 146–62.
- Ahmadjian, C. L., ‘Inter-organizational knowledge creation: knowledge and networks’, in H. Takeuchi and I. Nonaka (eds), *Hitotsubashi on knowledge management*, Singapore: John Wiley & Sons (Asia), 2004, 227–45.
- Aoshima, Y., ‘Transfer of system knowledge across generations in new product development: empirical observations from Japanese automobile development’, *Industrial Relations*, 41(4) (2002) 605–28.
- Baba, Y. and K. Nobeoka, ‘Towards knowledge-based product development: the 3-d CAD model of knowledge creation’, *Research Policy* 26(6) (1998) 643–59.
- Badaracco, J. L. *The knowledge link: how firms compete through strategic alliances*. Boston: Harvard Business School Press, 1991.
- Baker, W. E. and J. M. Sinkula, ‘Market orientation and the new product paradox’, *The Journal of Product Innovation Management* 22(6) (2005) 483–502.
- Bell, S. J., G. J. Whitwell, and B. A. Lukas, ‘Schools of thought in organizational learning’, *Journal of the Academy of Marketing Science* 30(1) (2002) 70–86.
- Benner, M. J. and M. L. Tushman, ‘Exploitation, exploration, and process management: the productivity dilemma revisited’, *Academy of Management Review* 28(2) (2003) 238–56.
- Bennet, R. and H. Gabriel, ‘Organisational factors and knowledge management within large marketing departments: an empirical study’, *Journal of Knowledge Management* 3(3) (1999) 212–25.

- Berry, L. L., L. P. Carbone, and S. H. Haeckel, 'Managing the total customer experience', *MIT Sloan Management Review* 43(3) (2002) 85–9.
- Bjerre, M. and D. D. Sharma, 'Is marketing knowledge international? A case of key accounts', In A. Blomstermo and D. D. Sharma (eds), *Learning in the internationalisation process of firms*. Cheltenham: Edward Elgar, 2003, 123–41.
- Bounfour, A., *The management of intangibles: the organisation's most valuable assets*. London: Routledge, 2003.
- Brown, S. L. and K. M. Eisenhardt, 'The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations', *Administrative Science Quarterly* 42(1) (1997) 1–34.
- Carbone, L. P. and S. H. Haeckel, 'Engineering customer experiences', *Marketing Management* 3(3) (1994) 8–19.
- Cavusgil, S. T., R. J. Calantone, and Y. Zhao, 'Tacit knowledge transfer and firm innovation capability', *The Journal of Business and Industrial Marketing* 18(1) (2003) 6–21.
- Chaston, I., *Knowledge-based marketing: the twenty-first century competitive edge*. Thousand Oaks: Sage Publications, 2004.
- Chesbrough, H. W., *Open innovation: the new imperative for creating and profiting from technology*. Boston: Harvard Business School Press, 2003.
- Chesbrough, H. W., *Open business models: how to thrive in the new innovation landscape*. Boston: Harvard Business School Press, 2006.
- Cusumano, M. A. and K. Nobeoka, *Thinking beyond lean: how multi-project management is transforming product development at Toyota and other companies*. New York: The Free Press, 1998.
- Cusumano, M. A. and A. Takeishi, 'Supplier relations and management: a survey of Japanese, Japanese transplants, and US Auto plants', *Strategic Management Journal* 12(8) (1991) 563–88.
- Davenport, T. H., J. G. Harris, and A. K. Kohli, 'How do they know their customers so well?' *MIT Sloan Management Review* 42(2) (2001) 63–73.
- Davenport, T. H. and P. Klahr, 'Managing customer support knowledge', *California Management Review* 40(3) (1998) 195–208.
- Day, G. S., 'The capabilities of market-driven organizations', *Journal of Marketing* 58(4) (1994) 37–52.
- Day, G. S., *The market driven organization: understanding, attracting, and keeping valuable customers*. New York: The Free Press, 1999.
- Day, G. S. and D. B. Montgomery, 'Charting new directions for marketing', *Journal of Marketing* 63 (Special Issue) (1999) 3–13.
- Desouza, K. C. and Y. Awazu, 'Gaining a competitive edge from your customers: exploring three dimensions of customer knowledge', *KM Review* 7(3) (2004) 12–15.
- Desouza, K. C. and Y. Awazu, *Engaged knowledge management: engagement with new realities*. Basingstoke: Palgrave Macmillan, 2005.
- Dixon, N. M., *Common knowledge: how companies thrive by sharing what they know*. Boston, MA: Harvard Business School Press, 2000.
- Doz, Y., J. Santos, and P. Williamson, *From global to metanational: how companies win in the knowledge economy*. Boston: Harvard Business School Press, 2001.
- Drucker, P. F., *Innovation and entrepreneurship: practice and principles*. New York: HarperCollins, 1985.
- Dyer, J. H. and N. W. Hatch, 'Using supplier networks to learn faster', *MIT Sloan Management Review* 45(3) (2004) 57–63.
- Dyer, J. H. and N. W. Hatch, 'Relation-specific capabilities and barriers to knowledge transfers: creating advantage through network relationships', *Strategic Management Journal* 27(8) (2006) 701–19.
- Dyer, J. H. and K. Nobeoka, 'Creating and managing a high-performance knowledge-sharing network: the Toyota case', *Strategic Management Journal* 21(3) (2000) 345–67.
- Easterby-Smith, M. and L. Araujo, 'Organizational learning: current debates and

- opportunities', in M. Easterby-Smith, L. Araujo and J. Burgoyne (eds), *Organizational learning and the learning organization: developments in theory and practice*. London: Sage, 1999, 1–21.
- Eisenhardt, K. M. and J. A. Martin, 'Dynamic capabilities: what are they?' *Strategic Management Journal* 21(10/11) (2000) 1105–21.
- Evans, P. and B. Wolf, 'Collaboration rules', *Harvard Business Review* 83(7/8) (2005) 96–104.
- Furukawa, I., 'Shakaiteki nettowaku to maketingu (social networks and marketing)', in I. Nonaka (ed.), *Netowaku bijinesu no kenkyu – fureai ga tsukuru kyokan komyuniti [network business research – empathy communities created through contacts]*. Tokyo: Nikkei BP, 1999a, 87–154.
- Furukawa, I., *Deai no 'ba' no kosoryoku – maketingu to shouhi no 'chi' no shinka [the imagination of the meeting 'ba' – the evolution of marketing and consumption 'knowledge']*. Tokyo: Yuhikaku, 1999b.
- Ghosn, C. and P. Riès, *Shift: inside Nissan's historic revival* (J. Cullen, trans.). New York: Currency Doubleday, 2005.
- Gibbert, M., M. Leibold, and G. Probst, 'Five styles of customer knowledge management, and how smart companies use them to create value', *European Management Journal* 20(5) (2002) 459–69.
- Glisby, M. and N. Holden, 'Applying knowledge management concepts to the supply chain: how a Danish firm achieved a remarkable breakthrough in Japan', *Academy of Management Executive*, 19(2) (2005) 85–9.
- Gouillart, F. J. and F. D. Sturdivant, 'Spend a day in the life of your customers', *Harvard Business Review* 72(1) (1994) 116–25.
- Grant, R. M., 'Prospering in dynamically-competitive environments: organizational capability as knowledge integration', *Organization Science* 7(4) (1996) 375–87.
- Griffin, A. and J. R. Hauser, 'The voice of the customer', *Marketing Science* 12(1) (1993) 1–27.
- Griffin, A. and J. R. Hauser, 'Integrating R&D and marketing: a review and analysis of the literature', *The Journal of Product Innovation Management* 13(3) (1996) 191–215.
- Gulati, R. and J. B. Oldroyd, 'The quest for customer focus', *Harvard Business Review* 83(4) (2005) 92–101.
- Gummesson, E., *Total relationship marketing*. Oxford: Butterworth-Heinemann, 2002.
- Hanvanich, S., C. Dröge, and R. Calantone, 'Reconceptualizing the meaning and domain of marketing knowledge', *Journal of Knowledge Management* 7(4) (2003) 124–35.
- He, Z.-L. and P.-K. Wong, 'Exploration vs. exploitation: an empirical test of the ambidexterity hypothesis', *Organization Science* 15(4) (2004) 481–94.
- Henard, D. H. and D. M. Szymanski, 'Why some new products are more successful than others', *Journal of Marketing* 38(3) (2001) 362–75.
- Iansiti, M., *Technological integration: making critical choices in a turbulent world*. Boston: Harvard Business School Press, 1997.
- Iansiti, M. and K. B. Clark, 'Integration and dynamic capability: evidence from product development in automobiles and mainframe computers', *Industrial and Corporate Change* 3(3) (1994) 557–605.
- Ichijo, K., 'Knowledge exploitation and knowledge exploration: two strategies for knowledge creating companies', in C. W. Choo and N. Bontis (eds), *The strategic management of intellectual capital and organizational knowledge*. New York: Oxford University Press, 2002, 477–83.
- Ichijo, K., 'The strategic management of knowledge', in K. Ichijo and I. Nonaka (eds), *Knowledge creation and management: new challenges for managers*. New York: Oxford University Press, 2007, 121–45.
- Ichijo, K. and F. Kohlbacher, *Toyota's global knowledge creation strategy*. Paper presented at the 49th Annual Meeting of the Academy of International Business (AIB). Indianapolis, 2007a.

- Ichijo, K. and F. Kohlbacher, 'The Toyota way of global knowledge creation: the "learn local, act global" strategy', *International Journal of Automotive Technology and Management* 7(2/3) (2007b) 116–34.
- Ichijo, K. and F. Kohlbacher, 'Tapping tacit local knowledge in emerging markets – the Toyota way', *Knowledge Management Research and Practice* 6(3) (2008) 173–86.
- Imai, K.-i., I. Nonaka, and H. Takeuchi, 'Managing the new product development process: how Japanese companies learn and unlearn', in K. B. Clark and R. H. Hayes and C. Lorenz (eds), *The uneasy alliance: managing the productivity-technology dilemma*. Boston: Harvard Business School Press, 1985, 337–81.
- Inkpen, A. C., 'Learning through alliances: General Motors and Nummi', *California Management Review* 47(4) (2005) 114–36.
- Jansen, J. J. P., F. A. J. Van den Bosch, and H. W. Volberda, 'Exploratory innovation, exploitative innovation, and ambixterity: the impact of environmental and organizational antecedents', *Schmalenbach Business Review* 57(4) (2005) 351–63.
- Kim, W. C. and R. Mauborgne, 'Blue ocean strategy', *Harvard Business Review* 82(10) (2004) 76–84.
- Kogut, B. and U. Zander, 'Knowledge of the firm, combinative capabilities, and the replication of technology', *Organization Science* 3(3) (1992) 383–97.
- Kohlbacher, F., 'Knowledge-based approaches to international marketing – in search of excellence'. Paper presented at the IFSAM VIIIth World Congress, Berlin, 2006.
- Kohlbacher, F., *International marketing in the network economy: a knowledge-based approach*. Basingstoke: Palgrave Macmillan, 2007.
- Kohlbacher, F., N. J. Holden, M. Glisby, and A. Nomic, *Knowledge-based approaches to international marketing: unleashing the power of tacit local and global knowledge to create competitive advantage*. Paper presented at the 49th Annual Meeting of the Academy of International Business (AIB), Indianapolis, 2007.
- Kohlbacher, F. and K. Mukai, 'Japan's learning communities in Hewlett-Packard Consulting and Integration: challenging one-size fits all solutions', *The Learning Organization* 14(1) (2007) 8–20.
- Konsynski, B. R. and F. W. McFarlan, 'Information partnerships: shared data, shared scale', *Harvard Business Review* 68(5) (1990) 114–20.
- Kotler, P., D. C. Jain, and S. Macsincce, *Marketing moves: a new approach to profits, growth, and renewal*. Boston: Harvard Business School Press, 2002.
- Kusunoki, K., I. Nonaka, and A. Nagata, 'Organizational capabilities in product development of Japanese firms: a conceptual framework and empirical findings', *Organization Science* 9(6) (1998) 699–718.
- Kyriakopoulos, K. and C. Moorman, 'Tradeoffs in marketing exploitation and exploration strategies: the overlooked role of market orientation', *International Journal of Research in Marketing* 21(3) (2004) 219–40.
- Lawer, C., *On customer knowledge co-creation and dynamic capabilities*. Working Paper, Cranfield School of Management (2005).
- Leonard, D., *Wellsprings of knowledge: building and sustaining the sources of innovation*. Boston: Harvard Business School Press, 1998.
- Leonard, D. and S. Sensiper, 'The role of tacit knowledge in group innovation', *California Management Review* 40(3) (1998) 112–32.
- Leonard, D. and W. C. Swap, *When sparks fly: harnessing the power of group creativity*. Boston: Harvard Business School Press, 2005.
- Leonard, D., 'Market research in product development', in K. Ichijo and I. Nonaka (eds), *Knowledge creation and management: new challenges for managers*. New York: Oxford University Press, 2007, 146–57.
- Leonard-Barton, D., 'Core capabilities and core rigidities: a paradox in managing new product development', *Strategic Management Journal* 13(Special Issue) (1992) 111–25.
- Levinthal, D. A. and J. G. March, 'The myopia of learning', *Strategic Management Journal* 14 (Winter Special Issue) (1993) 95–112.

- Lewin, A. Y. and H. W. Volberda, 'Prolegomena on coevolution: a framework for research on strategy and new organizational forms', *Organization Science* 10(5) (1999) 519–34.
- Li, T. and S. T. Cavusgil, 'Decomposing the effects of market knowledge competence in new product export', *European Journal of Marketing* 34(1/2) (1998) 57–79.
- Liker, J. K., *The Toyota way: 14 management principles from the world's greatest manufacturer*. New York: McGraw-Hill, 2004.
- Liker, J. K. and T. Y. Choi, 'Building deep supplier relationships', *Harvard Business Review* 82(12) (2004) 104–13.
- Lincoln, J. R., C. L. Ahmadjian, and E. Mason, 'Organizational learning and purchase-supply relations in Japan: Hitachi, Matsushita, and Toyota compared', *California Management Review* 40(3) (1998) 241–64.
- Lincoln, J. R., M. L. Gerlach, and C. L. Ahmadjian, 'Keiretsu networks and corporate performance in Japan', *American Sociological Review* 61(1) (1996) 67–88.
- Lincoln, J. R., M. L. Gerlach, and P. Takahashi, 'Keiretsu networks in the Japanese economy: a dyad analysis of intercorporate ties', *American Sociological Review* 57(5) (1992) 561–85.
- Lovelock, C. and E. Gummesson, 'Whither services marketing? In search of a new paradigm and fresh perspectives', *Journal of Service Research* 7(1) (2004) 20–41.
- Madhavan, R. and R. Grover, 'From embedded knowledge to embodied knowledge: new product development as knowledge management', *Journal of Marketing* 62(4) (1998) 1–12.
- March, J. G., 'Exploration and exploitation in organizational learning', *Organization Science* 2(1) (1991) 71–87.
- Miller, K. D., M. Zhao, and R. Calantone, 'Adding interpersonal learning and tacit knowledge to march's exploration-exploitation model', *Academy of Management Journal* 49(4) (2006) 709–22.
- Montoya-Weiss, M. and R. Calantone, 'Determinants of new product performance: a review and meta-analysis', *The Journal of Product Innovation Management* 11(5) (1994) 397–418.
- Moorman, C., and A. S. Miner, 'The impact of organizational memory in new product performance and creativity', *Journal of Marketing Research* 34(1) (1997) 91–106.
- Nobeoka, K. and M. A. Cusumano, 'Multiproject strategy and sales growth: the benefits of rapid design transfer in new product development', *Strategic Management Journal* 18(3) (1997) 169–86.
- Nonaka, I., 'A dynamic theory of organizational knowledge creation', *Organization Science* 5(1) (1994) 14–34.
- Nonaka, I., 'Foreword', in F. Kohlbacher, *International marketing in the network economy*. Basingstoke: Palgrave Macmillan, 2007, xi–xv.
- Nonaka, I., F. Kohlbacher, and N. Holden, *Aging and innovation: recreating and refining high-quality tacit knowledge through phronetic leadership*. Paper presented at the 66th Annual Academy of Management Meeting, Critical Management Studies Research Workshop, Managing the Aging Workforce: Leadership Towards a New Weltanschauung, August 11–16, 2006, Atlanta, USA, 2006a.
- Nonaka, I. and H. Takeuchi, *The knowledge-creating company: how Japanese companies create the dynamics of innovation*. New York: Oxford University Press, 1995.
- Nonaka, I., H. Takeuchi, and K. Unemoto, 'A theory of organizational knowledge creation', *International Journal of Technology Management* 11(7/8) (1996) 833–45.
- Nonaka, I. and R. Toyama, 'The theory of the knowledge-creating firm: subjectivity, objectivity, and synthesis', *Industrial and Corporate Change* 14(3) (2005) 419–36.
- Nonaka, I., R. Toyama, and N. Konno, 'SECI, ba and leadership: A unified model of dynamic knowledge creation', *Long Range Planning* 33(1) (2000) 1–31.
- Nonaka, I., G. von Krogh, and S. C. Voelpel, 'Organizational knowledge creation theory: evolutionary paths and future advances', *Organization Studies* 27(8) (2006b) 1179–208.

- O'Reilly III, C. A. and M. L. Tushman, 'The ambidextrous organization', *Harvard Business Review* 82(4) (2004) 74–81.
- Peltokorpi, V. and E. Tsuyuki, 'Knowledge governance in a Japanese project-based organization', *Knowledge Management Research and Practice* 4(1) (2006) 36–45.
- Pine II, B. J. and J. H. Gilmore, *The experience economy: work is theatre and every business a stage*. Boston: Harvard Business School Press, 1999.
- Prahalad, C. K. and V. Ramaswamy, 'Co-opting customer competence', *Harvard Business Review* 78(1) (2000) 79–87.
- Prahalad, C. K. and V. Ramaswamy, 'The new frontier of experience innovation', *MIT Sloan Management Review* 44(4) (2003) 12–18.
- Prahalad, C. K. and V. Ramaswamy, 'Co-creation experiences: the next practice in value creation', *Journal of Interactive Marketing* 18(3) (2004a) 5–14.
- Prahalad, C. K. and V. Ramaswamy, *The future of competition: co-creating unique value with customers*. Boston: Harvard Business School Press, 2004b.
- Riesenberger, J. R., 'Executive insights: knowledge – the source of sustainable competitive advantage', *Journal of International Marketing* 6(3) (1998) 94–107.
- Santos, J., Y. Doz, and P. Williamson, 'Is your innovation process global?' *MIT Sloan Management Review* 45(4) (2004) 31–7.
- Sawhney, M., 'Don't just relate – collaborate', *MIT Sloan Management Review* 43(3) (2002) 96.
- Sawhney, M. and E. Prandelli, 'Communities of creation: managing distributed knowledge in turbulent times', *California Management Review* 42(4) (2000a) 24–54.
- Sawhney, M. and E. Prandelli, 'Beyond customer knowledge management: customers as knowledge co-creators', in Y. Malhotra (ed.), *Knowledge management and virtual organizations*. Hershey: Idea Group Publishing, 2000b, 258–82.
- Schlegelmilch, B. B. and T. C. Chini, 'Knowledge transfer between marketing functions in multinational companies: a conceptual model', *International Business Review* 12(2) (2003) 215–32.
- Schlegelmilch, B. B. and E. Penz, 'Knowledge management in marketing', *The Marketing Review* 3(1) (2002) 5–19.
- Schulze, A. and M. Hoegl, 'Knowledge creation in new product development projects', *Journal of Management* 32(2) (2006) 210–36.
- Song, X. M. and M. E. Parry, 'How the Japanese manage the R&D-marketing interface', *Research Technology Management* 36(4) (1993) 32–8.
- Song, X. M. and M. E. Parry, 'The determinants of Japanese new product successes', *Journal of Marketing Research* 34(1) (1997) 64–77.
- Spear, S., 'Learning to lead at Toyota', *Harvard Business Review* 82(5) (2004) 78–86.
- Spear, S. and H. K. Bowen, 'Decoding the DNA of the Toyota production system', *Harvard Business Review* 77(5) (1999) 96–106.
- Srivastava, R. K., T. A. Shervani, and L. Fahey, 'Marketing, business processes, and shareholder value: an organizationally embedded view of marketing activities and discipline of marketing', *Journal of Marketing* 63 (Special Issue) (1999) 168–79.
- Takeuchi, H. and I. Nonaka, 'The new new product development game', *Harvard Business Review* 64(1) (1986) 137–46.
- Taylor, C., 'To follow a rule', in C. Calhoun, E. LiPuma and M. Postone (eds), *Bourdieu: critical perspectives*. Cambridge: Polity Press, 1993, 45–60.
- Teece, D. J., 'Capturing value from knowledge assets: the new economy, markets for know-how, and intangible assets', *California Management Review* 40(3) (1998) 55–79.
- Teece, D. J., G. Pisano, and A. Shuen, 'Dynamic capabilities and strategic management', *Strategic Management Journal* 18(7) (1997) 509–33.
- Thomke, S. H., *Experimentation matters: unlocking the potential of new technologies for innovation*. Boston: Harvard Business School Press, 2003.
- Thomke, S. H. and E. von Hippel, 'Customers as innovators: a new way to create value', *Harvard Business Review* 80(4) (2002) 74–81.

- Tushman, M. L. and C. A. O'Reilly III, 'Ambidextrous organizations: managing evolutionary and revolutionary change', *California Management Review* 38(4) (1996) 8–30.
- Vandenbosch, M. and N. Dawar, 'Beyond better products: capturing value in customer interactions', *MIT Sloan Management Review* 43(4) (2002) 35–42.
- Vandermerwe, S., 'Achieving deep customer focus', *MIT Sloan Management Review* 45(3) (2004) 26–34.
- Vicari, S. and P. Cillo, 'Developing a brokering capacity within the firm: the enactment of market knowledge', in B. Renzl, K. Matzler and H. Hinterhuber (eds), *The future of knowledge management*. Basingstoke: Palgrave Macmillan, 2006, 184–204.
- von Hippel, E., 'Lead users: a source of novel product concepts', *Management Science* 32(7) (1986) 791–806.
- von Hippel, E., 'Sticky information and the locus of problem-solving: implications for innovations', *Management Science* 40(4) (1994) 429–39.
- von Hippel, E. A., 'Has a customer already developed your next product?' *Sloan Management Review* 18(2) (1977) 63–74.
- von Krogh, G., K. Ichijo, and I. Nonaka, *Enabling knowledge creation: how to unlock the mystery of tacit knowledge and release the power of innovation*. New York: Oxford University Press, 2000.
- Wayland, R. E. and P. M. Cole, *Customer connections: new strategies for growth*. Boston: Harvard Business School Press, 1997.
- Wikström, S., 'The customer as co-producer', *European Journal of Marketing* 30(4) (1996) 6–19.
- Wikström, S. and R. Norman, *Knowledge and value: a new perspective on corporate transformation*. London: Routledge, 1994.
- Zack, M. H., 'Rethinking the knowledge-based organization', *MIT Sloan Management Review* 44(4) (2003) 67–71.
- Zaltman, G., *How customers think: essential insights into the mind of the market*. Boston: Harvard Business School Press, 2003.