
Strategic alliances: incorporating the impact of e-business technological innovations

*Frank Tian Xie and
Wesley J. Johnston*

The authors

Frank Tian Xie is an Assistant Professor of Marketing in the Department of Marketing, Bennett S. LeBow College of Business, Drexel University, Philadelphia, Pennsylvania, USA.

Wesley J. Johnston is CBIM Roundtable Professor of Marketing in the Department of Marketing, Georgia State University, Atlanta, Georgia, USA.

Keywords

Strategic alliances, Electronic commerce, Joint ventures, Performance management

Abstract

An extensive, integrated review of literature precedes a new typology of alliances based on participating firms' relative position in the supply chain (scale or link) and the nature of their cooperation (equity or non-equity). This typology helps to distinguish among a bewildering array of alliances and to explicate alliance motivations and performance on impact of e-business technological innovations. Theoretical and managerial implications follow.

Electronic access

The Emerald Research Register for this journal is available at
www.emeraldinsight.com/researchregister

The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0885-8624.htm

An executive summary for managers and executive readers can be found at the end of this issue

Introduction

Consultants Ernst & Young, in a study involving companies in 12 countries, found that 65 percent of non-US and 75 percent of US companies are engaged in some form of strategic alliances (Mazur, 2001). Since the 1980s, there has been a surge in the number of strategic alliances (Parkhe, 1993), and one estimate had it that as many as 20,000 US alliances were formed between 1988 and 1992, with IBM alone having more than 400 alliances in the USA and abroad (Day, 1995). The rate of alliance formation has been growing at an annual rate of over 25 per cent since 1985 (Pekar and Allio, 1994). Strategic alliances of the world's top 2,000 firms have consistently achieved an average annual return on investment (ROI) of nearly 17 percent, which is 50 percent higher than what their non-alliance activities produce (Pekar and Allio, 1994; Booz Allen Hamilton, 2001). Alliances also outperform the more conventional business development approaches, such as venture capital and mergers and acquisitions (Pekar and Allio, 1994). According to consultants at Booz Allen Hamilton, the percentage of annual revenue the 1,000 largest US companies generated from alliances increased from less than 2 percent in 1980 to 19 percent by 1996, and it is expected to reach 35 percent by 2002 (Booz Allen Hamilton, 2001). When Gerstner took over at IBM in 1993, only 5 percent of company sales outside PC were derived from alliances, now more than one-third of its turnover is derived from its 100,000 alliances (Mazur, 2001). The joint effort by the big three automakers to form an alliance to consolidate their suppliers and the breakup of centennial strategic partnership between Ford and Firestone under current e-business technological environment draw renewed attention to the motivation, formation, and performance of strategic alliances. As e-business applications gain momentum in all practical fields and dot coms are rising and falling, will alliances, including alliances involving dot coms, become more prevailing or less significant? What factors would contribute to the potential success or failure of alliances in this dynamic era? Moreover, how would e-business technological

An earlier version of this manuscript was presented at the 2002 AMA Winter Educator's Conference, in Austin, Texas. The authors acknowledge the comments and suggestions made by the following colleagues: Dan Bello, Mukesh Bhargava, Tamer Cavusgil, Joseph Cherian, Rajiv Dant, and Talai Osmonbekov.



Journal of Business & Industrial Marketing
Volume 19 · Number 3 · 2004 · pp. 208-222
© Emerald Group Publishing Limited · ISSN 0885-8624
DOI 10.1108/08858620410531342

innovations affect the motivations for firms to go into alliances and how would those alliances perform under current technological background? These are the research questions addressed in this study.

The authors examine the impact of e-business technological innovations on motivation and performance of strategic alliances. Extant literature is examined from the perspectives of conceptualization, antecedents and motivations to the formation of alliance, steps involved in the formation of alliances, alliance structure and governance, alliance management and, finally, performance outcome of alliances. As part of the theory development, a new typology of strategic alliances, based on participating firms' relative position in the supply chain and the nature of their cooperation, is proposed. Unlike previous classification schemes that use only one-dimensional factors, this categorization classifies alliances using a two-dimensional approach, i.e. horizontal (scale) or vertical (link), and equity versus non-equity. This new typology helps to distinguish among a bewildering array of alliances currently in the literature and assists in highlighting and clarifying the relationships between the determinants and motivations of alliance formation and between the motivations and alliance performance. A theoretical framework is then proposed with propositions to delineate the impact of e-business technological innovations on a variety of factors pertaining to strategic alliances in the post dot-com era.

The rest of this paper is organized as follows: an integrative literature review is followed by a new typology of strategic alliances, e-business technological innovations, the theoretical framework and propositions and, finally, the theoretical as well as managerial implications and suggestions for future research.

Literature review

Strategic alliances are a form of inter-organizational cooperation involving pooling of skills and resources to achieve common objectives of alliance partners, but retaining their separate entities (Anderson and Narus, 1991; Dev and Klein, 1993; Varadarajan and Cunningham, 1995; Varadarajan and Jayachandran, 1999). Firms in strategic alliances seek to enhance strategic advantage and position of alliance partners by leveraging critical capabilities (such as R&D and marketing) and responding to market and technological changes more flexibly (Achrol, 1991). For example, one kind of strategic alliances, joint ventures, is commonly used for firms to pool

different skills for application to new market opportunities (Kogut, 1989). While strategic alliances are inter-firm collaborations, not all inter-firm collaborations are strategic alliances. The businesses' decision to compete by forming alliances rather than pursuing other alternatives such as acquisition, merger, or internal development constitutes a strategic choice (Varadarajan and Jayachandran, 1999), and the goal of this choice is seeking competitive advantages through cooperation with other firms, including competitors. So to qualify as a strategic alliance rather than just inter-organizational cooperation, the relationship must be for the purpose of achieving a sustainable competitive advantage (Varadarajan and Jayachandran, 1999). Strategic alliances are long-term, enduring in nature, as compared to transaction type of relationships or interimistic relationships (see Lambe *et al.*, 2000). However, some researchers argue that even though the purpose of strategic alliance is for sustained competitive advantage, the alliance itself does not have to be long-term in nature, it could be for a specified finite period of time, such as the case of a joint product development team (Varadarajan and Jayachandran, 1999).

Since strategic alliances are a manifestation of inter-organizational cooperative strategies, and entail the pooling of specific resources and skills by the cooperating organizations in order to achieve common and specific goals (Varadarajan and Cunningham, 1995), operational cooperation such as electronic data interchange (EDI) and efficient consumer response (ECR) are usually not considered strategic alliances because they do not possess key characteristics of strategic alliance such as exclusivity and non-imitability (Varadarajan and Cunningham, 1995).

Strategic alliances could take the form of equity or non-equity investments, be between sellers, between buyers, or between sellers and buyers. They could be formed by firms with the same value chain activity, such as between Ford and Mazda, and being horizontal in nature; or they could be by firms at the adjacent stages of the value chain, and being vertical (such as GM and its suppliers) (Varadarajan and Jayachandran, 1999). Strategic alliances can be structured as either a distinct corporate entity (such as an equity joint venture) or a distinct interorganizational entity (such as a non-equity joint product development team) (Varadarajan and Cunningham, 1995).

Performance of strategic alliances may be enhanced when one company compensates for another firm's weak points (Dev and Klein, 1993). Some argue that acting independently is usually more difficult and expensive than acting

collectively, but there has not been systematic analysis of the benefits and risks of such collaboration (Dev and Klein, 1993). Lately, it is found that alliance competence contributes to its success through the acquisition and creation of resources and skills (Lambe *et al.*, 2002).

There are many objectives that motivate firms to go into strategic alliances: economies of scale and scope, market entry and access, market position, product, product market, market structure modification, market entry timing and speed, resource access and utilization efficiency, resource extension, risk reduction, strategic pre-emption, and skills enhancement (Spekman *et al.*, 1996; Varadarajan and Jayachandran, 1999; Kale *et al.*, 2000; Yeheskel *et al.*, 2001; Nanda, 2001). In addition, globalization, heavy competition, and low profitability are also the driving forces behind strategic alliances (Dev and Klein, 1993). In some cases, market fragmentation is another concern. For example, top five US airlines control over 80 percent of domestic capacity, whereas top 12 hotel companies account for just over 50 percent of capacity (Dev and Klein, 1993). Such a fragmented environment requires companies in the hotel industry to seek growth and counter the resulting diseconomies of scale (Dev and Klein, 1993). Two major reasons behind competitors collaborating on research and development (R&D) alliances are the financial requirement involved and the desire to jointly establish new industry standard (Johansson, 1995). But not all alliance activities are motivated by rational reasons or are based on solid economic grounds; some could be results of fashion trend setting, or bandwagon behavior (Kogut, 1988).

Researchers have advanced many theories to explain motivations underlying strategic alliance formation and conditions under which such alliances operate and sustain. Among them are market attractiveness/organizational power theory in explaining strategic behavior and competitive positioning (Kogut, 1988), resource dependency, resource-based view (Varadarajan and Cunningham, 1995), game theory (Parkhe, 1993), transaction cost analysis (Kogut, 1988; Heide and John, 1990; Parkhe, 1993; Bucklin and Sengupta, 1993), and inter-organizational exchange (Bucklin and Sengupta, 1993). Yet because of the complex nature of strategic alliances and their diversified forms and structures, no single framework could provide an adequate explanation of the phenomenon (Varadarajan and Jayachandran, 1999).

There are many kinds of strategic alliances in practice and under study. Some of the most common forms include joint ventures (Kogut, 1988), Just-in-time (JIT) systems (Frazier *et al.*,

1988), R&D alliances (Achrol, 1991; Johansson, 1995; Varadarajan and Cunningham, 1995), marketing coalition (Achrol, 1991; Varadarajan and Cunningham, 1995), international strategic alliances (Johansson, 1995), franchising (Varadarajan and Cunningham, 1995), license agreement (Mowery *et al.*, 1996), and supply chain integration (Morash and Clinton, 1998). All these forms of strategic alliances involve at least two firms in the partnership relations, and some may involve three or more firms. And, the relationship characteristics of these alliance forms differ in their horizontal or vertical linkages and in the nature of participating firms' investment. An overview of the number of partners involved and their relationship characteristics is given in Table I.

For instance, shared distribution is an early and common form of international strategic alliances (Johansson, 1995). Though this alliance has the advantage of improved capacity for one partner and market access for the other, it suffers from the drawback that growth may be constrained for both partners (Johansson, 1995). Shared manufacturing, or licensed manufacturing, is another form of international strategic alliances, though it is sometimes uneasy to distinguish it from international original equipment manufacturing (OEM) and similar arrangements (Johansson, 1995). The difference is that the former involves brands of both manufacturers and the latter is just a simple contract for selling unbranded components (Johansson, 1995). Other scholars, on the other hand, consider OEM/VAR agreement also a kind of strategic alliance (Nanda, 2001). Constraint on future growth is also a potential problem with shared manufacturing or licensed manufacturing (Johansson, 1995).

Strategic alliances have been used by organizations to learn from their partners and develop new competencies (Simonin, 1999). Knowledge transfer in strategic alliances is examined through the perspective of the "causally ambiguous" nature of knowledge (Simonin, 1999). Antecedents of knowledge ambiguity include tacitness, asset specificity, complexity, experience, partner protectiveness, cultural distance, and organizational distance (Simonin, 1999).

Some, not all, national account management (NAM) relationships are qualified to be alliances (Lambe and Spekman, 1997). Only those truly collaborative NAM relationships, where there are high levels of commitment, trust, compatible goals, joint planning, cooperation, and win-win norms, are equivalent to other forms of alliances (Lambe and Spekman, 1997).

Learning alliance is one where partners strive to learn or internalize know-how and capabilities

Table I Forms of strategic alliances and their characteristics

Author(s)	Form of alliances	Number of parties	Relationship characteristics
Kogut (1988)	Joint ventures	2 or more	Equity or non-equity, horizontal
Frazier <i>et al.</i> (1988)	Just-in-time (JIT) systems	3 or more	Equity, vertical
Heide and John (1990)	Industrial purchasing alliances	2 or more	Non-equity, vertical
Anderson and Narus (1991)	Partnering (supplier and customer)	2	Non-equity, vertical
Achrol (1991)	R&D alliances	2 or more	Equity or non-equity, horizontal
	Marketing coalition	2 or more	Non-equity, horizontal
Bucklin and Sengupta (1993)	Co-marketing alliances	2 or more	Non-equity, horizontal
Johansson (1995)	Shared/licensed manufacturing	2	Equity, horizontal
	International strategic alliances	2 or more	Could encompass all other types
	R&D alliances	2 or more	Equity or non-equity, horizontal
	Shared distribution	2	Non-equity, horizontal
Varadarajan and Cunningham (1995)	Marketing coalition	2 or more	Non-equity, horizontal
	R&D alliances	2 or more	Equity or non-equity, horizontal
	Technology exchange, licensing and and cross-licensing	2	Non-Equity, horizontal
	Joint exploration and development of raw materials	2	Equity, horizontal
	Joint product development	2 or more	Non-equity, vertical
	Joint manufacturing	2	Equity, horizontal
	Reciprocal marketing	2	Non-equity, horizontal
	Reciprocal after-sales service	2	Non-equity, horizontal
	Franchising	3 or more	Equity, vertical
Mowery <i>et al.</i> (1996)	License agreement	2	Non-equity, vertical
Lambe and Spekman (1997)	National account management (NAM) alliances	2 or more	Non-equity, vertical
Zinn and Parasuraman (1997)	Logistics-based strategic alliances	2	Non-equity, vertical
Morash and Clinton (1998)	Supply chain integration	2 or more	Equity, vertical
Kale <i>et al.</i> (2000)	Learning alliances	2	Non-equity, horizontal or vertical
Cooke and Ryan (2000)	Brand alliances (co-branding)	2 or more	Non-equity, horizontal
Nanda (2001)	OEM/VAR agreement	2	Non-equity, vertical
Nygaard and Dahlstrom (2002)	Horizontal alliances	2	Equity or non-equity, horizontal

from each other (Kale *et al.*, 2000). The paradox is that while partners are trying hard to acquire critical information from other partner(s), they are also working hard to protect their core competencies from the opportunistic behaviors of other partners (Kale *et al.*, 2000). Relational capital, or the mutual trust and interaction at the individual level between alliance partners, can help achieve both objectives concurrently (Kale *et al.*, 2000).

Brand alliance, or co-branding, is a form of strategic alliance that involves the linking or integration of the attributes of two or more brands to offer a new or perceptually improved product (Cooke and Ryan, 2000). It is proposed that brand alliances tend to be shaped by strategic objectives such as reputation endorsement or collaboration on core competencies (Cooke and Ryan, 2000). Collaborative supply chain integration, which links a firm with its customers, suppliers, and other channel members, is also a form of strategic alliances (Morash and Clinton, 1998).

As to the frequency of strategic alliances, equity joint venture, joint development agreement, and license agreement are among the most frequently used forms of strategic alliances, accounting for 64 percent of all alliances (Mowery *et al.*, 1996). Cross-licensing and technology-sharing,

customer-supplier partnership, and R&D contract make up another 18 percent, with mixed modes (13 percent), and other forms (5 percent) making up the remainder of alliance forms (Mowery *et al.*, 1996). Lately, the effect of role stress level of boundary-spanning persons on performance of horizontal alliances is also examined (Nygaard and Dahlstrom, 2002).

The following sub-sections survey extant research on the formation, governance and management, stability, and performance of strategic alliances, as well as on multiple alliances and strategic networks.

Formation of strategic alliances

Turbulent environment calls for new forms of marketing organizations, such as takeovers, spin-offs, divestitures, plant closing, global outsourcing, and strategic alliances (Achrol, 1991). Firm characteristics such as product-market diversity, firm size and resource position, prior involvement in strategic alliances, top executive attitudes towards strategic alliances, and corporate culture, as well as industry and environmental characteristics, are considered factors influencing the propensity of a firm to enter into strategic alliances (Varadarajan and Cunningham, 1995).

Industry characteristics include the level of minimum efficient scale (MES), cost structure, threat of new entrants, and threat of competition from substitutes (Varadarajan and Cunningham, 1995). Environmental characteristics include changes in buying patterns, degrees of market uncertainty, rates of technological change, and political, legal, and regulatory environment (Varadarajan and Cunningham, 1995). Other conditions of relationship formations for joint ventures include asymmetry, reciprocity, efficiency, stability, and legitimacy (Oliver, 1990).

Strategic alliances are formed through distinguishable stages (Spekman *et al.*, 1996). Spekman *et al.* (1996) identified seven stages through in-depth interviews with alliance managers. During the formative stages, potential alliance partners go through anticipation, engagement, and valuation to assess alliance feasibility; in the metamorphosis stages, which include coordination and investment, the alliance starts to develop and early structure and processes begin to take form; in the last steps, managers focus on stabilization and decision to be staying the course and adapting the direction of the alliance (Spekman *et al.*, 1996).

Sengupta and Perry (1997) examined empirically antecedents of global strategic alliance formation and found that when there is a great cultural difference between partner firms and when the alliance involves upstream value chain activities, equity joint ventures are preferred to contracts. On the other hand, in cross-industry alliances, when technology intensity of the industry sector is high, contracts are preferred to equity joint ventures (Sengupta and Perry, 1997).

The management and governance of strategic alliance

There is an additional task involved with strategic alliances, since the executives are responsible for managing not just the company of their own, but the alliance relationship and alliance entity also. The governance structure of the alliance is the formal contractual structure participants used to formalize it (Gulati and Singh, 1998). Environmental, industry, and firm-specific characteristics all have an impact on firms' propensity to initiate such an alliance and devise management structure accordingly (Varadarajan and Cunningham, 1995).

The forms of governance and the magnitude of hierarchical controls in contractual relationships (such as strategic alliances) are influenced by the anticipated coordination costs and appropriation concerns (Gulati and Singh, 1998). Appropriation concerns reflect the firm's concern about its ability to "capture a fair share of the rents" from the

alliances (Gulati and Singh, 1998). Many alliance structures are associated with opportunistic behaviors, instability, and high mortality rate (Parkhe, 1993). Therefore, power and control issue becomes of great importance to alliance partners. While it is natural for a powerful customer to attempt to create an exclusive network of suppliers, suppliers with unique market power will often strive to market freely their products to all potential customers. Dominant members of the alliances are found to exercise strong control over the players in their networks (Frear and Metcalf, 1995).

Gulati and Singh (1998) categorized alliance governance structure into three types based on the kinds of hierarchical controls in each of them. They are joint ventures, minority investment, and contractual alliances. Joint ventures, with shared equity, are at the hierarchical end. Minority investments involve a minority equity position in the other firm, and no new corporate entity is created; therefore, a weak form of control is normally used. And contractual alliances involve no sharing of equity and no new entity resulted therein, and is considered more akin to arm's-length market exchanges (Gulati and Singh, 1998).

Stability of strategic alliances

The competitive factors that serve as the initial motivations to the venture could be sources of future instability (Kogut, 1989). Since partners to an alliance often compete with each other in other product lines, serious conflict is always present and there is a high potential for opportunistic behaviors (Bucklin and Sengupta, 1993). One partner may use the alliance solely to steal market position from the other, or improve on its own technological capabilities through accessing other's otherwise protected intellectual property (Bucklin and Sengupta, 1993). For example, in industrial purchasing alliances, continuity of the relationship and verification of supplier are found to affect joint action of the partners (Heide and John, 1990).

There are a significant number of terminations of joint ventures, especially in the early years (Kogut, 1989). In examining the stability of joint ventures, it is found that cooperation is established with the abilities of the parties to reciprocate penalties and to reward altruistic behavior, and cooperation is enhanced with other horizontal ties, such as technology transfer (Kogut, 1989). And, not surprisingly, joint ventures between partners who also have other long-term relationships tend to be more stable (Kogut, 1989).

Performance of strategic alliances

Alliances could achieve an advantageous position if there is mutual value to the partners, durability due to mutual commitment, and a barrier to emulation, much like other competitive advantages (Day, 1995). It has been found that project payoff, the strategic value of the alliance net of development cost, is a significant determinant of alliance effectiveness (Bucklin and Sengupta, 1993). To a lesser degree, project management issues, such as power and managerial imbalances and conflict, and matching of partners, are also found to impact alliance effectiveness (Bucklin and Sengupta, 1993). Overall, Bucklin and Sengupta (1993) found that marketing alliances would do well if projects are well selected, partners carefully chosen, and relationship structures between partners well balanced.

Strategic alliances have a direct impact on firm evaluation (Das *et al.*, 1998). Alliances, including joint ventures and other product market relationships between firms, are found to be associated with significant increases in stock market performance, investment, and operating profitability, especially for industries involving high level of research and development (Allen and Phillips, 2000). Often, technological alliances enjoy a greater abnormal return in the stock market than marketing alliance announcements, because the former may be perceived as increasing the value of the firm (Das *et al.*, 1998). In contrast to that, marketing alliances are typically formed during the mature or declining phases of their products' life-cycle and therefore are perceived as a signal of weakness to the investors (Das *et al.*, 1998). Block ownership by corporation, unlike block ownership by institutions and individuals, serves to increase the possibilities of agreements and alliances between firms (Allen and Phillips, 2000). This is likely because block ownership is useful in aligning the incentives of the firms involved in the alliances, and it is also helpful in monitoring and influencing management (Allen and Phillips, 2000).

In their assessment of the impact of strategic alliances on new product development, Chen and Li (1999) distinguished between "content knowledge and learning" and "process knowledge and learning". The former refers to one alliance partner learning from the other's organizational capabilities in functional areas such as marketing and manufacturing, and the latter refers to knowledge gained from the management process (Chen and Li, 1999). In studying semi-conductor industry startups, they found that content learning in technological fields has a positive impact on product development, while process learning could enable firms to gain process knowledge and

indirectly enhance new product development (Chen and Li, 1999).

Though success stories abound, many alliances fail to meet expectations, partly because the close working relationship and interpersonal connections are not well nurtured (Hutt *et al.*, 2000). Seven out of ten joint ventures have been judged to have failed or fallen short of expectation, with a 50-50 joint venture having the worst record (Day, 1995). Some evidence suggests that benefits of strategic alliances may be counterweighed by their drawbacks. A study of perceived alliance performance measured by cost, quality, customer satisfaction, and survivability on Israeli medical technology ventures suggests that firms that have undertaken alliances actually under-perform those that have not (Yehekel *et al.*, 2001).

Under-performance of strategic alliance could be a result of inadequate assessment of the risks involved. Das and Teng (1999) differentiate relational risk, the risk of unsatisfactory inter-firm cooperation, from performance risk, which includes all other factors that adversely affect alliance performance. Attentions to personal relationships could accelerate organizational learning and increase the effectiveness of alliances (Hutt *et al.*, 2000).

There are, of course, shortcomings of strategic alliances, which may partially explain the under-performance of some strategic alliances. These shortcomings include:

- time spent by management to negotiate and implement the alliance;
- loss of flexibility;
- leakage of proprietary knowledge to the partner; and
- atrophy of certain firm capabilities (Day, 1995; Varadarajan and Cunningham, 1995).

Multiple strategic alliances and strategic networks

Some firms have gone beyond isolated alliances and attempted to establish a network of intra- and inter-industry and intra- and international strategic alliances (Varadarajan and Cunningham, 1995). Alliance within the context of a larger framework and collaboration of multiple firms by linking themselves together could become a trend in the future (Day, 1995; Gomes-Casseres, 1994). There has been an enormous body of literature on strategic alliances and networks (Gulati *et al.*, 2000a). A central issue to be addressed is how strategic networks influence profitability of the firms involved (Gulati *et al.*, 2000a).

As global competition intensifies, collaboration in business is no longer confined to traditional two-firm alliances. Group versus group competitions, or competitions between alliance networks, are spreading across the globe (Gomes-Casseres,

1994). From a macro perspective, strategic alliances, including joint ventures and long-term buyer-supplier partnerships, are actually component parts of a strategic network in which the firms are embedded (Gulati *et al.*, 2000b). Strategic networks encompass a firm's set of relationships with other organizations such as suppliers, customers, competitors, and other entities, both vertical and horizontal, across industries and across countries (Gulati *et al.*, 2000b). Performance and conduct of firms can be better understood in the context of the network of relationships they are embedded in (Gulati *et al.*, 2000b).

Even though the alliance is about relationships between organizations, interpersonal ties between and among managers of the involved firms can be of great significance and provide a cushion or safety net, especially during periods when a business is under stress (Spekman *et al.*, 1996).

Overall, strategic alliance studies have been relying heavily on case studies (Mowery *et al.*, 1996). Using the cooperative agreements and technology indicators (CATI) database, the work of Mowery *et al.* (1996) is among the first empirical studies that examined inter-firm knowledge transfer among strategic alliance partners. It has been found that equity joint ventures seem to be more effective conduits of knowledge transfer than are contract-based alliances such as licensing agreements, and alliances closer to the "hierarchy" end of the "market-hierarchy" continuum outperform alternatives in supporting interfirm learning (Mowery *et al.*, 1996).

CATI database, collected by researchers at the University of Limburg, is a comprehensive, multi-national, multi-industry data set that contains information on over 9,000 strategic alliances involving some 5,000 firms (Mowery *et al.*, 1996; Gulati and Singh, 1998). Another source of information for strategic alliance studies is a commercially available database, Information Technology Strategic Alliances (ITSA), developed by Itsunami Inc. (Sengupta and Perry, 1997). This database contains records gathered from the business press such as the *Wall Street Journal* and *Business Week* on strategic alliances in high-tech industries such as media, entertainment, computers, electronics, and telecommunications (Sengupta and Perry, 1997).

A typology of strategic alliances

A multiplicity of motivations led to an array of alliance forms with bewildering labels and nomenclatures (Day, 1995). Strategic alliances ranging from equity joint ventures to

co-distribution and co-promotion agreements are just a few examples (Day, 1995). A classification of international joint ventures (IJV) by Buckley and Casson (1996) makes use of the kind of knowledge shared between two firms, i.e. technology, marketing, or both, to classify IJVs into nine categories. Varadarajan and Cunningham (1995) proposed a framework for classifying alliances in terms of their industry scope (intra-industry or inter-industry), geographic scope (intra-national or international), and functional area scope (R&D, manufacturing, and marketing, etc). But no indication was given as to the inter-relationships between alliances in the functional area scopes and that in industry or geographic scopes. Another scheme in the literature is based on the action-reaction nature of the alliances and it groups alliances into offensive alliances and defensive alliances (Spekman *et al.*, 1996). Yet another scheme is based on the contractual nature underlying the alliances, distinguishing between equity and non-equity-based alliances (Rangan and Yoshino, 1996). Zinn and Parasuraman (1997) proposed a conceptual typology of logistics-based strategic alliances along the dimensions of scope (the range of services included in the alliance) and intensity (the extent of direct involvement). A high intensity alliance could be broad (integrated) or narrow (focused) in scope, whereas a low intensity alliance could also be broad (extensive) or narrow (limited) in scope (Zinn and Parasuraman, 1997). Functional distinctions, such as marketing alliances versus technology alliances, are also used in some classification (Das *et al.*, 1998).

Nanda (2001) classified strategic alliances into two categories: scale alliances and link alliances. Scale alliances allow firms to share in the execution of one or more activities, such as joint marketing, and link alliances allow partner firms to divide the activities within a value chain between themselves, such as one doing manufacturing and one marketing (Nanda, 2001). According to this scheme, joint entry and research consortia are scale alliances, whereas long-term supply agreements, licenses, and marketing agreements are link alliances. A potential problem with this classification scheme is that certain alliances could be formed with the goal of both scale and scope economies and division of labor along the supply chain in mind; therefore, belonging to both categories at the same time. For example, the alliance between Yahoo! and K-mart is aimed at making use of the business-to-business Internet infrastructure capabilities of Yahoo! to boost K-mart's retailing sales – a kind of link alliance. But the alliance is also geared towards increasing Web visits and online exposure of both companies,

which makes it a scale alliance as well. So a more refined classification scheme seems to be in order.

All the existing classification schemes use one-dimensional parameters (dichotomous) to distinguish between vast arrays of different alliances and are therefore incapable of capturing the idiosyncratic nature of the existing inter-firm collaboration designs. Clearly, there is a need of a new classification scheme that could better differentiate among all those complex alliance forms and structures. This study proposes a two-dimensional classification scheme based on that of Rangan and Yoshino (1996) and Nanda (2001). This typology uses equity/non-equity distinction as one dimension, and horizontal (scale) and vertical (link) as another to categorize alliances into four groups, as illustrated in Figure 1:

- (1) Equity-scale alliances (Type I).
- (2) Non-equity-scale alliances (Type II).
- (3) Equity-link alliances (Type III).
- (4) Non-equity-link alliances (Type IV).

This classification scheme, as will be seen in the sections that follow, seems to be able to better capture the unique characteristics of alliances under each category within the framework of this study. The selection of the dimensions is based on our intent to give a framework that is general enough to categorize a plethora of alliances in place and yet not to overwhelm the practitioners with too much information in the scheme. Certainly, other ways and dimensions of classification are desirable and will be considered in future research. This scheme will be used in the theoretical framework section to aid in model and propositions development.

Type I (Equity-scale) strategic alliances are characterized by the equity investment in the alliance by partners involved and by the horizontal associations of participating firms. Because of the nature of their investment and horizontal linkage, firms in this kind of alliances tend to be firmly committed to the venture and are more likely to be competitors in the same or similar industries. Examples of Type I alliances include joint productions, joint manufacturing, and equity joint ventures (Table II).

Type II (non-equity scale) strategic alliances are characterized by the horizontal associations of firms involved and a lack of equity investment in the alliance. Firms in this kind of alliance often use it as a means of consolidating market positions, promoting brand equity, and enhancing distribution efficiency and effectiveness. This kind of alliance is often formed during the maturity and decline stages of a product's life-cycle to strengthen market penetration by the firms involved. Examples of Type II alliances include co-marketing alliances, branding alliances, shared distribution, and technology exchange (Table II).

Type III (equity-link) strategic alliances are characterized by the equity investment in the alliance by partners involved and by the vertical associations of firms along the supply chain. Because of their equity investment in the alliance and the fact that the participating firms are not usually competing directly with each other but having a buyer-supplier relationship, this kind of linkage tends to be friendlier and longer lasting in nature. Examples of Type III alliances include supply chain integration, franchising, and JIT systems (Table II).

Type IV (non-equity-link) strategic alliances are those that involve firms vertically linked in the supply chain but having no equity investment in the joint effort. Firms in this kind of alliance normally have a buyer-supplier relationship and, like in Type III alliance, not directly competing with each other. But, unlike firms in Type III alliance, they do not have jointly invested equity in the alliance, therefore the alliances formed tend to be not as strong and last not as long as those Type III alliances. Examples of Type IV alliances include NAM alliances, industrial purchasing alliances, learning alliances, and OEM/VAR agreements (Table II).

It is noteworthy that some researchers consider franchises not a form of strategic alliance. This is so for good reasons. Franchise has been populated by cooperation between large, franchisor corporations (such as McDonald's) and small, local franchisees such as an individual business person or family, not between two large corporations. The amount of investment involved is often less than \$100,000 or at most several million dollars. But a franchise is indeed a form of inter-organizational cooperation involving pooling of skills and resources to achieve common objectives of franchisor and franchisee, and the franchisor and franchisee normally retain their separate entities. The fact that this type of relationship involves strategic goals of achieving sustainable competitive advantages for both the franchisor and franchisee, the critical capabilities of both parties, being long-term in nature, do put

Figure 1 Typology of strategic alliances

		Investment Characteristics: Equity versus Non equity	
Association Characteristics: Scale versus Link		Type I: Equity-Scale	Type II: Non-equity-Scale
		Type III: Equity-Link	Type IV: Non-equity-Link

Table II Strategic alliances under the new typology

Type I (E-S)	Type II (NE-S)	Type III (E-L)	Type IV (NE-L)
Joint productions	Co-marketing	Supply chain integration	Joint product development
R&D alliances	Branding alliances	Franchising	NAM alliances
Joint manufacturing	Co-branding	Just-in-time (JIT) system	Learning alliances
Joint ventures (equity)	Shared distribution		Industrial purchasing alliance
Licensed manufacturing	Technology exchange		Licensing agreement
Joint exploration	Joint ventures (non-equity)		Partnering
	Marketing coalition		Logistic-base alliances
	Reciprocal marketing		OEM/VAR agreement
	Reciprocal after-sales service		

them under the same category as many other, more familiar forms of alliances. A good example of franchise-type strategic alliance is the one between The Coca Cola Company and Coca Cola Enterprise (CCE), where both partners seek to enhance strategic advantage and position by leveraging each other's critical capabilities. And, by our new typology, it is a type of equity-link (Type III) alliance. Similarly, a McDonald's franchisee and the franchisor, The McDonald's Corporation, would also be in a strategic alliance where the marketing capabilities of the McDonald's and the local resource and capital of the franchisee are utilized to achieve their common strategic advantages.

E-business technological innovations

E-business encompasses e-commerce and involves front and back office operations of the firms and activities between firms; it is an overall strategy about redefining old business models, and maximizing customer value (Kalakota and Robinson, 1999, p. 4). E-business is much more profound and far-reaching than e-commerce, and will simply be the way business is done in the future (North *et al.*, 1999).

E-business technological innovations have the potential to revolutionize the efficiency and effectiveness of inter-firm relationships (Bello *et al.*, 2002). E-business technology leaders, such as sophisticated software package makers SAP, Oracle, and IBM, are capitalizing on the benefit the Internet brings to e-business and offer complete business solutions that go beyond a firm's traditional boundaries. The inter-firm, Web-based applications cover virtually all the functions performed by firms in the supply chain and may have an impact on the operational design and integration of firms by putting more pressure on their degree of formalization, standardization, and centralization (Bello *et al.*, 2002). In addition, e-business technological innovations would also affect inter-firm interactions and relationship

governance in terms of role specification and cooperation. The revolutionary change currently underway requires companies to respond; yet it is believed that most large incumbents will fail to respond to the challenges adequately (North *et al.*, 1999).

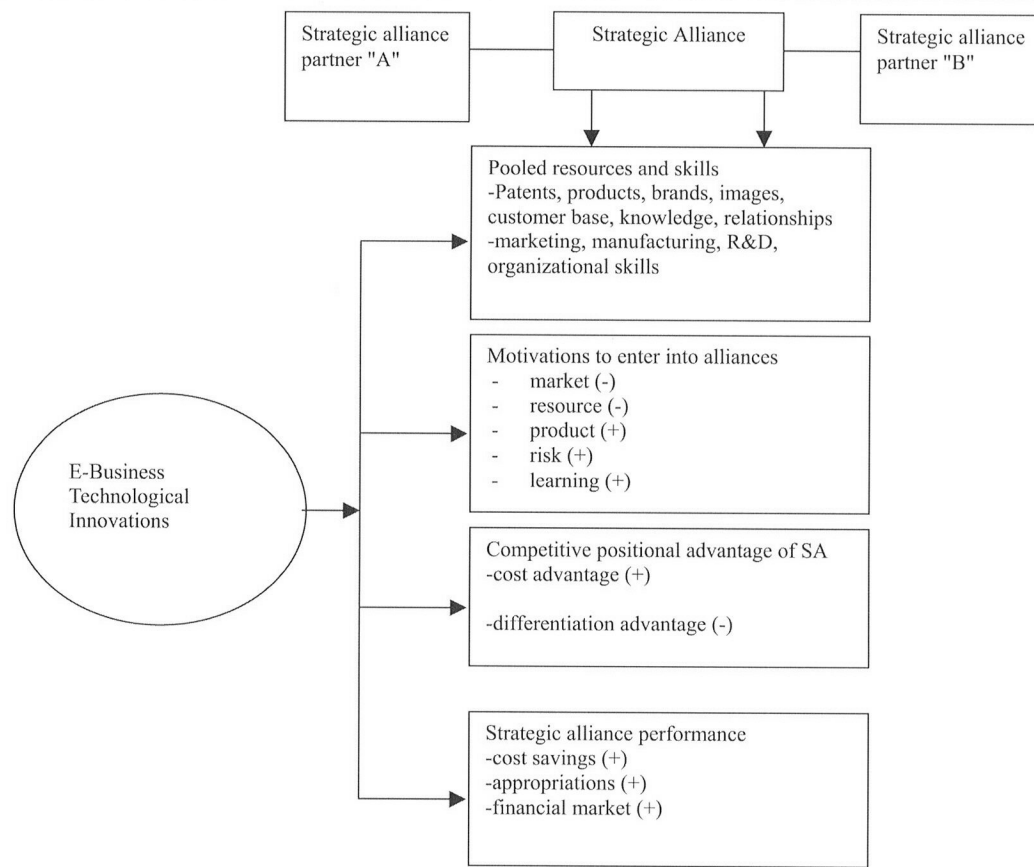
Theoretical framework

E-business technological innovations have, albeit the failures of dot coms in the near past, fundamentally changed the landscape of business practices today. The impact is, according to many observers in both academic and business worlds, yet to gain full momentum in reshaping the way business is conducted (North *et al.*, 1999; Bello *et al.*, 2002). The continued adoption of e-business technological innovations by firms is expected to have a long lasting impact on the conditions, motivations, formation, and performance of strategic alliances at present and in the future.

Our proposed theoretical framework (Figure 2) is drawn partially based on the alliance performance framework of Varadarajan and Cunningham (1995), the source-position-advantage framework of Day and Wensley (1988), and the strategic alliance framework of Gulati and Singh (1998).

Many e-business technological innovations would have an impact on firms at the firm level, the industry level, and the environmental level (Varadarajan and Cunningham, 1995). Firm characteristics such as product-market diversity, firm size and resource position, prior involvement in strategic alliances, top executive attitudes towards strategic alliances, and corporate culture would all be affected once those cross-functional and inter-organizational e-business software packages are adopted throughout the firm. Industry and environmental characteristics are both considered key factors in influencing the propensity of a firm to enter into strategic alliances (Varadarajan and Cunningham, 1995). Industry characteristics include the level of MES, cost

Figure 2 Conceptual framework of the impact of e-business technological innovations on alliances



Source: Partially based on Varadarajan and Cunningham (1995), Day and Wensley (1988), and Gulati and Singh (1998)

structure, threat of new entrants, and threat of competition from substitutes (Varadarajan and Cunningham, 1995). With automation enabled by e-business tools, MES is expected to decrease and industry cost structure reshaped because of widely-used techniques such as virtual product development and CAD/CAM in association with faster response from the market through systems such as quick response (QR) and efficient consumer response (ECR). Threats of both new entrants and substitution are expected to increase for a number of industries, such as retailing, wholesaling, and distribution, because of increased e-hub, e-marketplace, and e-commerce activities and the possibility of easily identifying and acquiring new suppliers worldwide. Environmental characteristics that affect alliance formation and motivation include changes in buying patterns, degree of market uncertainty, rate of technological change, and political, legal, and regulatory environment (Varadarajan and Cunningham, 1995). These factors have been affected, most dramatically and conspicuously, by changing consumer and industry purchase behaviors enabled by centralized and formalized

e-procurement system, up-to-the-minutes change in technical breakthroughs brought about by instant information-sharing throughout the enterprise system, and legislative attentions to items such as Internet sales tax at State and Federal levels.

Strategic alliance research has examined the issues from the perspective of functional activities in the supply chain (Sengupta and Perry, 1997). Upstream functions include research and development, manufacturing, and technology transfer; downstream functions include marketing, distribution, and customer service (Sengupta and Perry, 1997). E-business applications, such as enterprise resource planning system (ERP), customer relationship management (CRM) packages, and supply chain management (SCM) software, have the potential to impact all the functional area activities, both upstream and downstream functions within the firm and between firms along the supply chain.

Motivations of firms entering into strategic alliances vary. They could be economies of scale and scope, market entry and access-related, product-related, resource access and utilization

efficiency, risk management, strategic pre-emption, and skills enhancement (Spekman *et al.*, 1996; Varadarajan and Jayachandran, 1999; Kale *et al.*, 2000; Yeheskel *et al.*, 2001; Nanda, 2001). E-business innovations, such as e-procurement (SAP B2B Procurement), I-store, e-hub, Calico Configurator, and vertical market, because of their capability in providing easy access to all players, big and small, would reduce the motivation of firms seeking strategic alliances owing to market and resource utilization concerns. However, because of the fluidity and fast-changing pace in consumer preferences and market turbulence, alliances based on concerns about product market, risk management, and organizational knowledge enhancement should become more imperative among firms, giving way to wider adoption of e-business tools such as ECR, I-gear (URLabs), and diCarta Contracts. Therefore, strategic alliances based on product, risk, and learning concerns would more likely be motivated, hence:

P1. E-business technological innovation would negatively impact firms' motivation to enter into strategic alliances based on market and resource utilization considerations; it would positively impact their motivation based on product, risk management, and organizational learning considerations.

It has been found that when alliances involve upstream value chain activities, equity joint ventures are preferred to non-equity joint ventures such as contracts (Sengupta and Perry, 1997). In cross-industry alliances, on the other hand, when technology intensity of the industry sector is high, contracts are preferred to equity joint ventures (Sengupta and Perry, 1997). It is found that block ownership by corporations serves to increase the possibilities of agreements and alliances between firms (Allen and Phillips, 2000). This is plausible because block ownership is useful in aligning the incentives of the firms involved in the alliances, and it is also helpful in monitoring and influencing management (Allen and Phillips, 2000). Equity joint ventures between two firms are similar to block ownership to a certain extent, in that their incentives are aligned better than non-equity collaborations. Because of the information-intensive nature of e-business technological tools and the increasing need to integrate supply chain activities, therefore, in the case of link type alliances, we speculate that equity type alliances are more motivated than non-equity ones, i.e. Type III alliances are more likely motivated than Type IV alliances.

As for scale-type alliances (Types I and II), some researchers differentiate between content knowledge and learning and process knowledge

and learning. The former refers to one alliance partner's learning from the other's organizational capabilities in functional areas such as marketing and manufacturing, and the latter refers to knowledge gained from the management process (Chen and Li, 1999). Chen and Li (1999) found that content learning in technological fields has a positive impact on product development, while process learning could enable firms to gain process knowledge and, indirectly, enhance new product development. E-business technological innovations tend to make market and product information more transparent to firms in the same or similar industries (horizontal) and their desire to join forces in developing intangible marketing, branding, and distribution activities should be more likely motivated than tangible investment in production and research and development processes. Therefore, we propose that:

P2. The impact of e-business technological innovation on firm motivation to go into strategic alliances would be greater and more significant for Type II (non-equity-scale) and Type III (equity-link) strategic alliances than for Type I (equity-scale) and Type IV (non-equity-link) alliances, respectively.

Performance outcomes of the alliances include partners' satisfaction and appropriation of the alliance proceeds. According to Gulati and Singh (1998), two primary conditions influence the extent to which appropriation concerns arise: the technology component in the alliance and appropriability regime in the industry. The e-business tools is expected to have a greater impact on the technology component than on the industry appropriation regime, which is more likely a long-term norm of the industry and even that of the society at large.

Companies have started forming logistics-based strategic alliances with customers or suppliers, realizing the cost interdependence of logistics-related actions (Zinn and Parasuraman, 1997). Logistics services, such as cross-docking, advance shipping notice, and vendor-managed inventories (VMI) can be improved through alliances and the resulting cost savings could be shared by the parties involved (Zinn and Parasuraman, 1997). E-business technological innovations, such as ERP, SAP Logistics, SAP VMI, and CRM software packages, should positively affect the cost benefits resulting from alliances.

Strategic alliances have a direct impact on firm evaluation (Das *et al.*, 1998). And, technological alliances enjoy greater abnormal returns in the stock market than marketing alliance announcements (Das *et al.*, 1998). The inherent technological nature of e-business tools should

therefore help with financial performance of the alliance.

As indicated by many researchers, there are several shortcomings of strategic alliances, namely:

- time spent by top management team to negotiate and implement the alliance;
- loss of flexibility;
- leakage of proprietary knowledge to the partner; and
- atrophying of certain firm capabilities (Day, 1995; Varadarajan and Cunningham, 1995).

E-business tools could help alleviate the first two of the shortcomings of alliances by making management more efficient and more flexible, but they probably would not help prevent leaking of sensitive information and atrophying of firm capabilities. Because, even with more security enhancement over the Internet and Intranet, encroachment could still be a potential problem and decaying of core competencies is simply unavoidable if they are not constantly updated and refined.

E-business technological innovations meet certain essential requirements of being a source of sustained competitive advantage (SCA) (Barney, 1991). According to Barney (1991), such a resource must be valuable, rare, imperfectly imitable, and there must not be any strategically equivalent substitute for the resource. E-business technological innovations are certainly valuable and there does not seem to be any equivalent substitutes in sight yet; however, they lack the other two attributes to be a source of sustained competitive advantage – i.e. they are not rare, nor are they imperfectly imitable. So the potential contribution of e-business tools to strategic alliances in this regard seems to be quite uncertain.

P3. E-business technological innovation would have a positive impact on alliance performance with respect to cost saving, appropriation, and financial market; but would have a mixed (both positive and negative) impact on overcoming alliance shortcomings and serving as a source of sustained competitive advantage.

The performance impact of e-business technological innovations on various types of alliances is expected to be different, similar to that in *P2*. Many alliances fail to meet expectations, partly because the close working relationship and interpersonal connections are not well nurtured (Hutt *et al.*, 2000). In addition, it has been found that equity joint ventures seem to be more effective conduits of knowledge transfer than are contract-based alliances such as licensing agreements, and alliances closer to the “hierarchy” end of the “market-hierarchy” continuum outperform

alternatives in supporting interfirm learning (Mowery *et al.*, 1996). Also, as indicated, equity investment in the alliance by the firms involved tends to add to firms’ incentives to go into alliance and increase their potential gains from the alliance. Hence, Type I (equity-scale) and Type III (equity-link) type alliances, both involving equity investment, are more likely to outperform Type II (non-equity-scale) and Type IV (non-equity-link) type alliances, both without equity investment.

P4. The impact of e-business technological innovation on alliance performance would be more significant for Type I (equity-scale) and Type III (equity-link) strategic alliances, than for Type II (non-equity-scale) and Type IV (non-equity-link) alliances, respectively.

Implications and future research

There exist a variety of strategic alliances with startling and sometimes complex and confusing nomenclature and sophisticated structures that they operate under. Extant literature offers a broad perspective on motivation and formation of strategic alliances, its governance and management, stability, performance, and multiple alliances and strategic networks, and many offered empirical studies using available databases. But both marketing theorists and practitioners feel the need to have a better understanding of the intricate inter-relationships between and among different types of strategic alliances and the nature and characteristics of their operations. Current taxonomy of strategic alliances seems inadequate in addressing these issues and gives only a vague and simple categorization of dozens of alliance forms and structures identified so far. This study contributes to marketing theory, in that a two-dimensional categorization of strategic alliances is proposed and this typology seems more capable of assisting researchers and practitioners in understanding the complex nature of many forms of strategic alliances in the literature and in practice. By examining alliances from the equity and non-equity investment, as well as vertical or link association perspectives, antecedents to motivation and performance of alliances seem to manifest themselves more clearly within and between different groups. The interrelationships between different types of alliances in each category may reveal further their commonality and unique benefits and shortcomings to current and potential participants in alliances. The impact of e-business technological tools on alliances is the other contribution made in this study, which gives

alliance researchers and practitioners a new perspective in assessing the field's research and practice under current business environment. The motivation to go into alliances and potential alliance performance in the future may be dependent on the type of alliances the firms choose to form.

This study also opens the door to future research in the area by identifying additional research opportunities. Future research could focus on specific e-business technological innovations and their impact on a certain functional area activities within and across enterprises. Empirical works aimed at testing specific propositions given in this work should provide us with more insights and quantitative support. The nature and strength of the impact of e-business technological innovations on motivation and performance of alliance could provide managers in the field with a decision-making tool to assess the market attractiveness of forming an alliance and, once formed, the potential reward from it in the future. In addition, researchers of strategic alliance could examine the formation of strategic alliances, its governance and control mechanisms, alliance stability, and multiple alliances and strategic networks, etc., under the classification framework presented in this study. As we indicated earlier, the selection of the dimensions is based on our intent to give a framework that is general enough to categorize a plethora of alliances in place and yet not to overwhelm the practitioners with too much information in the scheme. Other, more extended ways and dimensions of classification schemes are certainly plausible and should be considered in future research.

In addition, for managers working for alliances or in firms that are contemplating potential alliances with other firms, the theoretical framework presented in this study could guide them in assessing those factors that would affect an existing alliance's performance and factors that may influence potential alliance partners in finalizing their executive decisions. Before any commitment is made with regard to initiating new alliances, managers could evaluate more carefully the potential impact e-business technological innovations may have on their motivation to enter the alliance and future alliance performance. For top management teams of firms considering a certain alliance type and other opportunities, this study could aid them in better assessing the weakness and strength of each type of alliance in the light of the current state of the firm, the industry, and environmental characteristics. The new typology also gives insight to the inter-relationships between alliances in different context

and offer possible alternative alliance types that could offer the same or better value to participating firms. To the practitioners, such a classification scheme will enable them to see through a bewildering array of alliance types and understand better their inter-relationships. In designing their future alliances, this framework would give them a new perspective in identifying the best alliance design given their firms' unique resource and competency characteristics. Managers could use the framework to analyze their strategic moves and find the most appropriate form of alliances, or even hybrid form of alliances, in achieving competitive advantages.

About 50 percent of all the alliance types identified (Table II) are marketing in nature, involving product, channel, branding, purchasing, or account management activities within a firm. This is especially the case with Type II (non-equity-scale) type of alliances in our new classification scheme (Table II), where eight out of nine alliances are marketing in nature. Besides, notice that the goals of alliances are to enhance strategic advantage and position of alliance partners in terms of sales revenue, brand equity, market leadership, and market shares. This is of great significance to marketing managers, especially business-to-business marketing managers, in that the marketing mix impact on the alliances needs to be fully evaluated for not just mostly marketing alliances (Type II), but also other types of alliances (Types I, III, and IV). This is particularly true with the current call for the assessment of return on marketing investment (ROM) in businesses worldwide, where marketing's contribution to firms and alliances are largely overlooked, especially in equity-scale and equity-link (Types I and III) types of alliances. Whereas alliances are formed at firm level, antecedents and conditions to alliance formation and alliance performance are mostly measured and assessed at the functional level, i.e. marketing research and marketing management level.

The propositions provided in this paper further indicate potential benefits and pitfalls e-business innovations may bring to both existing and potential alliances and alliances involving competitor firms. The mixed impacts of e-business technological innovation on alliance motivation, formation, and performance signify that firm, product-market, industry, and environmental specific factors must be examined individually and collectively in assessing feasibility of future strategic alliances.

References

- Achrol, R.S. (1991), "Evolution of the marketing organization: new forms for turbulent environments", *Journal of Marketing*, Vol. 55, October, pp. 77-93.
- Allen, J.W. and Phillips, G.M. (2000), "Corporate equity ownership, strategic alliances, and product market relationships", *The Journal of Finance*, Vol. LV No. 6, December, pp. 2791-815.
- Anderson, J.C. and Narus, J.A. (1991), "Partnering as a focused market strategy", *California Management Review*, Spring, pp. 95-113.
- Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17, March, pp. 99-120.
- Bello, D.C., Osmonbekov, T., Xie, F.T. and Gilliland, D. (2002), "E-business technological innovations: impact on channel processes and structure", *Journal of Marketing Channels*, Vol. 9 No. 3/4, pp. 3-25.
- Booz Allen Hamilton (2001), "Smart alliances: global growth strategies: buy, build or band together?", available at: www.bah.com/viewpoints/smart_alliances.html
- Buckley, P.J. and Casson, M. (1996), "An economic model of international joint venture strategy", *Journal of International Business Studies*, special issue, pp. 849-76.
- Bucklin, L.P. and Sengupta, S. (1993), "Organizing successful co-marketing alliances", *Journal of Marketing*, Vol. 57, April, pp. 32-46.
- Chen, R. and Li, M. (1999), "Strategic alliances and new product development: an empirical study of the US semiconductor start-up firms", *Advances in Competitiveness Research*, Vol. 7 No. 1, pp. 35-61.
- Cooke, S. and Ryan, P. (2000), "Brand alliances: from reputation endorsement to collaboration on core competencies", *Irish Marketing Review*, Vol. 13 No. 2, pp. 36-41.
- Das, S., Sen, P.K. and Sengupta, S. (1998), "Impact of strategic alliances on firm evaluation", *Academy of Management Journal*, Vol. 41 No. 1, pp. 27-41.
- Das, T.K. and Teng, B.-S. (1999), "Managing risks in strategic alliances", *Academy of Management Executives*, Vol. 13 No. 4, pp. 50-62.
- Day, G.S. (1995), "Advantageous alliances", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 297-300.
- Day, G.S. and Wensley, R. (1988), "Assessing advantage: a framework for diagnosing competitive superiority", *Journal of Marketing*, Vol. 52, April, pp. 1-20.
- Dev, C.S. and Klein, S. (1993), "Strategic alliances in the hotel industry", *The Cornell H.R.A. Quarterly*, February, pp. 42-5.
- Frazier, G.L., Spekman, R.E. and O'Neal, C.R. (1988), "Just-in-time exchange relationships in industrial markets", *Journal of Marketing*, Vol. 52, pp. 52-67.
- Frear, C.R. and Metcalf, L.E. (1995), "Strategic alliances and technology networks – a study of a cast-products supplier in the aircraft industry", *Industrial Marketing Management*, Vol. 24, pp. 379-90.
- Gomes-Casseres, B. (1994), "Group versus group: how alliance networks compete", *Harvard Business Review*, Vol. 72, July-August, pp. 62-70.
- Gulati, R. and Singh, H. (1998), "The architecture of cooperation: managing cooperation costs and appropriation concerns in strategic alliances", *Administrative Science Quarterly*, Vol. 43, pp. 781-814.
- Gulati, R., Nohria, N. and Zaheer, A. (2000a), "Guest editors' introduction to the special issue: Strategic networks", *Strategic Management Journal*, Vol. 21, pp. 199-201.
- Gulati, R., Nohria, N. and Zaheer, A. (2000b), "Strategic networks", *Strategic Management Journal*, Vol. 21, pp. 203-15.
- Heide, J.B. and John, G. (1990), "Alliances in industrial purchasing: the determinants of joint action in buyer-supplier relationships", *Journal of Marketing Research*, February, pp. 24-36.
- Hutt, M.D., Stafford, E.R., Walker, B.A. and Reingen, P.H. (2000), "Case study: defining the social network of a strategic alliance", *Sloan Management Review*, Winter, pp. 51-62.
- Johansson, J.K. (1995), "International alliances: why now?", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 301-4.
- Kalakota, R. and Robinson, M. (1999), *E-Business: Road-map for Success*, Addison-Wesley, Reading, MA.
- Kale, P., Singh, H. and Perlmutter, H. (2000), "Learning and protection of proprietary assets in strategic alliances: building relational capital", *Strategic Management Journal*, Vol. 21, pp. 217-37.
- Kogut, B. (1988), "Joint ventures: theoretical and empirical perspectives", *Strategic Management Journal*, Vol. 9, pp. 319-32.
- Kogut, B. (1989), "The stability of joint ventures: reciprocity and competitive rivalry", *The Journal of Industrial Economics*, Vol. XXXVIII, December, pp. 183-98.
- Lambe, C.J. and Spekman, R.E. (1997), "National account management: large account selling or buyer-seller alliance?", *Journal of Personal Selling & Sales Management*, Vol. 4, Fall, pp. 61-74.
- Lambe, C.J., Spekman, R.E. and Hunt, S.D. (2000), "Interimistic relational exchange: conceptualization and propositional development", *Journal of the Academy of Marketing Science*, Vol. 28 No. 2, pp. 212-25.
- Lambe, C.C., Spekman, R.E. and Hunt, S.D. (2002), "Alliance competence, resources, and alliance success: conceptualization, measurement, and initial test", *Journal of the Academy of Marketing Science*, Vol. 30 No. 2, pp. 141-58.
- Mazur, L. (2001), "The only way to compete now is with an alliance", *Marketing*, 15 February, p. 20.
- Morash, E.A. and Clinton, S.R. (1998), "Supply chain integration: customer value through collaborative closeness versus operational excellence", *Journal of Marketing Theory and Practice*, Vol. 6 No. 4, pp. 104-20.
- Mowery, D.C., Oxley, J.E. and Silverman, B.S. (1996), "Strategic alliances and interfirm knowledge transfer", *Strategic Management Journal*, Vol. 17 (Winter special issue), pp. 77-91.
- Nanda, A. (2001), *Joint Ventures and Strategic Alliances*, Harvard Business School books online, available at: www.people.hbs.edu/cormsby/jvsa/resource/bookJVSA/
- North, M., Osborn, D. and Moloney, D. (1999), "E-business today, big business tomorrow", available at: www.bah.com/viewpoints/insights/ebiz_ebusiness_2.html
- Nygaard, A. and Dahlstrom, R. (2002), "Role stress and effectiveness in horizontal alliances", *Journal of Marketing*, Vol. 66 No. 2, April, pp. 61-82.
- Oliver, C. (1990), "Determinants of interorganizational relationships: integration and future directions", *Academy of Management Review*, Vol. 15 No. 2, pp. 241-65.
- Parkhe, A. (1993), "Strategic alliance structuring: a game theoretic and transaction cost examination of interfirm cooperation", *Academy of Management Journal*, Vol. 36 No. 4, pp. 794-829.
- Pekar, P. and Allio, R. (1994), "Making alliances work – guidelines for success", *Long Range Planning*, Vol. 27 No. 4, pp. 54-65.

- Rangan, U.S. and Yoshino, M. (1996), "Forging alliances: a guide to top management", *Columbia Journal of World Business*, Vol. 31 No. 3, pp. 6-13.
- Sengupta, S. and Perry, M. (1997), "Some antecedents of global strategic alliance formation", *Journal of International Marketing*, Vol. 5 No. 1, pp. 31-50.
- Simonin, B.L. (1999), "Ambiguity and the process of knowledge transfer in strategic alliances", *Strategic Management Journal*, Vol. 20, pp. 595-623.
- Spekman, R.E., Isabella, L.A., MacAvoy, T.C. and Forbes, T. III (1996), "Creating strategic alliances which endure", *Long Range Planning*, Vol. 29 No. 3, pp. 346-57.
- Varadarajan, P.R. and Cunningham, M.H. (1995), "Strategic alliances: a synthesis of conceptual foundations", *Journal of the Academy of Marketing Science*, Vol. 23 No. 4, pp. 282-96.
- Varadarajan, P.R. and Jayachandran, S. (1999), "Marketing strategy: an assessment of the state of the field and outlook", *Journal of the Academy of Marketing Science*, Vol. 27 No. 2, pp. 120-43.
- Yehekel, O., Shenkar, O., Feigenbaum, A. and Cohen, E. (2001), "Cooperative wealth creation: strategic alliances in Israeli medical-technology ventures", *Academy of Management Executives*, Vol. 15 No. 1, pp. 16-25.
- Zinn, W. and Parasuraman, A. (1997), "Scope and intensity of logistics-based strategic alliances – a conceptual classification and managerial implications", *Industrial Marketing Management*, Vol. 26, pp. 137-47.

Further reading

- Kalwani, M.U. and Narayandas, N. (1995), "Long-term manufacturer-supplier relationship: do they pay off for supplier firms?", *Journal of Marketing*, January, pp. 1-16.
- Kaplan, S. and Sawhney, M. (2000), "E-hubs: the new B2B marketplaces", *Harvard Business Review*, May-June.
- Keep, W.W., Hollander, S.C. and Dickinson, R. (1998), "Forces impinging on long-term business-to-business relationships in the United States: a historical perspective", *Journal of Marketing*, April, pp. 31-45.
- Wathne, K.H., Biong, H. and Heide, J.B. (2000), "Choice of supplier in embedded markets: relationship and marketing program effects", *Journal of Marketing*, April, pp. 54-66.
- Yoshino, M.Y. and Rangan, U.S. (1995), *Strategic Alliances: An Entrepreneurial Approach to Globalization*, Harvard Business School Press, Boston, MA.