Collaborating for New Product Development: Selecting the Partner with Maximum Potential to Create Value

Zeynep Emden, Roger J. Calantone, and Cornelia Droge

The partner selection process in the formation stages of collaborative new product development (NPD) is a neglected topic. The present study investigated the partner selection processes to ascertain the potential of creating competitively advantageous products through collaboration. The goal was to develop a process theory of partner selection for collaborative NPD alliances using a theory development approach. The literatures on NPD, interfirm knowledge transfer and generation, and interorganizational relationships were tapped. These literatures motivated the approach and the research questions. Parallel with the analysis of the literature, a series of case study interviews were conducted with managers currently in collaborative dyads. Managers' inputs were used (1) to guide the theory development process and (2) to validate the relevance of the literature-based assertions. The method of narrative analysis for building theory from case studies was adopted: Multiple indicators were collapsed into single constructs, and recurring sequences or divergences were analyzed. This resulted in the unveiling of phases in the partner selection process. The study’s findings suggest that technological alignment of the partners triggered the partner-evaluation process. This phase was followed, in order, by the strategic alignment and relational alignment phases. These later phases were as important as the initial phase in ensuring the transfer and integration of critical know-how and in creating product value through collaboration. In addition to clarifying the definition of codevelopment alliances, this study reveals a comprehensive theoretical model of the technological, strategic, and relational aspects of partner selection in codevelopment alliances, as well as the order in which these aspects are practiced.

Introduction

In the open innovation paradigm advocated by Chesbrough (2003), product success stems from using the right mix of internal and external resources. Firms can originate research, but they can also benefit from other firms’ resources as well as from other firms’ usage of their own resources. In this way, firms are able to utilize the brains of people outside of the firm, people who will develop things that create demand for their own products (Deck and Strom, 2002). The challenge is building cross-enterprise processes (Deck and Strom, 2002) and innovative ways of managing these processes (Jassawalla and Sashittal, 1998). Firms are increasingly compelled to leverage their internal strengths with partners’ core competencies to enhance or to sustain their capabilities in providing superior products and services (Mohr and Spekman, 1994).

The present research studies new-generation new product development (NPD) practices called codevelopment alliances: Specifically, the aim was to develop a process theory of partner selection for achieving desirable outcomes from codevelopment alliances.
Codevelopment alliances are nonequity-based collaborative relationships enjoined by two or more firms to create value by integrating and transforming disparate pools of know-how related to new product or service development (adapted from Link and Bauer, 1989). **Collaboration** is defined as a type of cross-organizational linkage, which in addition to high levels of integration is characterized by high levels of transparency, mindfulness, and synergies in participants’ interactions (adapted from the definition of cross-functional collaboration in Jassawalla and Sashittal, 1998). In codevelopment alliances, each party contributes a significant portion of the end solution. These partnerships do not include relationships involving, for example, a purchase of components requiring minor interorganizational interaction.

Both benefits and additional risks or costs may accrue from collaboration for NPD (Littler, Leverick, and Bruce, 1995). Benefits include providing access to new skills or technologies (Mohr and Spekman, 1994) or the means for creating or exploiting new markets (Littler, Leverick, and Bruce, 1995). Collaboration allows for cross-disciplinary integration, which may be essential for creating really new products (Chesbrough, 2003). Opportunities for the utilization of technologies that have not yet found application may be created (Chesbrough, 2003). Collaboration may lead to shared research and development (R&D) costs and risks (Perks, 2000) or it may increase the speed to market (Bronder and Pritzl, 1992; Deck and Strom, 2002). As in any interorganizational arrangement (Achrol, 1997; Achrol and Kotler, 1999; Kanter, 1994), codevelopment alliance managers need to overcome obstacles and to operate through novel configurations. Differences in organizational cultures, mindsets, expectations, and behavior can make building relational capital and managing alliances extremely costly (Hanson and Lackman, 1998; Tse, Francis, and Walls, 1994). Finally, knowledge exchanged in a collaborative NPD arrangement may be proprietary, and in a situation of high competitive overlap there is the risk of knowledge spillover (Yan, Luo, and Child, 2000).

Although collaboration has become the next generation for NPD practices in a world where product innovation is increasingly challenging, there has been relatively little academic research on collaborative NPD codevelopment. The limited directly related literature was reviewed, and the broader, indirectly related literature on alliances in general was tapped. In parallel, an exploratory, theory development from case studies approach was employed. Narrative analyses (Pentland, 1999) of interviews with managers in a codevelopment dyad were conducted. By classifying sequential patterns and reordering for pattern detection, a wealth of information on the causal chain of events can be obtained (Abbot, 1990). The result was an emerging theory of partner selection for codevelopment alliances. The exposition begins with an elaboration on the motivations for the current research.

**Background**

Several factors make an investigation of partner selection for NPD codevelopment timely. First, product innovation has become increasingly more challenging, driving managers to employ a different model to stay competitive; codevelopment is one way to meet this challenge. Innovation demands greater coordination, cooperation, and integration among functional areas (Olson, Walker, and Ruekert, 1995; Sarin and Mahajan, 2001), but building cross-functional processes and structures is insufficient (Perks, 2000). Internal industrial research has become less effective (Chesbrough, 2003). External environments are turbulent (McCann and Selsky, 1984); global competition has increased (Blackwell and Eilon, 1991); and product life cycles are shrinking (Chen and Li, 1999). The complexity of technology needed to innovate has increased, and R&D costs are exploding (Rindfleisch and Moorman, 2001). There is growing mobility of highly experienced and skilled people (Chesbrough, 2003) and a dispersion...
of skills and knowledge across firms (Barney, 1991; Das and Teng, 2000). Thus, overall a new model or paradigm shift is necessary: Chesbrough (2003, p. 20) referred to a shift from a “closed to an open innovation paradigm.” The latter encompasses codevelopment.

Second, all NPD alliances can create clashes between the logic of alliances and the logic of NPD (Bidault and Cummings, 1994), and ways to resolve this contradiction need to be found. As Sivadas and Dwyer (2000) highlighted, collaborative NPD requires a continuous information flow between partners to ensure the best possible integration as well as flexibility. However, information flow is difficult even across the firm’s functional entities and may become unattainable across firm borders (Perks, 2000). Partners may become protective about their resources, especially when their competitive advantage relies on these resources (Hamel, 1991). In that case, partners will strive to restrict knowledge (Yan, Luo, and Child, 2000) and also will become excessively controlling over the NPD project. However, conflict and cooperation may produce the very setting for innovation (Perks, 2000). In summary, the logic of alliances demands extensive information flows, whereas the logic of NPD has ownership of differential competitive advantage as its locus. This peculiarity of codevelopment demands investigation.

Third, a study by Hagedoorn (2002) on 40 years of data revealed growth in the number of R&D partnerships since 1960, but a literature review on codevelopment alliances identifies only about a dozen scholarly studies dealing directly with codevelopment (see Table 1). Five of these are case studies (Appleyard, 2003; Deck and Strom, 2002; Hummel et al., 2000; Kreiner and Schultz, 1993; Perks, 2000); one is a field survey (Littler, Leverick, and Bruce, 1995); two are causal models (Rindfleisch and Moorman, 2001; Sivadas and Dwyer, 2000); three are regression models (Athaide, Stump, and Joshi, 2003; Chen and Li, 1999; Saez, Marco, and Arribas, 2002); and the last is a trend analysis (Hagedoorn, 2002). Development of an emergent theory addressing key codevelopment issues is overdue.

Finally, of all issues regarding codevelopment, the present study focuses specifically on partner selection for the following reasons. In a survey done by Deck and Strom (2002) with firms involved in codevelopment projects, the number one concern revealed was a poor foundation for collaboration. This concern is echoed by a number of scholars in the strategy (Mohr and Spekman, 1994), management (Hitt et al., 2000), international business (Geringer, 1991), and marketing literatures (Bucklin and Sengupta, 1993). Glaiser (1996), for instance, stated the sustainability and viability of an alliance is, to a great extent, determined by the partner chosen. Similarly, Dev, Klein, and Fisher (1996) pointed out that although some failures may be attributed to changes in business conditions, a number are triggered by inappropriate partner selection. Although two studies in the codevelopment literature recognized the importance of partner selection (Athaide, Stump, and Joshi, 2003; Saez, Marco, and Arribas, 2002), none have addressed this issue extensively. High risks accompany the high potential benefits in codevelopment alliances (Littler, Leverick, and Bruce, 1995), but reducing risks while maximizing benefits may be a function of partner choice. Choosing the right partner also may reduce the clash between the logic of alliances and the logic of NPD.

Research Approach

An exploratory theory development from case studies approach was employed. This approach allowed study of codevelopment alliances in a natural setting. Moreover, in-depth case research encourages theory building by allowing the constructs, their definitions or measurements, and relationships among constructs to emerge from the process rather than being specified at the outset (Eisenhardt, 1989). Though the research problem was formulated and the existing literatures were reviewed to identify potentially important constructs, specification of relationships between constructs was avoided as much as possible. Interviews were conducted with managers; four case studies were completed, three of which comprise manager dyads in codevelopment alliances. A summary of company and interviewee profiles is presented in Table 2.

Eisenhardt (1989) advocated no single technique to collapse multiple indicators into individual constructs. For that purpose, the method of narrative analysis was employed. Pentland (1999, p. 717) argued that narratives are “naturally suited for the development of process theories and explanations.” Following Abbott’s (1990), sequential patterns were first classified, and then antecedents and consequences of these patterns across different cases were identified. Narratives contain a wealth of information on the causal chain of events (Abbot, 1990) but allow for more than examining just sequential patterns (e.g.,
<table>
<thead>
<tr>
<th>Relevant Study</th>
<th>Focus</th>
<th>Major Findings</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sivas and Dwyer (2000), <em>Journal of Marketing</em></td>
<td>Management</td>
<td>Cooperative competency (a combination of trust, communication, and collaboration) has a significant impact on the NPD success. Complementarity of partner competencies has significant effect on NPD success only in one of the industries studied.</td>
<td>Structural Equation Modeling</td>
</tr>
<tr>
<td>Rindfleisch and Moorman (2001), <em>Journal of Marketing</em></td>
<td>Information processing</td>
<td>Participants of horizontal alliances possess both higher levels of knowledge redundancy and lower levels of relational embeddedness compared with vertical alliances.</td>
<td>Structural Equation Modeling</td>
</tr>
<tr>
<td>Athaide, Stump, and Joshi (2003), <em>Journal of Marketing Theory and Practice</em></td>
<td>Relationship management</td>
<td>Sellers consider both the buyer’s ability and motivation before engaging in product codevelopment. Idiosyncratic investments are another factor affecting their decision. Codevelopment relationships lead to seller satisfaction when the buyer is knowledgeable.</td>
<td>OLS Regression</td>
</tr>
<tr>
<td>Kreiner and Schultz (1993), <em>Organization Science</em></td>
<td>Organizational Networks</td>
<td>Successful collaboration emerges from ordinary interaction within personalized networks. Excitement, commitment and other sentiments are important for establishment and survival of the collaborations than are calculations of benefits and costs. Collaborative ties attract other partners. Sharing of information, research plans, and visions are an integral part of codevelopment relationships.</td>
<td>Case Studies</td>
</tr>
<tr>
<td>Littler, Leverick, and Bruce (1995), <em>Journal of Product Innovation Management</em></td>
<td>Field characteristics and responses</td>
<td>A list of factors in two categories (inputs category, such as choice of partner, and collaboration management category, such as building trust and communication) contributing to collaborative NPD success.</td>
<td>Descriptive statistics and mean comparisons</td>
</tr>
<tr>
<td>Appleyard (2003), <em>Journal of Product Innovation Management</em></td>
<td>Knowledge accumulation</td>
<td>Buyers may prefer generally applicable modifications to customized ones; generally applicable modifications may lead to greater knowledge accumulation at the supplier.</td>
<td>Building mathematical model using a case</td>
</tr>
<tr>
<td>Chen and Li (1999), <em>Advances in Competitiveness Research</em></td>
<td>Learning</td>
<td>Content learning in technological fields increases the number of new product lines; content learning in manufacturing and marketing areas has no impact on the number of new product lines. Process learning (i.e., gaining knowledge from the management process of alliance activities) has positive impact on the number of new product lines.</td>
<td>Probit Regression Analysis</td>
</tr>
<tr>
<td>Perks (2000), <em>Industrial Marketing Management</em></td>
<td>Information exchange</td>
<td>Complementarity of resource inputs and outputs and the state of competitiveness can influence the approach toward integrating marketing information in the collaborative NPD process.</td>
<td>Case Study</td>
</tr>
<tr>
<td>Hagedoorn (2002), <em>Research Policy</em></td>
<td>Trends</td>
<td>A clear pattern of growth can be seen in the R&amp;D partnerships since 1960. Firms seem to increasingly prefer contractual partnerships to joint ventures. This preference is amplified in several sectors, with the top three being pharmaceuticals, information technology, and aerospace and defense industries.</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td>Deck and Strom (2002), <em>Research Technology Management</em></td>
<td>Strategy</td>
<td>A general codevelopment model has three levels: a strategy for development chain design, process and governance structures that define how the partners work together, and information technology that supports collaborative development.</td>
<td>Case Study</td>
</tr>
<tr>
<td>Saez, Marco, and Arribas (2002), <em>R&amp;D Management</em></td>
<td>Empirical</td>
<td>Among external sources of ideas for innovation customers are most valued and research centers are the last on the list, despite the fact that when it comes to codevelopment research centers are most likely to be chosen.</td>
<td>Logistic Regression</td>
</tr>
<tr>
<td>Hummel et al. (2000), <em>Journal of Multicriteria Decision Analysis</em></td>
<td>Group decision making</td>
<td>The support of Team Expert Choice, a group decision support system, appears to have enhanced the decision-making processes and outcomes of new product evaluation. The evaluation resulted in valuable guidelines for improving the development and diffusion of the product.</td>
<td>Case Study</td>
</tr>
</tbody>
</table>
An in-depth study of each case was performed by using structural analysis of the managers’ stories. First, the primary sequences in the narratives were isolated following the analytical framework in Labov and Waletzky (1967). Each narrative was organized according to the temporal sequence by assigning a displacement set subscript to each clause: A left subscript indicated the number of antecedent narrative simultaneous with the given clause, and a right subscript indicated the number of subsequent clauses simultaneous with the given clause (Labov and Waletzky, 1967). Second, the free clauses were moved to the beginning, and the restricted clauses were moved “to a point as early as possible in the narrative without changing the temporal sequence of the original semantic interpretation” (Labov and Waletzky, 1967, p. 31). Last, sequential categories were formed inductively, commonalities and divergences among cases were identified, and explanations were sought in other narrative ingredients. Table 3 presents the emergence of the categories, and Table 4 shows the temporal sequences. The resulting emergent process theory for partner selection is presented in the next sections.

### Emergent Theory of Partner Selection

The emergent model reveals three broad phases: (1) technological alignment; (2) strategic alignment; and (3) relational alignment. Figure 1 shows a framework that highlights the process managers followed to select partners for codevelopment in cases they declared to be successful.

#### Phase 1: Technological Alignment

The left-most box in Figure 1 shows that when looking for a NPD partner, managers initially look for technological alignment. The existence of technological alignment can give managers ideas about opportunities, thus triggering the decision for collaboration. This first phase is characterized by affirmations from managers about technical capability, resource complementarity, and overlapping knowledge bases.

**Technical capability.** In all of the four cases studied, each partner was stated to have either an innovative technology or expertise in a certain field. This technology or expertise attracted the attention of the other firm, either because it was widely publicized or simply through networking. For instance, one of the respondents stated,

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**Table 2. Company and Interviewee Profiles**

<table>
<thead>
<tr>
<th>Case</th>
<th>Company</th>
<th>Business Description</th>
<th>Interviewee’s Position</th>
<th>2003 Sales Volume</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>Executive Training</td>
<td>Assistant Director</td>
<td>$3.1M</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Consulting</td>
<td>Executive Vice President, Business Development</td>
<td>$18.5</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>Film Products and Adhesives</td>
<td>Market Development Manager</td>
<td>$69M</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Imaging And Printing</td>
<td>Product Marketing Manager</td>
<td>$73,061M</td>
<td>142,000</td>
</tr>
<tr>
<td>3</td>
<td>E</td>
<td>Auto Products And Services</td>
<td>Manager, Fuel Cell Systems Engineering</td>
<td>$164,196M</td>
<td>327,531</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Fuel Cell Technologies</td>
<td>N/A&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$119,600M</td>
<td>1,300</td>
</tr>
<tr>
<td>4</td>
<td>G</td>
<td>Digital Printing</td>
<td>Vice President, Software Development</td>
<td>€ 75M</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>Software Development</td>
<td>Chief Technical Officer</td>
<td>€ 3.5M</td>
<td>26</td>
</tr>
</tbody>
</table>

<sup>a</sup> Company and interviewee names are suppressed due to confidentiality.

<sup>b</sup> No manager from company F could be reached for an interview.

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**Table 3. Emergence of Concepts from Stories**

<table>
<thead>
<tr>
<th>Case</th>
<th>Company</th>
<th>Technical Ability</th>
<th>Resource Complementarity</th>
<th>Overlapping Knowledge Bases</th>
<th>Motivation Correspondence</th>
<th>Goal Correspondence</th>
<th>Compatible Cultures</th>
<th>Propensity to Adapt</th>
<th>Long-Term Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>X&lt;sup&gt;a&lt;/sup&gt;</td>
<td>X</td>
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<td>X</td>
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<td></td>
<td>B</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>2</td>
<td>D</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>C</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>3</td>
<td>E</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4</td>
<td>G</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>H</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<sup>a</sup> An X sign demonstrates the interviewee’s one or more statements imply the corresponding concept.
“The whole world came to us because we had put these really outrageous trade shows, and the product concept was so amazing, we were just truly the most exciting thing in printing. So many people said they wanted to be a part of it.” If partners were not well informed about the technological competences of one another, one party had to convince the other of its capability at the outset. For instance, one other manager declared, “We put together a proposal to them for what we could offer them in terms of supply chain education. And we really pitched it to them on a couple of fronts. One was our faculty’s willingness to get to know their business and customize what we offer. Second, our depth of knowledge in the supply chain area.”

In the technological alignment phase, firms recognized the potential partner’s unique competencies, which can be leveraged into NPD-related activities. This finding seems to be consistent with the resource-based view (RBV), which claims firms search for partners who have unique technological resources ( Barney, 1991) they can leverage ( Hitt et al., 2000). In the RBV, such a need is the primary reason for creating a strategic alliance (Das and Teng, 1999) and for the selection of specific alliance partners (Hitt et al., 2000).

**Resource complementarity.** The second subcategory of manager affirmations is technical resource and market knowledge complementarity. In all cases analyzed, the potential partners had technical resources that were distinct yet complementing one another for the opportunity foreseen. Partners would be able to exploit or to create opportunities only by integrating their complementary skills and resources. One manager stated, “So, when we were to make a decision, company A was complementary and able to round the edges for us. Complementary skills, complementary market knowledge, so we were able to augment our decision with their strengths.” In all cases, firms were adept at certain technologies and also had a thorough understanding of the needs of dissimilar customers. Through collaboration, firms were either able to create new market segments for their mutual product (i.e., mutual market expansion), or as one partner gained access to a new market, the other had the opportunity to become a value-added supplier. Specifically, their market knowledge as well as technological knowledge complemented one another.

Supportive of these findings, several researchers have argued that strategic alliances are more likely to succeed when partners possess complementary assets (Hill and Hellriegel, 1994; Luo, 1999). Dyer
and Singh (1998), for example, suggested that generating rents might require a firm to use their competencies in conjunction with complementary resources from another firm. Similarly, Das and Teng (2000) argued that partners’ resources might provide more competitive advantage when they are used in combination. Moreover, new product researchers argued that significant innovations are likely to emerge from a combination of complementary skills (Glaister, 1996).

Overlapping knowledge base. A third subcategory was overlapping knowledge bases among partners. In all the stories analyzed, managers mentioned having somewhat similar knowledge bases, which allowed them to see the value in the potential partners’ competencies. For instance, one manager said that before they decided to partner to have access to state-of-the-art technology, his company had already “been working on some government contracts to evaluate a certain technology for transportation at the research level type of effort.” Various reasons were stated for these knowledge overlaps, such as same educational background, previous work done on the same subject, or simply working with similar technologies or in the same industry. Regardless of reason, overlapping knowledge provided the necessary common ground (1) to realize the technology’s potential; (2) to discover complementarities of their competencies; and (3) to communicate these interorganizationally.

In support of this finding, researchers (Geringer, 1988; Hitt et al., 2000; Kogut, 2000) argued that even though skill discrepancies are motivators for collaboration and facilitators of knowledge transfer (Dyer and Singh, 1998), such transfer is not guaranteed unless prior knowledge and a set of context-specific learning skills exists (i.e., absorptive capacity exists) (Cohen and Levinthal, 1990). Some level of similarity within the knowledge domains is necessary to understand the intricacies of the new knowledge and its applicability. Yet Hitt et al. (2000) mentioned that if a partner is willing to share expertise and work in tandem, it might help the other firm develop adequate absorptive capacity. Therefore, in the absence of such capacity, managers may choose to ally with “partners who are willing to share their capabilities and, perhaps, to make special efforts to help their partners acquire these capabilities” (Hitt et al., 2000, p. 460).

**Phase 2: Strategic Alignment**

The middle box in Figure 1 shows the next phase: strategic alignment. *Strategy* is defined as the goals of an organization and the manner in which it seeks to achieve them (Saint-Onge, 1996). The two emergent
subcategories in this phase are (1) motivation correspondence and (2) goal correspondence.

Motivation correspondence. This refers to the extent to which the partners’ perceived ulterior motives are in correspondence with one another (Smith and Barclay, 1997). In all cases analyzed, the partners had correspondent motivations and also looked for signals to assure this. From partnering firms A and B, manager A said, “We knew that they weren’t interested in having our technology. They were interested in selling more film and being a value-added supplier,” whereas manager B stated, “They were trying to penetrate our traditional market. They needed a lot of help getting into and understanding that market. That was partly where we joined them.” These partners clearly had different, yet correspondent, motivations to enter the codevelopment partnership.

Correspondence of motivations signals whether partners have mutually beneficial intentions and determines the likelihood that the partners will engage in opportunistic behaviors. Firms may encounter many different motivations to enter alliance relationships (Doz and Hamel, 1998). For instance, firms may enter alliances to internalize knowledge that is not readily available in the marketplace (Hamel, 1991). Codevelopment partners may be competitors in the same market (Saez, Marco, and Arribas, 2002) or may fear that knowledge outflow “may equip a previously non-competing partner with the necessary skills and knowledge to enter such markets” (Perks, 2000, p. 184). Therefore, aiming to internalize the competencies of a partner may be viewed as opportunistic behavior in a codevelopment setting.

Goal correspondence. This second subcategory that emerged occurs when the prospective partners having noncompeting goals. A key finding is that high goal correspondence enhanced the consistency of expectations and assured mutual gains. Goal correspondence does not necessarily mean that partners have exactly the same goals. For instance, in case 1 (see Table 2), the manager from company A said, “Our service offering of education isn’t the whole requirement of what the customer really needs. The customer really needs to get results from the education, so there is a learning component and then there is the implementation and achievement of the results component. And we are not able to do that part, because it is outside the mission of the university. So working with a consultant enables us to offer a bigger package. So there is a good balance of two organizations seeking a common objective,” whereas the manager from company B said, “There are a lot of consulting companies out there and we didn’t really want to go at it just kind of like everybody else. So, we were trying to figure out a way to be different.” According to manager A, the two parties had common goals, but in reality they had different goals, as can be clearly seen from the two statements. The goal of B was to differentiate itself from its competitors by the mutual product offer, whereas the goal of A was to better meet needs by providing a more comprehensive service package. The reason manager A perceived these goals to be common is most likely because these two goals are not conflicting and can be achieved through a common business model.

Phase 3: Relational Alignment

The last box in Figure 1 shows that the final emergent phase of the partner selection process is relational alignment. Three subcategories were (1) compatible cultures; (2) propensity to change; and (3) long-term orientation.

Compatible cultures. Culture is the collection of cognitions, expectations, mindsets, norms, and values within an organization (O’Reilly, Chatman, and Caldwell, 1991). Culture is a determinant of how organizations make decisions, and it shapes collective behaviors. Findings show that when the partners have compatible cultures, conflicts are overcome relatively easily. Parkhe (1991) argued that diversity—that is, cultural and procedural differences—may be the root of adversities and can negatively affect the quality of partnership interactions.

To have effective communication and exchange of knowledge, there has to be at least a minimum congruence in norms and procedures, that is, in the way of doing things. Partners should be able to speak the same language, as pointed out by one respondent: “It is sometimes very hard to discuss new products, new markets and new ideas with bigger companies. I don’t know why exactly, but they don’t seem to speak the same language. We have the discussion and it doesn’t stick. We don’t get any traction on it. It is very difficult because again we both come from different worlds. And we see some value in some of the products they have and they don’t seem to see that value.” Partners with compatible cultures are more likely to understand one another and to work toward common
goals. Compatible cultures engender synchronization of expectations and behaviors. Indeed, one manager said that it feels like there are no organizational boundaries because the two organizations were “all just kind of kindred spirits in [their] values on how [they] treat customers and each other.”

Cultural compatibility was implicit in all narratives but one. One manager stated, “Actually our cultures did not match up, because nothing is going to match the culture of a university. No business organization will ever match up. But they were very upfront, very open, and very consistent with what they do.” This statement shows that in the absence of cultural fit, other attributes of the partner—such as openness and consistency—may create the necessary ground for collaboration. Likewise, Hitt et al. (2000) argued that in the absence of overlapping procedural routines, the commitment of a partner to the alliance relationship might create a willingness to share tacit knowledge and to develop the necessary common ground for communication and knowledge transfer.

Propensity to adapt. This second emergent subcategory refers to the willingness of partners to adapt as the requirements of collaboration change. In all stories, managers said they were comfortable with asking their partners for changes in their share of the task, because their partners were willing to say, “Yes, that makes a lot of sense; we should try that.”

Propensity to adapt may be considered a necessary characteristic, since it may form the basis for the needed flexibility for both NPD (Sivadas and Dwyer, 2002) and sustained collaboration (Doz and Hamel, 1998). Codevelopment relationships may evolve in ways that are hard to predict; the manner in which value is created is not preordained. Doz and Hamel (1998) stated that initial agreements have less to do with success than adaptability to change. Clearly, adaptability is a necessary characteristic for codevelopment partners, and managers seek signals of the potential partner’s propensity to adapt.

Long-term orientation. This subcategory refers to the willingness to make short-term sacrifices for long-term results. Ganesan (1994) argued that a short-term orientation focuses only on the options and outcomes of the current period, whereas a long-term orientation focuses on achieving future goals and is concerned with both current and future outcomes. Anderson and Weitz (1992) equated a long-term orientation with relationship commitment and argued that commitment results in independent channel members working together to increase mutual gains.

It was found that partners with long-term orientations are selected over others because long-term orientation gives the partner the ability to overcome obstacles, to resolve conflicts, and to continue under uncertainty. For instance, one manager stated, “Everybody could see the potential of the product concepts. But again it was potential, and it was very latent. Most of those people dropped off quickly. They saw the kind of work involved and how small the opportunity was in the short term.” In all success cases studied, partners were aware of short-term sacrifices the collaborative task required and were willing to contribute without knowing the exact outcome. One of the managers mentioned, “Now we are a success story, but it was from the deepest darkest hole that we came.”

Discussion

Theoretical Contributions and Implications

Although the number of codevelopment alliances in industry has increased, a review of the literature revealed a relatively limited number of studies focusing specifically on this issue. Assuming that the foundation of an alliance partially determines sustainability and viability (Glaister, 1996) and that inappropriate partner selection underlies many failures (Dev, Klein, and Fisher, 1996), the present study developed a process theory of partner selection in codevelopment alliances. A theory development from case studies method was used, in which managers in codevelopment alliances were interviewed and their stories of successful cases were recorded. Alliance failures were not included in this study. Managers’ stories of the partner selection process were analyzed using a narrative analysis technique, with the purpose of ascertaining routines in their stories and of grasping causal meanings from recurring sequences or from divergences.

This study’s first contribution is to clearly define codevelopment alliances and to concentrate specifically on this type of collaboration. Several characteristics differentiate codevelopment alliances from other types of partnerships. When firms collaborate for NPD, they do so with several different types of organizations, such as competitors, suppliers, customers, or universities and research centers (Saez, Marco, and Arribas, 2002). Codevelopment alliances are nonequity-based relationships in which each party contributes a significant
portions of the end solution; that is, these partnerships do not include relationships involving the purchase of components or simply funding of research. In addition, these partnerships involve both integration and some level of competitiveness among partners (Rindfleisch and Moorman, 2001). This contradiction adds a unique dimension to codevelopment partnerships. In the current study, codevelopment alliances were treated in isolation from other types of partnerships.

The study’s second contribution is to develop a novel partner selection process theory, which involves relational and strategic alignments as well as technological alignment of the partners. The emergent model reveals a comprehensive theoretical combination of these aspects, whereas the existent literature on interfirm relationships concentrates on one or two of these aspects. The relationship management literature, for instance, focuses on relational aspects (Anderson and Narus, 1992; Morgan and Hunt, 1994), whereas the organizational learning literature concentrates on technological know-how transfer (Hamel, 1991; Inkpen, 1996, 1998, 2000; Iyer, 2002; Khanna, 1998; Parkhe, 1991). In their study on international alliances, Sarkar et al. (2001) included resource complementarities—which is similar to technological alignment in the current study—as well as cultural and operational compatibilities—which have aspects similar to relational alignment in the current study. In a study of partner selection criteria for international joint ventures, Luo (1997) divided partner selection criteria into operations related (e.g., product relatedness) versus cooperation related (e.g., previous interpartner collaborations). Yet these studies do not examine the goal and motivation correspondence comprising strategic alignment, which was found to be important for value creation through collaborative NPD.

The present study’s third contribution is to provide a process theory founded on the methodology employed, or narrative analysis; that is, the third contribution is to uncover not only the important constructs but also the order in which they are practiced. Based on the emergent theory, the primary driver of codevelopment arrangements is the potential for mutual gains from the technologies pooled. Firms discover these technologies by one of two means: (1) They seek them deliberately, or (2) they come across these technologies during such avenues as meetings, conferences, trade shows, or through public media. The number of firms that possess a technology with a potential to create synergistic value is almost always very small. These firms are not necessarily in the same industry. They may or may not have compatible strategic intentions or compatible relational characteristics. Firms make an effort to develop a mutual understanding of these technologies and their implications in the market only if they realize the synergistic value of pooling and integrating these technologies. Therefore, the first phase of the partner selection process theory is technological alignment.

On the other hand, knowledge shared for codevelopment is almost certainly proprietary and may be vital for the competitive stances of the parties. Potential partners may be rivals in other markets or may become competitors in the future (Perks, 2000; Rindfleisch and Moorman, 2001). The risk of knowledge spillover in the case of competitive overlap is high (Yan, Luo, and Child, 2000). In these circumstances, mutual gain requires appropriate strategic alignment between the partners. Therefore, technological alignment is followed by strategic alignment.

Strategic alignment provides some level of security for parties in the absence of an early contract. At this stage, the firm has ensured the synergistic and collective value creation through collaboration by enabling the transfer of tacit know-how. Also at this stage, the potential partners establish teams to develop the initial codevelopment project specifications. This is when people from the partnering companies sit down together to work out the details of the collaborative project. It is very important at this stage that the people involved—and ones who direct them—speak the same language and are willing to make adjustments and compromises as well as short-term sacrifices for an unknown outcome. Therefore, the last thing necessary for ensuring the transfer of tacit know-how is relational alignment between the parties.

Overall, the findings suggested that partners’ technical, strategic, and relational fit determines, in confluence, the potential of codevelopment alliances to create value. Sarkar et al. (2001) supported this emerging picture: They define an interorganizational fit as having different resource and capability portfolios, while sharing similarities in social institutions. Mockler (2001) concurs that strategic fit is a necessary but insufficient condition for multinational strategic alliances.

Managerial Implications

By providing a better understanding of the sequence of actions–decisions associated with partner selection, the present study provides managers with useful insights. This emergent model underscores the need for
managers to look for technological alignment with a partner to maximize the transfer and integration of disparate pools of know-how. The model also underscores the significance of strategic and relational alignments with a potential partner to ensure this transfer, as well as the sustainability of the partnership.

Technological alignment of firms may trigger the decision for NPD collaboration. Codevelopment alliances are formed when technical skills are sufficiently complementary for the creation of unique capabilities, which are then owned by neither of the parties alone. Firms also search for partners that have complementary skills and resources (Johnson et al., 1996), which can be integrated with their own resource endowment to create synergy (Doz and Hamel, 1998). Complementary skills provide the opportunity for integrating and transforming the unequal pools of technical know-how into product value (Doz, 1996; Sarkar et al. 2001).

One might expect that technological alignment of codevelopment partners would be a sufficient condition for value creation. However, since codevelopment alliances are venues for integrating core competencies and firms risk passing on valuable knowledge to the partner, the congruence of motivations and goals (i.e., strategic alignment) is another necessary condition to ensure the flow of information necessary for successful product codevelopment. Furthermore, it is possible that a codevelopment alliance may fail despite technological and strategic alignments if relational alignment is absent. A relational misalignment may occur in three circumstances: (1) Norms, values, or procedural routines may not be congruent—that is, partners do not speak the same language or do not share similar expectations and behaviors, thus impeding understanding and information flows; (2) potential partners are not willing to adapt as requirements change, and thus mutual and innovative ways to create synergistic value may never be found; and (3) the partners may be concerned only with short-term returns, in which case they are not be willing to make the necessary contributions for long-term outcomes. In all of these situations, the prospects of a codevelopment alliance may be undermined. Therefore, our research shows that maximizing the potential for creating synergistic value through codevelopment alliances hinges on three aspects: (1) selecting a partner with maximum potential for creating technological synergy—that is, technological alignment with the partner; (2) selecting a partner with maximum potential to collaborate—that is, strategic alignment with the partner; and (3) selecting the partner with a maximum potential to sustain the relationship—that is, relational alignment with the partner.

References


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