

Chapter III

Hypotheses

Factors such as cultural similarity, receptivity, trust, ownership structure, partners complementarity, prior tie, and nature of knowledge have become important concepts in the literatures of strategic alliances and organizational learning regarding the success of the alliances and the technology transferring between partners. However, little empirical research has been conducted on these variables' contributions to the understanding of learning of local partner firms in alliances. In this study, these variables are categorized as related to partner firm's attributes, partners' relationship attributes, and knowledge attributes. The conceptual model of the association between these constructs and learning is proposed in chapter one. Nine hypotheses of the relationships between these attributes and learning are proposed in this chapter.

Partner attributes

I hypothesize that factors involving partner attributes such as cultural similarity (e.g., Schein, 1985; Contractor and Lorange, 1988), receptivity (e.g., Hamel, 1990), and trust (e.g., Badaracco, 1991) positively related to local partner firm's learning. These three variables have received a considerable amount of recent attention in the literature of strategic alliance focusing the technological collaboration. It has been conceptualized in previous studies that these characteristics of partner firm will enhance knowledge acquisition and learning.

Cultural similarity

Cultural similarity refers to the degree to which one perceives another party as similar to one's own group in perceptual and behavioral patterns (Kim, 1991). Partners may hesitate to openly communicate and exchange information when they believe that the other party holds dissimilar frames of reference for interpreting,

understanding, and signaling (Geringer, 1988b). Highly dissimilar partners would need to expend greater efforts and resources toward learning (Parkhe, 1997). The internal integration of individuals within a shared culture facilitates learning (Schein, 1985).

H₁: The greater the degree of cultural similarity between partner firms, the higher the likelihood that learning will take place.

Receptivity

Receptivity is the capacity of organizations to learn from their partners (Hamel, 1990). Spinello (1998) proposes that strengths and capabilities of a firm's resource concern the limitation or opportunity to import knowledge from outside. Companies with strong internal awareness will know what to look for as they scan their external environments. Knowledge enclaves arise where there is no sharing within the firm. As a result, few employees can benefit from knowledge that has been cultivated within the corporate hierarchy.

H₂: The greater the level of receptivity, the greater the likelihood that learning will take place.

Trust

Trust is the incentive for partner firms to mutually forbear (Madhok, 1995), ensuring a sound and cooperative working relationship between the partner. The higher the trust, the more efficient the alliance will be in transforming an input of cooperation into a collaborative output (Buckley and Casson, 1988). Trust is essential for the development of enduring partnerships (Williamson, 1985; Morgan and Hunt, 1994) because it facilitates constructive dialogue and cooperative problem solving (Pruitt, 1981). Firms are limited in their learning by the willingness of external sources to fully cooperate (Pisano, 1988). Inkpen (1998) suggests that increasing trust between alliance partners may mitigate partner protectiveness. In terms of learning, an atmosphere of trust should contribute to a free exchange of information between committed exchange partners since the decision-makers do not feel that they have to

protect themselves from the others' opportunistic behavior (Blau, 1964; Jarillo, 1988). Without trust, information exchanged may be low in accuracy, comprehensiveness, and timeliness because the partners are unwilling to take the risks associated with sharing more valuable information (Zand, 1972).

H₃: The greater the degree of trust, the greater the likelihood that learning will take place.

Relationship Attributes

Relationship attributes such as ownership structure, complementarity, and prior ties between partners have been conceptualized as important factors creating synergy from collaboration. These factors have been argued that they positively influence learning of partner firms in alliances since they provide an opportunity to access and to complement partner's knowledge, as well as provide a basic understanding about partner's skills.

Ownership structure

Some speculations suggest that the ability to discover knowledge and then implement it may vary under different forms for alliances (Osborn and Baughn, 1993; Lyles, 1988). There has been an argument on which ownership form enables the flow of knowledge transfer. On the one hand, it is suggested that non-equity collaborations are less committed forms of involvement than joint ventures and offer greater flexibility, as entry and exit are lower (Harrigan, 1983). Thus, it is expected to provide a more effective discovery of new knowledge (Hagedoorn and Narula, 1996), to promote negotiation and day-to-day cooperation, and to promote reciprocal information exchange and the development of a common language than equity forms do (Osborn and Baughn, 1993). Sponsors have favored non-equity forms because of their flexibility and potential learning advantages, even though this administrative form offers fewer protections (Hagedoorn and Narula, 1996).

On the other hand, equity is considered as an important measure by which partners address their concerns about malfeasance in alliances (Gulati, 1995a). Lyles

and Salk (1997) empirically found that shared ownership influenced the degree of knowledge acquisition. The structure of the relationship determines the barriers and gateways to the inter-organizational knowledge flow (Tiemessen et al., 1997). A tacit knowledge transfer is best handled through an equity relationship, not only due to the superior alignment of incentives but also to the more intimate mechanisms it presents for the transfer of knowledge (Vernon and Wells, 1986, Killing, 1994). The equity joint ventures potentially offer the highest degree of inter-firm cooperation because the owners have a legal right to jointly manage the JV and they jointly assume the risk (Tiemessen et al., 1997). Kogut and Chang (1991) found that joint ventures were frequently used for the sourcing of U.S. technological capabilities. Equity investments enable a direct link which facilitates learning of the intrinsic, complex, and tacit processes (Shan and Song, 1997).

Equity sharing in joint ventures has been explained as a mechanism for balancing the incentives of the partners when both of them are expected to make certain resource contributions that the other finds difficult to measure and monitor (Gomes-Casseres, 1989; Hennart, 1988; Shan, 1990). Kogut (1988) suggests that equity joint ventures offer "mutual hostage" positions to guarantee performance on the part of both the foreign firm and the local firm. Tacit knowledge requires formal organizational forms for accurate transmission. The formal structure of an alliance creates a laboratory for learning. Equity arrangements promote greater knowledge transfer (Mowery, Oxley, and Silverman; 1996) by aligning the interests of all the partners (Pisano, Russo, and Teece, 1988).

H₄: The greater the degree of ownership in the alliance, the greater the likelihood that learning will take place.

Partners complementarity

Dymsza (1988) suggests that factors involved in the success and failures of joint ventures in developing countries include complementary and synergies of contributions by partners. The inputs provided by the partners might be similar or complementary, with the latter expected to develop synergy (Contractor and Lorange, 1988). In other words, when members contribute dissimilar resources, it may create a

synergy that leads to alliance success (Hamel, 1991). The diversity between partners will have implications for what they need to learn (Parkhe, 1991). Partner perceptions of unequal contribution in strategic alliances is also another reason for failure. Complementarity involves the uniqueness and symmetry dimensions of partners' resource contributions to the alliance (Johnson et al., 1997). A lack of strategic symmetry destabilizes the relationship.

H₅: The greater the degree of complementarity between partners, the greater the likelihood that learning will take place.

Prior Tie

Cooperative inter-organizational relationships among parties who have had prior economic relationships or social ties tend to develop far more quickly and efficiently than among parties who, initially, were strangers (Galaskiewicz and Shatin, 1981). A history of relations between firms can shape the context for new exchange by reducing uncertainty. Parkhe (1993) argued that a partner's cooperative history allows each partner the opportunity to assess the ability and willingness of each to follow through on its promises. Partners' early experiences with each other may have lasting consequences for the success of their joint efforts (Gray and Yan, 1997).

H₆: The stronger the degree of prior ties between partners, the greater the likelihood that learning will take place.

Knowledge attributes

Knowledge has become the most important or strategic factor of production (Spender, 1996). It is clear that knowledge is an essential element in learning (Joo, 1998). Transferred knowledge can reside in design, production, installation, sales and distribution, operation and maintenance, or management (Zander and Kogut, 1995). Information is always pooled when firms cooperate. The extent to which a firm can truly internalize new skills and techniques may be partially dependent on the attributes or characteristics of the technology (Steensma, 1996).

In this study, three knowledge attributes, i.e., ambiguity, trialability, and usage advantage are hypothesized to associate with local partner firm's learning. Ambiguity is hypothesized to negatively related to learning. Trialability and usage advantage are expected to positively related to learning.

Ambiguity

Knowledge transfer is easiest when the knowledge is easily transported, interpreted, and absorbed (Hamel, Doz, and Prahalad, 1989). Crossan and Inkpen (1995) acknowledge that successful joint-venture learning strategies call for firms to overcome the ambiguity associated with their partner's skills. Zander (1991) found that the tacit-articulated dimension of knowledge had an important impact on the smoothness of knowledge transfer. The transfer of tacit knowledge is more difficult to accomplish than the transfer of more articulated knowledge. Szulanski (1996) focused on the transfer of best practices within firms and the difficulties experienced in the transfer process. He found that the tacit-articulated dimension explained more variance than any other factors such as motivation.

H₇: The lower the degree of ambiguity of the knowledge, the greater the likelihood that learning will take place.

Trialability

Rogers and Shoemaker (1971) suggest that the trialability of innovation effects the rate of adoption of innovation. Trialability is the degree to which an innovation may be experimented with on a limited basis. New ideas, which can be tried on the installment plan, will generally be adopted more quickly than innovations which are not divisible. Larson (1992) suggests that the trial phase of the network's operation is characterized by incremental movement that edges organizations and individuals closer and closer. In the process, explicit and implicit rules begin to emerge. For an example, Larson (1992) presents a case of hi-tech assembly that "We went through a trial and error period. We learned from mistakes and incrementally became part of their operation." Likewise, Rogers (1983) argues that an innovation that is trialable

represents less uncertainty to the individual who is considering it for adoption, as it is possible to learn by doing.

H₈: The greater the degree of knowledge trialability, the higher the likelihood that learning will take place.

Usage advantage

Firms collaborate to get access to resources that they otherwise could not secure (Hamel, 1991). Commitment develops largely as a function of perceived benefits of the relationship (Cullen, Johnson, and Sakano, 1995). Organizations are oriented to target (Simon, 1955). Levitt and March (1988) have observed that the behavior of firms depends on the relationship between the outcomes they observe and the aspirations they have for those outcomes. Action of an organization stems from a logic of appropriateness or legitimacy. Organizational actions adapt to experience incrementally in response to feed back about outcomes. When confronted with learning opportunities, the firm may see little need to change behavior and thus become trapped by their distinctive competence (Levinthal and March, 1993). Rogers and Shoemaker (1971) suggest the concept of relative advantage of technology, which is viewed as the usage advantage of the knowledge in this study. Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption.

H₉: The greater the degree of knowledge usage advantage, the higher the likelihood that learning will take place.