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Interfirm Alliance Interactions and knowledge Learning: A Conceptual Research Model

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ABSTRACT:
Alliance raises many knowledge transfer and interfirm learning issues that have implications for how the alliance partners manage their cooperative learning activities in the alliance system. Many of these implications are grounded in the assumption that partners in the alliances have routines for transferring knowledge, learning, gaining management efficiencies. Thus organizations can support knowledge flow, learning, sharing and even developing with technology and management practices in alliances. This paper introduces a conceptual research model of knowledge transfer within learning IJVs. Based on the review of the literature, this paper identified each category relevant to the research model of knowledge transfer in alliances and proposed several research questions when considering the particular characteristics of knowledge transfer and learning process as an additional way of looking at cooperative relationships. The purpose was to illustrate the importance of interfirm knowledge transfer in IJVs and relevant knowledge transfer barriers and facilitating mechanisms and knowledge transfer stages for alliance partners faced with the new knowledge environments. It justifies the constructs and identifies the interrelationships among these concepts through proposing a framework of interfirm knowledge transfer and organizational learning in IJVs.

Keywords: *Knowledge transfer, Learning, Alliances, IJVs, Research model*

INTRODUCTION

Alliance/IJVs are frequently formed with the intent of facilitating organizational learning and gaining access to new knowledge from the partner firms (Ding, Akoorie, & Pavlovich, 2009b; Parkhe, 1993b). Scholars have treated aspects of knowledge transfer and interfirm learning in alliances in a diffuse manner, and defined the terms in question using a multitude of different theories or drawing on different empirical findings. Theoretical explanations go some way towards explaining the increased use of the alliance mode, which means that a company can be involved in cooperative arrangements in different market areas and with different partners at the same time, bringing different strengths to each partnership as they are needed, such as knowledge of the market in a particular region, or the capital needed for an important investment.

In some countries, alliances may be the only acceptable and possible form with local partner/s; the firm could reduce liabilities of

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foreignness and have keen insights about local environment, thus increasing the likelihood of success (Li & Shenkar, 1996). Pavlovich and Akoorie (2003) point out that different knowledge owned by different partners; consequently how the knowledge could be used by each other means that the alliance phenomenon is not entirely unexpected. Therefore, learning expectations and goals exist in alliances which were shaped for strategic, or functional considerations. This alliance knowledge transfer phenomenon has occurred particularly in knowledge intensive or high-tech industries.

This paper presented an overview of a research model concerning the area of study. Based on the review of the literature, this paper identified each category relevant to the research model of knowledge transfer in alliances and proposed several research questions when considering the particular characteristics of knowledge transfer and learning process as an additional way of looking at cooperative relationships. The purpose was to illustrate the importance of interfirm knowledge transfer in IJVs and relevant knowledge transfer barriers and facilitating mechanisms and knowledge transfer stages for alliance partners faced with the new knowledge environments.

Interfirm Knowledge Transfer and Alliance Learning: a Literature Review

Nonaka and Takeuchi (1995) empasise that knowledge transfer is fundamentally dynamic. Additional competence, abilities, and trust-based cooperative relationships (Ding et al., 2009b; Inkpen & Dinur, 1998) are, therefore, required to overcome the challenges (Lyles, 1988; Miner, Bassoff, & Moorman, 2001).

In business alliances, the most significant knowledgea processes aim to facilitate knowledge flows between partners from different background and to control unwanted knowledge leakage (Buchel et al., 1998; Ding et al., 2009a, 2009b). To ensure this knowledge exchange process occurs, partners must work closely together and learn through watching, or through acquiring new skills under specific guidance where people can allow others to gain insight into their own capabilities. The ability to absorb new knowledge may be reduced in business alliances due to the differing cultural background or differences in viewpoints on the alliance's cooperation objectives. It is only when previously accepted values are reconsidered that there will be a space for creating something unique (Nonaka, Toyama, & Konno, 2000). The readiness to pass on knowledge which was previously present in implicit form, and to organize and create new knowledge through creative cooperation within business alliances, can thus be encouraged by careful moulding of tools, such as social interactions, and versatile communication systems between individuals and organizations (Ding et al., 2009b).

Knowledge transfer (KT) research has attracted many organizational management scholars dating back to the early 1990s (e.g., Bou-Liusar & Segarra-Cipres, 2006; Buckley, Clegg, & Tan, 2003; Crossan & Inkpen, 1995; Ding et al., 2009b; Eunni et al., 2006; Tsang, 2001, 2007). Looking at the literature on knowledge transfer, the development of the research trends has contributed to our understanding from diverse perspectives linked to the knowledge transfer (Ding et al., 2009b). In the international business context, several streams of literature on knowledge transfer have revealed a series of research considerations, such as knowledge transfer contents, tools, determinants and outcomes, and transfer of technology as well as the transfer of managerial know-how (Easterby-Smith & Lyles, 2003; Easterby-Smith, Lyles, & Tsang, 2008). Some research focuses mainly on *intra*firm knowledge transfers, and the concept that knowledge may be transferred, integrated, and disseminated in an evolutionary way (Schlegelmilch & Chini, 2003). Other researchers focus on the extent of the internalised and institutionalised knowledge acquired by the recipient (Cummings & Teng, 2003; Kostova, 1999).

Most often, knowledge transfer research is considered in alliance settings, which has actually gained heightened recognition in the literature (i.e., Ding et al., 2009b; Dong & Glaister, 2006; Inkpen & Tsang, 2005). In the strategic alliance literature, knowledge transfer research generally sees a transfer as the movement of existing knowledge between relevant collaborative organizations, when one partner either imitate or learn from the other organization in the field of relevant business or production behaviors (Ding et al., 2009b; Tsai, 2001). Some researchers thus view knowledge transfer as a learning process. They also identify various factors which could impact on the acquisition of knowledge from external partners (e.g., Inkpen, 2002; Simonin, 1999a, 1999b, 2004). Table 1 (see Attached) presents major studies on knowledge transfer in alliances.

Table 1: Major Studies on knowledge transfer and learning in alliances

Author (s)	Country of Investigation	Research Method	Key Aspects Investigated
Markoczy, 1993	Hungary	Case Study	The impact of changes in contingent factors, such as decrease in dependence on authorities and the increase in dependence on the foreign partners, on organizational routines and procedures.
Cyr & Schneider, 1996	Poland, Hungary & Czech Republic	Interview Questionnaire	How human resource management contribute to new values learning for local partners.
Geppert, 1996	East Germany	Case Study	How learning/KT in organizations are related to particular external environment elements.
Lyles & Salk, 1996	Hungary	Survey Questionnaire	The impact of the organizational feature and institutional factors on knowledge acquisition from parents to subsidiary in JVs.
Nilsson, 1996	East Germany	Longitudinal Case Study	How changes held by western firms are related to learning in Eastern Europe.
Villinger, 1996	Czech Republic, Hungary, Poland & Slovakia	Survey Questionnaire	Main skills needed for overcoming the learning barriers.
Lyles & Steensma, 1997	Hungary	Longitudinal Questionnaire Survey	The impact of managerial activities and technological knowledge supported by parents on learning, and IJV survival.
Mowery, Oxley, & Silverman, 1996	USA	Meta-Analysis	Equity arrangements and absorptive capability promote greater knowledge transfer in alliances.
Shenkar & Li, 1999	China	Questionnaire	Possession of the complementary knowledge is a prerequisite, and JV is the vehicle for transferring the tacit knowledge.
Si & Bruton, 1999	China	Survey	Knowledge acquisition ultimately helped increase the IJV satisfaction.
Simonin, 2004	USA	Questionnaire	Proposed and tested a basic model of organizational learning in alliances.
Dhanaraj, Lyles, Steensma, & Tihanyi, 2004	Hungary	Stratified Sampling	Examined the role of relational capital and its impact on IJV success.
Wang & Nicholas, 2005	China	Survey	Identified the collective learning in contractual JVs.
Inkpen& Pien, 2006	China	Case Study	Examined alliance knowledge transfer, found tacit knowledge was difficult to transfer.
Becerra, Lunnan, & Huemer, 2008	Norway	Questionnaire Survey & Interview	Role of trust and tacit & explicit knowledge transfer on the learning alliances.
Harryson, Dudkowski, & Stern, 2008	Sweden	Case Study	Identified transformation network theory and innovation in alliances.
Mason & Leek, 2008	Europe & India Based	Case Study	Explored the business models as an example of interfirm knowledge transfer.
Van Wijk, Jansen, & Lyles, 2008		Meta-Analytic Literature Review	Examined the antecedents and consequences of inter and intraorganizational knowledge transfer.
Perez-Nordtvedt, Kedia, Datta, & Rasheed, 2008	USA	Survey	Examined the relationship between source and recipient, and indicated that recipient learning intent and source attractiveness positively impact on KT effectiveness & efficiency.
Sammarra & Biggiero, 2008	Rome, Italy	Telephone & Face to Face Interview	Investigated the exchanges of technological, market and managerial knowledge based on social network analysis. Revealed the complex process of knowledge-specific exchange. Emphasising the nature of innovation in collaborative relationships.

However, research on interfirm knowledge transfer in alliances is still in its early stage of development, which creates a significant gap in the literature of interfirm knowledge transfer research (Ding et al., 2009b; Duanmu & Fai, 2007). With respect to overall interfirm knowledge transfer based on the alliance phenomenon, Duanmu and Fai (2007) and Easterby-Smith et al. (2008) acknowledge that although alliances' knowledge transfer has been the subject of much "theorising", it still remains relatively underresearched. A key challenge in studying knowledge transfer is how to adequately specify the actors involved, the contents to be transferred, as well as the channels in "facilitating" the transfer (Ding et al., 2009b; Van Wijk et al., 2008). Particularly, extant knowledge transfer research tends to focus on either the contributor or the receiver instead of on both sides. This unidimensional rather than a multidimensional perspective has prevented us from reaching a holistic understanding of the KT process, and few studies tend to explicitly address the difficulties or challenges experienced between foreign MNEs and host nation local partners (Duanmu & Fai, 2007). Finally, most studies (except Inkpen & Pien, 2006) mostly employ quantitative methods (such as surveys), rather than in-depth case analysis. This confirms that the nature of KT in alliances creates fundamental challenges for both practitioners and researchers alike (Ding et al., 2009b; Szulanski, 2000).

Three Schools of Theoretical Explanations

Considering the process of knowledge transfer evolution as a result of cooperative arrangements, this paper asks questions which are relevant to the research purpose. The questions centre on the conditions under which IJV knowledge transfer could be affected by the management of the cooperative partners and the knowledge itself.

There exist certain different theoretical perspectives with regard to the various aspects of interfirm knowledge transfer phenomena (including *Transaction Cost Economics*, *Resource-based Theory* and *Knowledge-based Theory*). Specific contributions of these three approaches include the identification of antecedent conditions that provide a strategic rationale for entering alliances, the anticipation of specific returns, and the selection of a governance structure (Gulati, 1998).

Transaction cost theory is traditionally viewed as the mainstream theory when examining alliance knowledge transfer research (Das & Teng, 2000), which provides some different explanations comparing with that of the RBT (Albers, 2005). TCE identifies the conceptual significance of knowledge transfer in alliances. TCE suggests that in order to avoid environmental uncertainties, firms are willing to engage in alliance governance, as the costs incurred are perceived to be lower than "market means" and "full integration of the given activity within the existing corporate hierarchy" (Ding et al., 2009a, p. 48). As this "mutual hostage position" functions, it could be possible to result in the "sharing of technologies, and then guaranteeing performance through agreement on the division of profits or costs" (Ding et al., 2009a, p. 48).

The resource-based theory (RBT) (Barney & Clark, 2007) defines and shapes the precursors, processes and outcomes related to interfirm knowledge transfer in their social networks, which is a give-and-take process that includes combining and pooling knowledge resources. Learning can take place only in an environment where change is encouraged – as the organizational learning school views alliance knowledge transfer as collaborative learning processes intended to internalise and codify skills needed to improve firm performance (Faulkner & De Rond, 2000).

With regard to the emergence of knowledge transfer in alliances, the knowledge-based theory (KBT) also provides certain convincing arguments (Ding et al., 2009a). According to the KBT, strategic alliances are used to access other firms' resources and for knowledge enhancement in certain critical functional areas, as the required knowledge cannot be developed independently (Ding et al., 2009a, 2009b; Madhok, 1996). Building on the knowledge-based approach, while alliances sometimes bring together partners making similar contributions, e.g., sharing the risks of assets' investment, it seems that they more frequently contribute to the integration of strategic and complementary inputs and knowledge resources (Ding et al., 2009a, 2009b; Mowery, Oxley, & Silverman, 1996).

Looking at the above theoretical explanations, the use of the transaction costs approach and other perspectives to study interfirm knowledge transfer has been recognised (Ding et al., 2009a). While the RBT focuses on the firm as a predefined whole organization by examining the resource integration implications for its strategy formulation (Ding et al., 2009a), TCE basically focuses on the transaction exchanges based on contract conditions (Williamson, 1975, 1985, 1996). TCE particularly emphasizes the importance of cost reduction for each business dealing rather than value creation when firms seek competitive advantages vis-à-vis its competitors (Albers, 2005; Ding et al., 2009a; Faulkner & De Rond, 2000).

According to Ding et al. (2009a), there exist certain common issues for RBT and KBT. First, both approaches emphasise the unique characteristics and significance of knowledge, competence and capabilities, such as patents, processes and brands, when explaining why firms are different in growth (Faulkner & De Rond, 2000; Gomes-Casseres, 1996; Li & Shenkar, 1996). Second, they provide persuasive arguments when explaining how to develop competitive advantage and maximise long-run profits through using firm resources, including knowledge (Tsang, 1998). Third, both approaches suggest as few organizations are self-sufficient in critical resources/knowledge, the lack of self-sufficiency in the firm introduces both uncertainty into the decision-making process (Barney & Clark, 2007; Koza & Lewin, 1998; March, 1991), and knowledge learning opportunities (Hyder & Abraha, 2003). By exchanging compelementary resources and sharing knowledge "that otherwise are not available to each individual partner", two or more firms "can form an alliance to achieve a symbiotic cooperative advantage and economies of scale" (Ding et al., 2009a, p. 51).

In sum, the RBT theory tends to ask and answer "how" questions related to interfirm knowledge transfer, whereas transaction cost economics fails to capture the mechanics and dynamism of interfirm knowledge transfer activities. A knowledge-based view (KBV) highlights the idea that the firm's future growth is dependent on the productive integration of knowledge resources and the derivative capabilities (Ding et al., 2009b; Steensma & Lyles, 2000). The KBV is thus an alternative to the RBV for explaining firm knowledge resources' integration. Given particular affinities with either economics or organization theory, these three schools of thought exhibit distinct chatracteristics. However, "none of these explanations should be seen as being superior to any other, and it cannot be assumed that interorganizational cooperation is always prompted by a single aim" (Ding et al., 2009a, p. 52).

Following Ireland, Hitt, and Vaidyanath's (2002) classification, this paper uses the term "knowledge" referring to those skills, capabilities, and processes which could be critical to enhancing organizational competitiveness.

Challenges of Formulating a Suitable Theoretical Framework

An appropriate theoretical framework is needed to guide this research. Chen (1995) and Kang (2002) argue that first, a suitable theoretical framework can decide the basic units of analysis; second, a suitable theoretical framework is able to identify and address some kind of special or nonrandom relationship from the basic units of analysis which is a specific institutional relationship; third, a suitable theoretical framework is able to observe the repeated process of interaction between the basic units of analysis; fourth, a suitable theoretical framework can be a guide to delineate the boundaries of the basic units of analysis from other units outside them; fifth, a suitable theoretical framework is able to identify independent preconditions and their influence on the basic units of analysis both inside and outside boundaries; and finally, an appropriate theoretical framework has an undeniable function – it is able to distinguish the causal linkages between the determinants and outcomes.

However, a great challenge lies in formulating a suitable theoretical framework to guide the whole research process. Interfirm knowledge transfer in IJVs essentially presents an institutional arrangement, which is very different from both traditional forms of hierarchy and market in its organizational form (Powell, 1990). Knowledge transfer in IJVs also involves many issues of operational strategies in the field of international business. Further, the decision to transfer knowledge and the operational decisions to be made relating to knowledge transfer in IJVs are not made in isolation from the two or more partners since IJV learning behavior can be understood only in the social context. Thus the formulated theoretical framework must be capable of dealing with all three areas: organizational form, business strategy, and social behavior.

Proposing a Conceptual Research Model

Drawing on the relevant theoretical ideas about cooperative arrangements and knowledge transfer (refer to the literature review above), a research model with which to frame this study is postulated (see figure 1 below). The conceptualisation is shown schematically as a model of the interfirm knowledge transfer in IJVs. The proposed theoretical framework of the research includes several major groups of elements. The first group involves the partner firms in the IJV's internal cooperative system. The second group contains knowledge transfer stages. The final group constitutes the central part of the model: it includes knowledge contributor dimensions, recipient firm dimensions and relevant influencing factors (knowledge characteristics and interfirm interactions) related to the knowledge transfer process. This conceptualisation of the interpartner knowledge transfer model, in common with past conceptualisations, shows a holistic view of the IJV system involving the knowledge transfer dynamics.

Category A: Interfirm Cooperative System

Strategic alliances including IJVs are most frequently (at least implicitly) founded on the resource-based theory (Faulkner, 1995). As the RBT views companies as a unique system to collect and deploy resources (such as knowledge, skills, competences, and capabilities), these resources determine the effectiveness and efficiency of a company's activities (Barney & Clark, 2007; Collis & Montgomery, 1995; Ding et al., 2009a). A resource-based view of joint ventures suggests that all the partners involved in forming the joint venture could bring a certain set of knowledge resources to the joint ventures. The formation of a joint venture could increasingly create value through combining the knowledge resources, thus reaching an optimal return (Das & Teng, 2000; Ding et al., 2009a).

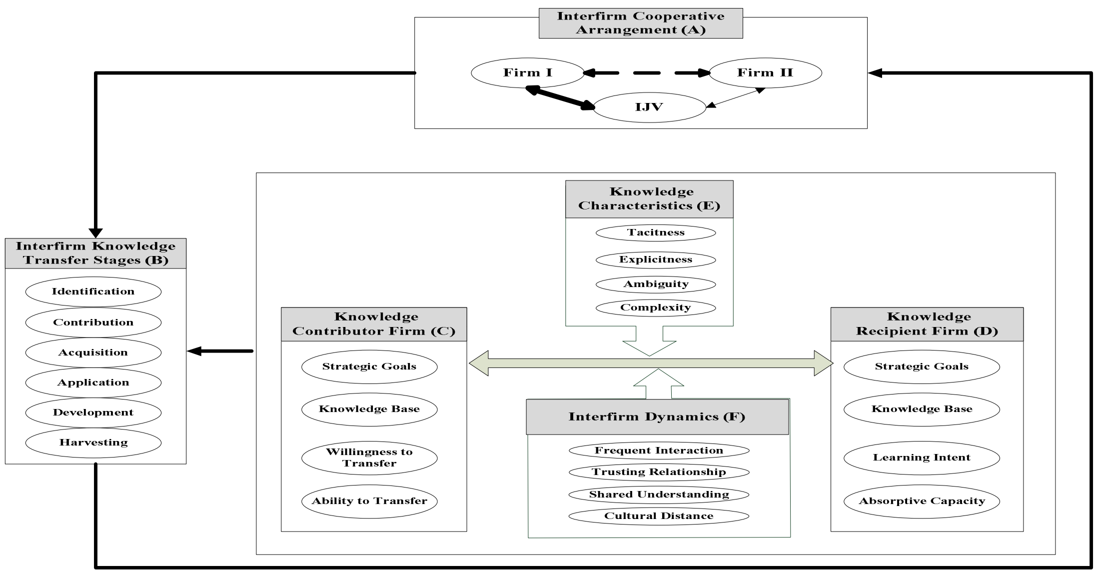

Figure 1: A conceptual model of interfirm knowledge transfer and alliance learning interactions

In the research model, Category A constitutes a cooperative system comprising two partner firms (Firm I and Firm II) from different backgrounds. An IJV cooperative system is considered as the firms' business relationships with other organizations and/or individuals who have an interest or can play some role when developing the business and exchanging knowledge resources (Cook & Emerson, 1974; Granovetter, 1982; Johanson & Mattsson, 1988). An IJV cooperative system is based on three major factors: (1) partner firms who get involved in an IJV partnership; (2) interactions and exchanges, and (3) knowledge resources (Albers, 2005; Ding et al., 2009b; Johanson & Mattsson, 1988).

The knowledge exchanges and transactions that take place between partner firms refer to the knowledge transfer and learning activities. An interfirm cooperative arrangement has been described by Håkansson (1989), Johanson and Mattsson (1988) as a useful asset that can be created by the exchange relationship between the actors. Due to the establishment of the IJV network, partners will encounter and many times gain entrance to each other's knowledge resources in the system.

Linking Category A and B: Knowledge Transfer Stages

How partner firms develop and utilise the knowledge in the network is important in the IJV system because IJVs are, to a large extent, expected to dictate the capacity of the IJV. Researchers recognise different yet closely interconnected knowledge flows in alliances calls for distinctive knowledge management procedures (such as knowledge creation, dissemination, and use) (Barney & Clark, 2007; Davenport & Prusak, 1998; Ding et al., 2009b).

Category B involves the interfirm knowledge transfer stages (including identification, contribution, acquisition, application, development, and harvesting of knowledge) that cooperative partners employ to get to know and to mobilise external knowledge and skills as a way of strengthening the alliance's competitive advantage. Here, the partners seek to develop the alliance's existing knowledge by including new knowledge significant for raising the alliance's competence.

These knowledge transfer stages do not always confer direct benefit on the IJV but may be helpful in creating reliance and confidence in the partnership between the cooperative partners. Before an IJV is formed, partner companies may decide how much knowledge (initial resources) is needed by the new joint venture. At the initial stage of IJV formation, partner firms contribute both tangible and intangible knowledge (such as technical knowledge, managerial knowledge, and market knowledge) to the IJV. At the following stage, additional knowledge will "flow" into the cumulative knowledge "stock" of the IJV.

While the initial knowledge resource commitment is an irreversible (fixed) decision, once the IJV is formed the ongoing knowledge transfer stages can be adjusted according to market requirements and other factors. The sustainability of the alliance's competitive advantage will depend on both the initial knowledge contribution and the cumulative new knowledge developed through learning generated beyond the initial operational stage. Thus, the following resource/knowledge adaptation and development beyond the formation stage can be a topic of concern.

Linking Category B and Group Category of (C, D, E and F)

Although the benefits of knowledge transfer as the primary internal function for providing a basis of knowledge/competence development have long been realised, the activities of interfirm knowledge transfer are a complex process, and vary significantly across different alliances (Ding et al., 2009b; Easterby-Smith et al., 2008; Tsang, 2007). Some scholars (e.g., Gupta & Govindarajan, 2000; Szulanski, 1996) argue that as there are several fundamental impediments to interpartner learning and knowledge transfer, KT does not automatically occur.

Category C: Knowledge Contributor Firm – Category C concerns the knowledge contributor firm's characteristics in terms of its strategic goals. Alliance formation is often regarded as one of several means or tools to pursue the strategic goals/motives of the business firm. The goals/motives include economic and/or strategic considerations. Certain goals and motives must be presented to justify creating an alliance/IJV, which suggests firms do not merely cooperate, but cooperate for a reason – an appropriate assumption is that organizations decide to enter cooperative relations with one another (Hyder & Abraha, 2003). As Albers (2005) comments, "Certainly, cooperating firms aim at creating positive synergies" (p. 13). Doz and Hamel (1998) also suggest, "Executives do not awake one morning with an unexplained urge to collaborate. It is not in their nature." (p. 225)

Naturally, the knowledge contributor firm may be reluctant to share knowledge and want to protect its knowledge from uncompensated leakage to the recipient. Thus, knowledge transfer willingness is also considered in this category. If international joint venture partners are rivals or potential rivals, it is reasonable to predict that the contributor will strive to prevent knowledge leakage to the recipient because of the risks of knowledge spillover.

The existing knowledge base and its ability to transfer knowledge are also considered in this category. A certain level of knowledge base affects knowledge transfer ability which stimulates or impedes interpartner learning, although a reciprocal need or willingness to transfer serves as a solid basis for knowledge transfer. Meanwhile, high complementarity in the knowledge base increases both incentives for knowledge transfer and accessibility to partner's knowledge.

Category D Refers to Knowledge Recipient Firm

Tsang (2007) argues the transfer of organizational knowledge could depend not only on the contributor's dimensions, but also be related to the recipient-related characteristics. Ideally, knowledge transfer will be encouraged when the recipient possesses definite strategic goals with a certain level of knowledge base. Those parties who have no learning intent will often be hesitant to acquire knowledge. If the recipient is not able to absorb the contributor's knowledge, interfirm knowledge transfer between partners is likely to have problems. Similarly, a reciprocal need for each other's proprietary knowledge boosts knowledge exchange between partners and ensures resource accessibility. Thus, in a two-partner joint venture, accessibility to other partner's knowledge resources also depends on recipient's strategic goals, the extent of the its knowledge base, learning intent and absorptive capacity, as indicated in Category D.

Category E Identifies "Knowledge Characteristics" Related Elements

The first characteristic originates in the socially embedded nature of knowledge (tacit or explicit). In contrast to the codified, explicit knowledge, which is generally transparent, readily accessible, most knowledge transferred between joint venture partners is tacit, context-specific, and socially or organizationally embedded (Ding et al., 2009b; Nelson & Winter, 1982; Nonaka, 1994; Yan & Luo, 2001). Studies on organizational learning also recognise the embedded knowledge may result in "complexity" and "ambiguity" (Kogut & Zander, 1992; Simonin, 1999a, 1999b), and such factors are likely to obstruct interpartner learning and knowledge exchange (Granovetter, 1985). Thus, these widely recognised barriers, including "tacitness", "complexity" and "ambiguity" are thus involved in the Category E of the model.

Category F Emphasises InterFirm Dynamics

Recognising knowledge resources and learning opportunities as the major reasons for IJV formation, firm specific knowledge development is dependent upon partners' interactions to access, assimilate and accumulate knowledge (Barney & Clark, 2007).

As interfirm knowledge transfer includes both the knowledge contributor and the recipient firm, the interfirm dynamics between the contributor and recipient constitute the central issue in the research model and are also regarded as the focus in this thesis. Meanwhile, it is also recognised that while transferring hardware such as blueprints, specification sheets is easy enough, real commitment is required to make sure the tacit or ambiguous know-how transfer across units of an organization (Killing, 1983). It is thus acknowledged that frequent interaction involved in Category E may enable partners to conform to new procedures and processes, and to contribute equally business practices and resources (Miesing & Slough, 2003). Another two dimensions are whether there are trusting relationships and shared understanding between cooperative partners.

Related to this stream of logic, active management involvement, communication, visits, meetings, training and social interactions appear to encourage greater knowledge sharing (Ding et al., 2009b; Inkpen, 1997; Nonaka & Takeuchi, 1995). As collaboration matures and the venture organizations build trust and learn more about each other, such shared knowledge could also be a platform for developing understanding about each other's skills, and so on. Specifically, as interpartner trust increases and mutual understanding develops, access to each other's knowledge base will become less problematic (Ding et al., 2009b; Pavlovich & Corner, 2006). This category thus refers to both partners providing more active support and getting involved in the IJV primarily to combine their knowledge in the IJV and thus increase their competitive strength.

Ownership Structure and Cultural Distance Considerations

In the collaborative IJV system, knowledge management involves the transfer of knowledge between the venture partners working together to increase their total knowledge (Bresman, Birkinshaw, & Nobel, 1999). If a company relies on a partner's constant supply of necessary resources and knowledge, it will tend to form an equity-based IJV structure, as Huber (1991) argues one of the critical issues concerning knowledge transfer cannot be separated from the consideration of the type of ownership structure.

Such knowledge management activities in equity-based ownership structure are complex enough within the same national environment but the transfer of knowledge management to foreign locations poses further difficulties (Bresman et al., 1999), especially when knowledge is acquired and institutionalised in cross-cultural settings, a difficulty which deserves serious attention from international managers (Huber, 1991; Yan & Luo, 2001). Nevertheless, the cultural compatibility of partners determines if they can effectively communicate and coordinate. Higher cultural compatibility heightens the odds of knowledge transfer across nations (Pollard, 2001).

Finally, knowledge transfer in the cross-cultural alliance/IJV setting cannot be effectively conducted through market transactions (Ding et al., 2009b; Hamel, 1991; Mowery et al., 1996). Through interpartner mutual interactions, trust relationship and consensus building (i.e., factors identified in Category F), IJV can help firms create a unique culture distinctive from that of the partner companies in order to promote shared understanding and effective knowledge transfer.

Linking Category of (C, D, E and F) and Category A

Interfirm knowledge transfer activities in IJVs may play an important role in the overall cooperative activities. It is anticipated that knowledge transfer results will vary in the IJV depending on the interpartner cooperative management. Beamish (1987) pointed out that combined resource strength describes the joint venture's overall resource endowments and capabilities and it should contribute to better or worse joint venture performance. When combined resource strength changes during a knowledge management process, the joint venture's performance would be expected to change accordingly (Eunni et al., 2006). It is the combined knowledge resources that give the joint venture a competitive advantage over its competitors (Das & Teng, 2000).

Hence, the model finally suggests that changes in IJV cooperative management will lead to changes in the knowledge transfer process and in turn change the learning performance in IJVs. As partner firms combine their knowledge in the IJV, more learning and adaptation take place, which may also have a synergetic effect on the overall IJV development.

DISCUSSION

As the current dynamic environment requires firms to concentrate on their core activities while forming collaborative relationships with other firms to access and build internal resources (knowledge) (Pavlovich & Akoorie, 2003), this knowledge transfer process in alliances seems to be of strategic importance particularly in the context of international business activities and has long been a part of the research agenda (Ding et al., 2009b).

Given that research on knowledge transfer has received increasing attention, we still know relatively little about how to transfer knowledge within and across organizational boundaries (Ding et al., 2009b; Inkpen & Ramaswamy, 2006), and unlike the profusion of conceptual work, there has been only limited empirical/academic work on the knowledge transfer in strategic alliances (Ding et al., 2009b; Easterby-Smith et al., 2008).

Knowledge transfer in alliances/IJVs needs to be approached realistically if they are to provide companies with a meaningful way of extending their scope for action by cooperating with others (Buchel et al., 1998; Ding et al., 2009b). Experience has demonstrated that companies are often eager to embark on alliances. However, this versatility constitutes both the attraction of alliances and one of the main difficulties which they present. This is especially true when dealing with knowledge transfer practices, which are another demanding and unfamiliar task. There are a rapidly growing number of researchers focusing on IJV knowledge transfer issues; however, a unified theoretical framework has not emerged yet.

Focusing on the IJVs – a specific alliance form – provide good opportunities to examine international partnership and interfirm knowledge transfer nature (Ding et al., 2009b; Inkpen & Dinur, 1998). It sought to examine how companies with different backgrounds working together to exploit cooperative opportunities in order to share, integrate and develop knowledge for the purpose of acquiring competitive advantages in specific alliances/IJVs setting.

CONCLUSION

This paper articulates and presents a research model (figure 1) for the current research in categories that bring together the major features of IJVs and knowledge transfer. In Figure 1, alliances/IJVs are regarded as a specific kind of interorganizational cooperative system. The partnership of the firms is treated as an institutional relationship and also constitutes the core tier of the IJVs. This figure indicates the interpartner knowledge transfer based on cooperative partnerships between the firms as well as the operations of the key constructs. Through the operations of the IJVs, knowledge transfer can be conducted by the partners both inside and outside IJVs with their subsequent behaviors, and may affect their alliance cooperation performance. This paper thus presents a conceptual framework in which certain key elements influence and are influenced by each other, following relevant literature review and theoretical analysis.

Future Research

Building on the pertinent contemporary theoretical thinking and conceptualisation considerations, the thrust of knowledge transfer and learning as a dynamic process is the main research focus in this paper. Possible influential factors in knowledge transfer activities, specifically, knowledge characteristics and trust dimensions, and alliance management behavior in the knowledge transfer process are also considered. This paper looks more closely at the bases of learning processes in the IJV and tries to answer the question "What does learning in the IJV system mean?". This conceptual model thus provides part of the basis on which the research methodology and research design selected in the future research. Particularly, future research can consider the following points as a basis for discussing learning processes in the IJV system: (1) *Agents:* "Who learns in the IJV?"; (2) *Content:* "What is learned?"; (3) *Process:* "How is it learned?".

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