

Inter-Partner Interactions and Knowledge Transfer Mechanisms in the Chinese Automotive Industry: A Qualitative Research Based on Dual Managerial Perceptions

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ABSTRACT:

The purpose of this study is to extend the existing knowledge of inter-firm knowledge transfer research and provide a deeper understanding of knowledge transfer practice in an alliance context, as well as the reasons for such a practice. This study reports on relevant results derived from semi-structured interviews with 16 top managers in a Chinese international joint venture (IJV) formed by two automobile companies, one in China and the other in the USA, conducting interactive cooperation and inter-firm knowledge transfer practices. It was found that the partners in this alliance brought together their complementary capabilities in automotive technology and management expertise to build an independent organization with its own board of directors and staff members to facilitate knowledge sharing and alliance learning. This consisted of these three elements: (1) Contracts and agreements that clearly articulated each member's objectives and responsibilities involved in alliance knowledge transfer; (2) Inter-organizational knowledge transfer involving a set of communication and interacting knowledge procedures, such as identification, contribution and development; (3) Partnership evolution at the interfaces between the participating firms. These findings raise an important question of how to ensure satisfaction for inter-partner interactions and knowledge exchanges in the Chinese automotive industry context. Based on literature review tangible facts and interview interpretations, this paper provides a deeper understanding of the organizational activities involving cooperation and the dynamic knowledge transfer routines, which is a significant extension of past static cross-sectional conceptualizations. This paper proposes an inter-firm knowledge transfer and cooperative learning process emphasizing that the issue of sharing knowledge in IJVs and bringing IJVs into profitability requires partner companies to engage in inter-partner learning to benefit from the transfer of knowledge. A key implication for the firms, therefore, is the critical ability to deal effectively and efficiently with the transfer of knowledge resources and gaining a competitive advantage consequently.

Keywords: *Knowledge transfer, Inter-organizational learning, International joint venture, Chinese automotive industry*

INTRODUCTION

Global competitiveness is largely a function of the firm's pace, efficiency and extent of knowledge accumulation (Yan and Luo, 2001; Easterby-Smith et al., 2008). Because of market competition and pressures, firms increasingly

specialize and co-ordinate external knowledge resources (e.g., Milgrom and Roberts, 1992; Spender and Grant, 1996; Inkpen, 1998; Teece, 1998). According to the resource/knowledge-based theory of the firm (RBT/KBT), knowledge

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has the greatest potential for providing sustainable competitive advantage (SCA) for the firm (Kogut and Zander, 1992; Kumar et al., 1993; Grant, 1996; Davenport and Prusak, 1998; Doz et al., 2001; Schulz, 2001; Inkpen and Ramaswamy, 2006; Barney and Clark, 2007). Further, differences in firm performance are related to variances in firm's resources (Peng, 2001). At the core of the theoretical argument is that valuable, rare, and imperfectly imitable resources are the key for maintaining SCA, which bring about positive abnormal returns (Barney and Clark, 2007). However, few firms have all of the resources necessary to compete effectively and efficiently in the current dynamic, uncertain and complex markets (Schulz, 2001). They need to give more thought to various ways of accessing the necessary resources in order to survive – a trend that has become particularly strong in the era of globalization in the past decades (Iles and Yolles, 2002).

Knowledge transfer and management learning is one important motive in inter-firm cooperative arrangements, and the term "learning alliances" has been coined to designate associations in which the primary objective of the partner firm is to learn knowledge (Khanna et al., 1998). Yoshino and Rangan (1995) argue that the implicit strategic objective for every firm that becomes involved in an alliance is "learning". In other words, cooperative partners can become the sources of knowledge with potential for utilization elsewhere in the alliance; partner firms are dependent on the alliance for knowledge and other types of resources. In particular, alliances established in transitional economies provide foreign partners quick and easy access to new markets by leveraging off a local partner's knowledge (Sharp and Barz, 1997), which may help reduce the risks. Local partners not only obtain capital but also critical know-how about manufacturing, technological expertise, marketing, and managing in a competitive marketplace (Griffith et al., 2001). This is a shift from single company's perspective to two or more companies' standpoint of sharing costs, risks and benefits and accessing to new resources (Child and Faulkner, 1998). In a learning alliance, the transfer and creation of new knowledge should be seen as central to the work of all parts of the business, not the

exclusive province of a research and development department.

The ability to take knowledge from other organizations or other parts of the organization and learn from what they are doing is an important task. While there is a considerable amount of research on knowledge transfer process through cooperative arrangements, further understanding regarding inter-organizational knowledge transfer is still far from complete (Steensma and Lyles, 2000; Eunni et al., 2006; Inkpen and Pien, 2006; Easterby-Smith et al., 2008). Thus although there is nothing new about knowledge transfer *per se*, recognizing it as a source of corporate success continues to challenge many organizations.

One important consideration is that knowledge transfer is unique and complex and management needs to recognize that access to a partner's knowledge base warrants serious consideration, especially when much of the knowledge is often organizationally embedded and tacit in nature. As knowledge transfer does not necessarily take place efficiently or effectively, additional competence, abilities, and trust-based cooperative relationship are required. However, few companies realize the potential rewards of knowledge because they may not understand what it is and what they need to learn from it.

The objective of this paper is to add to the understanding of how alliance companies can manage knowledge processes by introducing different organizational mechanisms. This paper proceeds with a discussion of knowledge types and characteristics, followed by a delineation of the inter-firm cooperation and a special equity-based alliance form – an international joint venture (IJV). The foundation of effective knowledge development and transfer will then be portrayed. A relevant research design on knowledge sharing is then developed. The research results based on qualitative interview techniques are also presented. This paper is intended to address issues which interest both researchers and practitioners in this interesting field; finally some implications for management and future research are offered.

Conceptual Background and Literature Review

The following sections will review the relevant literature in an attempt to identify key features and concepts of knowledge transfer in the IJVs for the purpose of this research.

Knowledge Types and Characteristics

The definition of knowledge deserves serious attention in knowledge transfer research. Research suggests transferred knowledge can be the integration of ideas, experience, intuition, skills, capabilities and lessons learned (e.g. Hamel, 1991; Drucker, 1993; Nonaka, 1994; Grant, 1996; Spender, 1996; Doz, 1996; Garvin, 1998; Inkpen and Dinur, 1998; Simonin, 1999a). Researchers generally agree that the contents of a company's stock of knowledge must include technical knowledge as well as knowledge about how to function in global markets, work with local laws, how to protect intellectual property, and how to operate successfully in various forms. Meanwhile, as knowledge in part can be treated as an intangible asset, this package of intangible knowledge is also considered critical for success in creating value for the company's shareholders, customers and employees (Barney and Clark, 2007).

In most business situations, different areas of knowledge can be categorized as being either tacit or explicit (Polanyi, 1958, 1966). Explicit knowledge exists in the form of data, specifications, manuals, documents, patents, and products (Nonaka and Takeuchi, 1995). Tacit knowledge is abstract in nature, deeply embedded in action, procedures, routines, commitment, ideals, values, and emotions. Explicit knowledge is a part of human capital and can be easily acquired on the open market and bought according to need. Explicit knowledge describes those things that can be written down and, hence, easily be shared with others (Davidson and Voss, 2002). The second type of knowledge – implicit or tacit knowledge – is a different matter as it cannot necessarily be clearly articulated in words or symbols (Lyles and Gudergan, 2006). Thus it can be passed on only by the active involvement of each player (Buchel et al., 1998).

Inter-firm Cooperation as a Corporate Knowledge Acquisition Strategy

An important stream of research within international business strategy relates to the complexity of organizing and managing worldwide operations. A common theme in this research has been the continuous changes in the competitive environment, which have reduced the effectiveness of the traditional organizational structure, highlighting a need for a continual amendment of organizational structures.

Although inter-organizational alliances are often described as the inherently fragile and unstable in nature, and exhibit a high failure rate, the number of inter-organizational alliances has increased exponentially over the past two decades (Albers, 2005). A rapid proliferation of benefits from inter-organizational alliances has been witnessed worldwide, and inter-organizational alliance forms have been utilized substantially in nearly all industry sectors (Harryson et al., 2008). Inter-organizational alliances can be regarded as an important component of intentional corporate strategy undertaken by firms in facilitating manner. They normally involve two or more parties engaging in the development and operation of a new business entity both in the domestic and international markets (Ariño and Reuer, 2004).

Researchers seeking to explain the alliance trend have argued that inter-organizational alliances provide a platform for the maximization of their long-term profitability – either to increase sales or to decrease costs, or both (Lyles and Gudergan, 2006). Other common motives include capturing increased economies of scale; being cost-effective and efficient in the height of the globalization of markets; and gaining local market channel access (Albers, 2005). Researchers particularly note that accessing resources, core competencies, innovative skills, and country-specific knowledge could be the primary goals for many business firms (Eunni et al., 2006). Researchers also argue that alliances provide a platform for knowledge transfer and skills learning. These arrangements could also bring about the innovativeness and competitiveness of the members involved because of the dispersion of capabilities across firms.

Even though strategic alliances can be set up for other reasons, knowledge acquisition is a well-accepted cooperative by-product (Child, 2001). In many industries, the need for increasingly rapid technological updates and the ferocity of competition has resulted in the formation of alliances intended to access knowledge, skills, and resources beyond firm boundaries. Companies that are capital-rich but knowledge resource-poor are attracted to collaborative alliance ventures (Inkpen, 2002; Schuler and Tarique, 2006). Albers (2005) explains the resource access motive in alliance formation as the advantage of two firms joining their complementary resources. In doing so, they achieve time advantages in comparison to the alternative of developing or acquiring the needed resources alone. Inkpen and Pien (2006) also emphasize that the “partnering” of firms from various industrial sectors are involved in rich and fine-grained knowledge exchanges enabling organizations to flourish if they can be managed effectively and efficiently. With these in mind, taking businesses into inter-firm alliances has thus enabled organizations to consider every potential opportunity to promote their products or services at some level. Not only it is important for organizational growth, but also is essential to gain an advantage and stay a step ahead of the opposition – a key strategy for modern corporations.

International Joint Venture: A Special Form of Cooperative Arrangements

Inter-firm alliances can encompass several institutionalized forms that range from just short of mergers and acquisitions (when one firm absorbs most of the stock of another) to informal arrangements to work together (Harrigan, 1986), such as short-term contracts, license co-production agreements, equity joint ventures or value chain partnerships (Hyder and Abraha, 2003; Albers, 2005). Various forms of inter-organizational cooperative arrangements depict the important changing landscape accruing in organizational management practices – no longer are organizations operating independently, but rather there is flexible interdependency and co-development among various types of firms (Child and Faulkner, 1998). These collaborative phenomena illustrate the changing landscape of organizational management based upon

partnerships and interdependence. In fact, if the disadvantages of inter-firm cooperative alliances can be reduced to a certain degree, companies could seek the mechanism of cooperation to acquire each other’s resources and skills that they cannot develop by their own efforts (Albers, 2005).

Considering Effective Knowledge Transfer in IJVs

IJVs are relatively efficient in transferring (tacit) knowledge between partners, as long as restrictions are not placed on the release of such knowledge (Child, 2001). However, there are several fundamental impediments to inter-partner learning and knowledge transfer. The first originates in the socially embedded nature of knowledge. Although IJVs provide opportunities for effective knowledge transfer because they involve not just tangible resources, but also knowledge-bearing individuals, the tacit knowledge that individuals carry is the more difficult resource to acquire. In contrast to codified, explicit knowledge, which is generally transparent, readily accessible, and thus inherently diffusible, most knowledge transferred between joint venture partners is tacit, context-specific, and socially or organizationally embedded (Yan and Luo, 2001). Studies on organizational learning recognize the “embedded knowledge” may result in “asymmetry”. Such asymmetry is likely to obstruct inter-partner learning and knowledge exchange (Granovetter, 1985). It is also recognized that transfer hardware such as blueprints, specification sheets, price lists and product samples is easy enough, but real commitment may be necessary to ensure the transmission of the tangible know-how (Mason and Leek, 2008).

A second problem with knowledge transfer concerns partner incentives for knowledge sharing and protection against knowledge leakage (Yan and Luo, 2001). Naturally, the firms may be reluctant to share knowledge and each party wants to protect its knowledge from uncompensated leakage to the other or any third party. Therefore, even when the firm is resource rich and able to disburse resources, it may not be willing to commit resources for this purpose. Willingness to transfer knowledge refers to the predisposition to provide knowledge to the recipient (Faems et al., 2007). In the IJVs

context, when knowledge is transferred across borders, the distance and unfamiliarity with host environmental conditions pose great challenges to the monitoring and controlling of the knowledge flows. Firms are naturally concerned over the protection of their proprietary knowledge, which is likely to adversely affect the level of knowledge transfer (Simonin, 2004). Thus, if cooperative partners are rivals or potential rivals, it is reasonable to predict that they will strive to prevent knowledge leakage to partners because of the risks of knowledge spill over (Hamel, 1991; Inkpen, 1998). Ideally, partner protectiveness will be minimal when an alliance is designed by both parties to facilitate knowledge transfer.

Another factor influencing partner willingness or reluctance to share knowledge is the extent of mutual complementarity (Yan and Luo, 2001). Knowledge complementarity stimulates inter-partner learning and leads to knowledge transfer. Knowledge complementarity thus may be based on identifying the current state of knowledge bases and connections according to their strategic importance and immediate or future knowledge needs.

Lastly, the extent to which one partner's knowledge is accessible to the other depends on inter-partner trust (Yan and Luo, 2001). For those unfamiliar parties who have no prior collaboration, they will often hesitate to share knowledge. If the venture is able to survive the honeymoon period, deeper ties between partners are likely to emerge. In a two-partner joint venture, accessibility to mutual partners' knowledge depends on their extent of openness and trust. Similarly, a reciprocal need for each other's proprietary knowledge boosts knowledge exchange between partners and ensures resource accessibility. Specifically, as inter-partner trust increases and mutual understanding develops, access to each other's knowledge base will become less problematic (Pavlovich and Corner, 2006).

Tsai (2001) argues that the transferability of knowledge is connected with the network position and the absorptive capacity of both the transferor and the recipient. Absorptive capacity – a term coined by Zahra and George (2002) – depends on prior related knowledge. The “dynamic capabilities” perspective of absorptive capacity has also been introduced which

distinguishes between *potential* and *realized* absorptive capacity (Bucic and Gudergan, 2004). This ability is largely dependent on a firm's prior related knowledge base (including basic skills, knowledge of the most recent technological development, existing managerial expertise and learning experience) and organizational factors, such as communication and knowledge distribution (Lau et al., 2002). Lane, Lyles and Salk (2001) make a conceptual advance on the notion of “absorptive capacity” by demonstrating the cognitive similarities between firms and clarifying the importance of relative absorptive capacity in knowledge transfer enhancement. In this vein, we can see that the existence of a prior knowledge base and relative absorptive capacity may be an explanation for innovation, business performance and inter-organizational learning. The lack of absorptive capacity is considered a major barrier to knowledge transfer within an organization (Szulanski, 1996).

In practice, however, it is not merely structural incompatibility alone that prevents the identification and transfer of knowledge within organizations. IJVs bring cooperative partners into a close working relationship, fostering learning both by facilitating knowledge transfer and by promoting knowledge creation (innovation) on the basis of complementary competencies (Inkpen and Pien, 2006). Szulanski (1996) found that the inability to internally share best practices explains in part intra-firm performance differences and concluded that firms have difficulty in transferring knowledge because they do not know how to do so. He identified the four reasons for such “internal stickiness” as the characteristics of the knowledge (tacit and explicit), its source, the recipient, and context. For instance, practices that are identifiable, proven, and generalizable are easier to transfer. Trustworthy and reliable sources are more credible. Recipients with “absorptive capacity” are willing to experiment with new practices. Finally, organic organizations facilitate such transfers with appropriate structures and systems, cultures and rewards.

The Chinese Automobile Industry: Research Setting

As part of the manufacturing sector, the automotive industry was designated in 1994 by

the Chinese Government as one of the pillar industries of economic development in China. Undoubtedly, the Chinese Government's decision to make the automobile sector a mainstay of the economy greatly contributed to economic development in China, especially with respect to employment and output. The value added by the Chinese auto industry represented 7% of the total value added of manufacturing in China in 2010, a near doubling of this percentage from its level in 1990 (China Automotive Industry Yearbook, 2010). One characteristic related to the progress of China's auto industry is that the influence of foreign direct investment (FDI) has been evident in the Chinese automotive industry in terms of a rapid expansion of inward FDI and entry of international automakers into China.

In 2012 China accounted for about 30% of the growth in the global automobile industry. This growth has been driven by major investments in China by the top eight global auto manufacturers¹ which were expecting the emerging markets to create the growth opportunities necessary for their firms. Although FDI in the automobile industry seemed to be declining in 2011 and 2012, due to falling margins and continued restrictions, China is consistently attractive as regards absorbing more inward FDI. Even though it too has been experiencing the global economic slowdown since 2008, the Chinese auto market is still more attractive than the western markets because of its cost advantages and massive, potential consumer market (Mallela, 2009).

Scholars agree that FDI in the Chinese automobile sector has contributed to the economic success of this industry and China's national economy in a number of ways (Buckley et al., 2007). First, it has created desirable and stable jobs for Chinese workers in Sino-foreign joint venture firms. Second, this investment has strongly benefited the wider economy because the Sino-foreign joint ventures have created a strong source of demand in China for raw materials and automotive parts and components. FDI has also made a significant contribution to the industrial development by improving local

production, management methods and marketing systems during the last 30 years (Gallagher, 2006). MNEs, with the provision of advanced production techniques, industrial know-how, and capital could thus get permission to explore the market opportunities in China.

Overall, these linkages with the joint ventures and the Chinese automobile industry in general are increasingly contributing to economic growth in China. By the mid-1990s, the Chinese auto industry was providing demand for 5-6% of total steel production, 80-90% of petroleum products, 14-16% of machine-tool production, 50% of tempered-glass production, 45% of tyre production, 15% of engine-plastics production, and 15% of paint production (Gallagher, 2006).

Complex International Partnerships in the Auto Industry

The Chinese Government has emphasized the development of an appropriate infrastructure as a high priority and it is quite willing for foreign investors to add to these facilities – in transportation and communication, in energy capacity, and even in education. Due to the strict auto-related regulations, in certain strategically important or pillar industry sectors (such as the automotive industry), the Chinese Government puts pressures on MNEs to use equity joint ventures rather than wholly-owned foreign enterprises (WOFEs) (Conklin, 2006), and more than 90% of Chinese state-owned automakers are tied to foreign auto giants (Alon and McIntyre, 2008). Figure 1 below shows the complex international partnerships in the Chinese automotive industry.

The partnership model is preferred by the Chinese Government in the auto industry. The state-owned enterprises (SOEs) and MNEs generally share the investment and joint operations through joint ventures. This choice has particularly opened up an effective channel for the transfer of technology and managerial expertise, which have functioned as accelerants to the transformation of the economic system in China (Ali and Guo, 2005).

1- The largest investments were made by Hyundai and General Motors and followed by Toyota and Volkswagen, with the smallest investments being made by Renault-Nissan, Ford, and Honda (McGunagle, 2007).

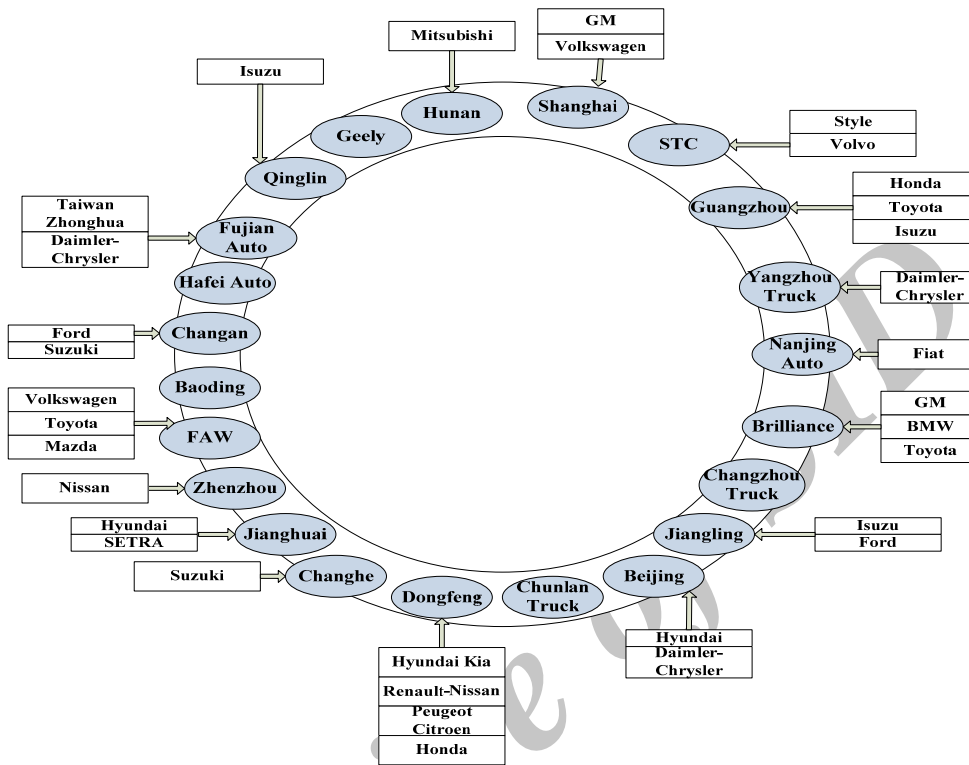


Figure 1: Complex international partnerships in the Chinese auto industry

RESEARCH METHOD

Within knowledge transfer research in a special form of alliances – international joint ventures (IJVs), the predominant research approach appears to be quantitative, which is based on statistical analysis and measurements (Marschan-Piekkari and Welch, 2004). However there exists a need for qualitative research based on probing of respondents' attitudes to such issues (Faems et al., 2007). Hence, current research on inter-organizational knowledge transfer is important in international business strategy research.

Based on the work of Easterby-Smith, Thorpe and Lowe (1993) and Veal (2005), qualitative research is usually constructed in a form of narrative rather than a statistical form, making it generally more understandable for

readers not trained in statistics. The essence of the qualitative interpretive framework draws on the richness of direct experience to heighten perceptions and understand actions and meanings in their social context (Crotty, 1998), which can be sought through observing the events and phenomena in the process in an effort to identify different ways things can be viewed (Mercer and Powell, 1972). This experience must be that of those who participate in the context of the research as no one can experience things on behalf of the participants. The strength of the qualitative method is that it sets a stage for exploration and discovery (Crotty, 1998).

Thein-depth interview techniques were applied with the data collection with IJV executives from both sides in the present research. Thus participants can express their

views over a wide range of responses, and as a result formed a basis for the study, which interprets “how the various participants – individuals, groups or organizations – socially and subjectively construct rather than objectively determine the world round them” (Glesne and Peshkin, 1992). This qualitative framework based on interview techniques is particularly effective in investigating dynamic organizational processes in terms of knowledge transfer and management research (Marshall and Rossman, 1989). Several studies, for instance, Hoopes and Postrel (1999), Pavlovich and Corner (2006) have demonstrated that an interview-based perspective is an appropriate way to understand the “intangible” nature of knowledge resources. Indeed the role of qualitative interview research utilizes qualitative information to understand what lies behind poorly understood social phenomena (Strauss and Corbin, 1990). It attends to the social construction of meaning and is more concerned with subjective experience, observation and description from field research (Neuman, 2000).

Case Samples

This research selected multiple respondents from the case company IJV [A-B] (In this study the IJV referred to [A-B] comprises the American partner [A] and the Chinese partner [B]). The fieldwork research and interview activities were carried out in a large city in China during the period between September 2005 and February 2006 (First Round Data Collection), and in February 2010 (Second Round Data Collection) respectively. All names of firms, products and individuals are disguised to ensure confidentiality. The interviewees were IJV American and Chinese top managers including presidents, general managers, representatives of parent firms, and functional department managers in charge of business development, marketing planning, technology R&D and human resource training programs.

The Research Process

As members of the top management teams, respondents had an in-depth perception and understanding of the IJV management systems, strategies and daily operations. They were also able to observe and determine the impact of the skills and technologies transferred between

partner firms in the IJVs. Previous research conducted by Dhanaraj et al. (2004), Peng and Luo (2000) support the viewpoints that reliable data provision (from either self-reported or archival documents) can be expected from the IJV top managers. In brief, the seniority of most respondents in this study alleviates the problem of single-respondent bias. On average, the American and Chinese managers have been in their current position for about four years as of the first date of contact, and all are involved in the knowledge transfer facilitation processes.

Semi-structured interviews were conducted in this study, where respondents were free to talk and give their opinions as they understand the process. With the interviewees coming from both sides of the IJV [A-B] there were differences in competence, age, rankings, and nationalities. Stemming from their different cultural backgrounds, the principal researcher carefully designed two versions of interview questionnaire; one in English, and the other in Mandarin. More importantly, the bilingual background of the lead researcher (Mandarin and English) was also very helpful in conducting the interview data collection procedures. Finally, the method of back translation was also adopted to keep the questions' content consistent as suggested by other researchers, such as Brislin (1970), Buckley, Clegg and Tan (2004).

In this research, data analysis consisted of multiple readings of the interview transcripts and related documentation, and identifying activities and subjective evaluations pertaining to the success of knowledge transfer and learning configurations (Strauss and Corbin, 1990; Yin, 1994). The data analysis followed a pattern of Description, Interpretation, Evaluation, and Application (Miles and Huberman, 1994), an analytic method that let interviewees tell the “story” of the situation, describing what happened; then the researchers identify themes and sub-themes arising from the interview discussions. This data reduction technique addresses the research questions with the classification and examination of evidence used to make linkages between concepts. These steps can be done with the help of a computer software package called CATPAC. CATPAC is a nonbiased self-organizing computer program, designed to conduct the textual analysis of the relevant concepts and associations between

different themes. CATPAC simply reads the text, determines what words occur the most frequently to count frequencies, and establishes patterns within any kind of written text², thus providing visual representations of the identified interrelationships among the most important words (Woelfel, 1998). This software has been used in other contexts such as social and political analysis.

RESULTS AND DISCUSSION

Strategic Motives and Knowledge Transfer Objectives

For the specific individual motives of the foreign [A] and local partners [B], [A] considered that producing vehicles in USA was extremely expensive, rendering products uncompetitive, while the production costs in China were lower due to cheap labor and material costs than in USA, which could offer competitive pricing and thereby sell more of its products at a higher margin. This could be achieved by finding an efficient and competent partner [B] and by establishing production in China where salary costs were low. Firm [B] was also attracted by lower costs when advanced technology and management expertise would be introduced.

The second theme was that the primary reason for the executives of [A] to share their knowledge was to build effective long-term working relationship with the Chinese partner, and develop experience from working in China. [A]'s motivation to cooperate with [B], was that the Chinese market was very attractive to [A], as China had considerable potential due to the fast-growing economic and industrial development of the country (even though the Chinese market for private automobiles was nonexistent prior to the formation of the joint venture). One manager said:

We're not going to take big stakes just because we can use the Chinese manufacturing bases, or they have good connections. Considering the institutional differences, which were characterized by 50 years of socialist administration and deeply rooted bureaucracy, China's market was still considered to be

complex and uncertain for us at that time; a suitable cooperative partner who could deal appropriately with the problems and constraints of day-to-day operations was really needed. Therefore, if we don't believe there is a good potential for us to make successful operations out of it, we wouldn't think about it. (Interviewee A4)

A third theme that emerged from respondents was that [A] wanted to work with local partners to implement the [A-B] project development plan, and to become familiar with the auto industry in China with the partnership with [B]. Due to the political and economic uncertainties in China, [A] preferred to share the risks with local associates. The local partner, [B], in this case, considered in which way it would be appropriate to enhance its competitiveness – the cooperative arrangement strategic choice or internal self-development route. [B] recognized new strategic cooperative partnership opportunities with [A], meaning it is both conceivable and reasonable to view the issue of cooperation is directly related to better technology access, competitiveness and profitability enhancement for [B]. Firm [B] clearly cited skill development and upgrade of competitiveness as one major motivating factor in getting involved in the JV with [A].

Willingness to Transfer and Intent to Learn

In the case, we found that the Chinese partner [B] had explicit learning intentions in this IJV. The most important consideration was to develop another useful connection with a well-established world-class auto giant, and to learn [A]'s modern technology, skills and know-how, in order to produce and improve the quality of the middle or even high-end vehicle products. One American manager who went through on-the-job training in the [A-B] joint venture made the following observation:

Some Chinese engineers and workers showed eagerness to learn despite their language problems or lack of intercultural communication skills. They always ask questions and observe the American colleagues . . . how to handle various issues . . . I was surprised by their willingness and capabilities for answering my questions. (Interviewee A5)

2- Some examples of text files people have studied using CATPAC include: in-depth interview transcripts; answers to open-ended survey questions; newspaper reports and magazine articles.

There are two considerations here. Firstly, [B] wanted to keep up with the Chinese auto market's sudden expansion. Secondly, such a new cooperative project can be useful to the state-owned company and even to the industry and the country at large. In the case, although the global automotive industry has come a long way in the last decade to assure the quality of vehicles and components through extensive testing before the start of production, Chinese managers still see large gaps in many of their automotive products and processes when compared to world-class products and processes. Firm [B] was actually not content with its previous achievements. Most of the Chinese managers expect a time frame of 10 to 30 years to close the product and process gaps between Chinese manufacturers and their world-class counterparts. The three biggest gaps cited are in design capability of components, production management capabilities, and business management skills and experience.

The lead researcher also found that [A] promised in the agreement to provide [B] with relevant technology and resources needed for IJV development. Respondent [A] promised to be a provider of critical technology and marketing knowledge for [B]'s own ambitious plans, and showed a strong willingness and interest to invest in China with [B]:

Our sustainability lies in technical and new vehicle model introduction in the IJV (Interviewee A1).

Clearly, the comments made by the participants support the grouping of the perceptions the managers have of the "Willingness to Transfer Knowledge and Intent to Learn".

Interestingly, [A] also wished to gain access to important contacts at the political, government and ministerial levels in the local market, and to establish contacts with actors with the knowledge and experience required to handle these relationships. One American manager stated:

Accessing the experience of local partners are specific goals for us (Interviewee A2).

Thus, it can be concluded that supplying the necessary knowledge and skills to ensure IJV [A-B] operational and management efficiency and intent to learn the rules and regulations in China were important motives for both [A] and

[B]. We can see both the Chinese firm [B] and the American firm [A] have clearly specific knowledge-related goals within IJV, and this cooperative project was formed with an explicit knowledge transfer objective. The key knowledge transfer objective was that both partner firms would share their knowledge of effective and efficient alliance management and cooperative experience with each other so that the partners could learn from each other.

Knowledge Identification and Knowledge Base

This IJV [A-B] case provided evidence that the existing knowledge created important learning potential for [A] and [B]. This excellent learning "window" had two main sources of potential value. First, IJV [A-B] is an auto manufacturing plant, and the products and equipments are similar to that manufactured or supplied by both partner firms. Existing knowledge represents [A]'s initial experience in cooperating with the Chinese automaker which enabled [A] to effectively identify [B] as its Chinese partner and gain access to skills created by the Chinese partner for the Chinese market. It also had access to how those skills could be developed to the Chinese working style and infrastructure context. For [B], its existing knowledge base, lack of market-orientation and new passenger car-models due to its deep roots in a planned economy gradually changed when partnering with [A]. One Chinese manager made the following comments:

The most impressive thing was their [A] preciseness in work. Compared to Americans, our Chinese managers are not so precise in what we do. They were very strict on quality assurance during the whole process of production. This is where we are weak in China. We have all the basic knowledge but we don't have the quality control. The most important thing we had learnt was about the working attitude, the quality management in their work. (Interviewee B5).

This is understandable in the Chinese automobile industry's context – due to the complex environment including political, economic, social and cultural factors.

Knowledge Connections and Contribution

In the case the knowledge transfer process at the IJV early cooperation stage included initial

knowledge resource contribution from partner firms, and each partner represented a knowledge source in the automotive industry. When [A] was first established in China in 1997 it continuously introduced Western management styles, modern sales skills and up-to-date vehicle models. Firm [A] expended much effort in this regard to make the local partner realize the importance of keeping commitments made to the customers. Firm [B] also provided locally available knowledge, and sufficient knowledge in the technical field, materials procurement and manufacturing capabilities for the installation of vehicle production lines.

The local Chinese partner [B] was responsible for employing qualified workers, well-educated sales people, experienced managers and engineers locally, as there was ample manpower and skilled technicians in the field were available locally. One of the most important and essential contributions of [B] was its expertise in managing the domestic market and contacts with the influential government officials in China's auto industry. One American manager recognized:

[B] is actually a well-known state-owned company and has a good knowledge of customer preferences and attitudes, good company control of the home market, and knows how to manage and deal with the economic situation. It is able to enter the agreements and contracts needed in a proper manner and in a short period of time. [B] is very competent in its fields of operation, has technical skills of a general nature and is capable of developing car and engine products. (Interviewee A2)

This initial knowledge contribution thus created effective connections and good opportunities for sharing the observations, resources and provided an avenue for partners to gain exposure to knowledge and ideas outside their traditional organizational boundaries, and created a link for individual managers to communicate their IJV experiences to others. In that sense, this knowledge contribution is the link through which different types of knowledge converge and become accessible, and lay a good foundation for knowledge development.

Intensive Cooperation and Knowledge Development

During the fieldwork interview process, the researchers found a number of managers touched

on the importance of knowledge development, innovation and adaptation based on the intensive cooperation. One manager in [A] stated:

My understanding is one cannot expect to get the original system in without any changes. When entering [into] foreign countries, you must comply with the local situation . . . Changes are really necessary. We [A] adapted to the Chinese environment. (Interviewee A5)

One Chinese interviewee also recognized that [A] relied heavily on the local knowledge of the Chinese partner in the automobile industry in their adaptation processes:

A lot of product development practices that need to be done are based on many contextual and situational elements. . . . Some product development procedures need to consider the local needs. But [A] accepts suggestions from us. (Interviewee B2)

Recognizing the knowledge development and adaptation significance is important in the case. As the concept of knowledge development as a key source of competitive advantage is necessary, [A] and [B] have come to see knowledge transfer as a way of managing transition and changes. IJV [A-B] is capable of integrating and utilizing knowledge to improve manufacturing efficiencies.

Inter-Firm Relationships

From the resource-based perspective, inter-firm relationships affect the process of knowledge exchange, sharing, combination, and joint problems-solving through creating or enhancing a number of necessary conditions, such as increasing openness, respect, friendship (McEvily Perrone and Zaheer, 2003).

Two aspects in terms of relational capital issues can be identified after the IJV formation: on the one hand, [A]'s commitment in fulfilling demands from [B] for the continuous introduction of new vehicle models. The continuous new technology transfer showed the trust and commitment held in between [A] and [B] in the joint venture. On the other hand, both partners worked together to conduct vehicle product development and adaptation, which also helped to strengthen the level of trust. All the terms of the [A-B] joint venture were equal for both parties, from the number of senior management representatives to distribution rights. One American executive commented:

We believe that [A] would catch up other competitors in the Chinese market rapidly through the collaboration with [B]. We are quite happy that the forecast is holding, although there exists increasing sales price and production cost competition in China's auto market. (Interviewee A1)

In this case, [A] and [B] in the Chinese market developed important contacts with each other in the well-organized IJV [A-B] network, which they utilized in distributing the joint venture's products. The following quotation from a Chinese manager suggests there is a strong working relationship and intensive communication between both sides:

Although there are some misunderstandings and conflicts between the two partners, the cooperation in the areas of automotive technology transfer has always been very smooth. ... When the interests of the two partners conflicted, we did suggest intensive opinion exchanges, which became a big success. (Interviewee B3)

Through these contacts with each other, both partners managed to gain access to some important customers, other companies, and government authorities, domestic and international markets.

Summary and the Research Findings Implications

The formation of inter-organizational cooperative entities to improve knowledge transfer performance is significant for the companies which rely on knowledge and innovation to gain competitive edge (Nonaka, 1994; Lynn and Rao, 1995). The effective management of organizational knowledge has been increasingly linked to competitive advantage (Grant, 1996; Spender, 1996), and it is more and more considered a vital ingredient in competitive success and will probably continue to be so (Davidson and Voss, 2002). Organizations are repositories of knowledge resources, and organizational learning is regarded as a key building block and a technique to increase organizational performance. It also assists an organization to utilize knowledge to make continuous progress and improvement in organizational development (Inkpen and Dinur, 1998). Through this knowledge transfer process, managers seek to increase employees' expectations and their capabilities in dealing

with constant changes from diverging and unpredictable forces. Clearly, the main relevant concern here is how individual, group and firm interactions contributing to organizational knowledge transfer.

Research suggests that inter-firm knowledge transfer process cannot occur without the existence of mechanisms that enable and facilitate the knowledge connections between the alliance partners (Almeida et al., 2002; Inkpen and Pien, 2006). These mechanisms serve as the basis and potential for partners to share and communicate their experiences, corporate philosophy, and new knowledge for operating successfully.

Several antecedents of knowledge transfer in alliances can be identified in this case: knowledge source characteristics, knowledge recipient characteristics, the characteristics of the knowledge, and alliance contextual features. For example, recipients with prior knowledge bases and learning intent have high level of absorptive capacity, and are capable of experimenting with new competences.

The question addressed in this paper is how different organizational efforts have been made to look at the organizational mechanisms on knowledge transfer within the IJV. Consistent with prior studies, the results of this research support the positive role of inter-partner relationship as a facilitator of knowledge transfer. This paper provides evidence of the important role of relationship capital plays in inter-organizational knowledge transfer and its subsequent impact on alliance performance. The results also suggest that knowledge transfer is an arduous process that requires significant levels of commitment from the transferor and receptivity from the transferee. Meanwhile, alliance with appropriate structures and mechanisms, such as human resource arrangement, training, and communication may facilitate the reduction of cultural misunderstanding, thus encourages inter-firm transfers. Finally, the paper confirms empirically the theoretical knowledge-based perspective that knowledge is a key resource that contributes to enhance overall alliance performance.

Managerial practices can thus be modernized through contact with innovative information systems and administrative techniques used by other firms, as with cooperative ventures that

bring together international partners. Only if partners can overcome inhibitions regarding inter-organizational knowledge transfer and develop systems to use them effectively, their firms can build strengths and gain knowledge by cooperation. They can even pre-empt competitors from forcing the marketplace to change disadvantageously, as in the case example of the China automobile industry. It is important to recognize the nature of those differences and changes when all actors should be working together for mutual gains. Finally, it is important to distil the skills of managing knowledge transfer into patterns that suggest which knowledge management are most likely to prosper and to relate these patterns to a alliance framework for creating and managing knowledge successfully.

CONCLUSION

The knowledge transfer approach to business management necessitates the identification and valuation of knowledge. As the appropriate application, and use of alliances shape knowledge transfer patterns (Tiemessen et al., 1996; Yan and Luo, 2001). It should be pointed out that the knowledge transfer processes are interrelated and used for illustrative purposes, and these are not explicitly separated from each other. The researcher recognized different yet interrelated knowledge flows, and each of these flows calls for related yet unique knowledge management processes within the alliance/IJV.

It was discovered in the research paper that inter-organizational knowledge transfer is a multidimensional concept which has an impact on learning performance. The driving factors mentioned in the paper formed the context in which knowledge transfer and inter-partner learning were explored effectively in the research framework, and have been identified as a result of both an extensive literature review and discussions with managers from the case company. These factors created an environment for the learning IJV to gain a competitive advantage. In other words, the driving factors created not only the challenges but also the opportunities for the partner firms to successfully conduct knowledge transfer and learning. Schein (1993) argues that "current circumstances tell us that learning is no longer a

choice but a necessity" (p. 85). Some commentators (i.e., Van Wijk et al., 2008; Ding et al., 2009) would go further, arguing that the goal of transferring knowledge and learning the management knowledge and skills is necessary for firm survival.

This case study research demonstrated that for companies relying on knowledge and innovation for their competitive edge, the formation of inter-organizational cooperation to improve knowledge transfer performance is significant (Nonaka, 1994; Lynn and Rao, 1995). The effective management of knowledge is increasingly considered a vital ingredient in competitive success (Grant, 1996; Spender, 1996; Davidson and Voss, 2002; Foss et al., 2010). In the case study, learning is an ongoing activity rather than a discrete outcome, and knowledge transfer mediates the relationship between organizational features and various types of alliance performance. In conceptualizing the probable linkages between knowledge transfer, learning, and performance, this research argues that different categories of knowledge transfer need to be distinguished and examined separately at different levels in relation to efforts and expected outcomes of the IJV learning. The results show that different types of knowledge were also transferred over time from key technologies, management skills, followed by the tacit, social, cultural knowledge, which was also a critical barrier during the sharing process. As time passed by, both partner firms demonstrated effort and commitment in facilitating inter-firm knowledge transfer practices. Conversely, the IJV knowledge transfer performance also significantly influenced the nature of the inter-firm partnership.

This research finally proposes that not only are certain IJV characteristics associated with knowledge transfer and learning, but that the degree of learning outcomes – knowledge development and effective knowledge identification and application in the IJV – in turn, should be associated with better IJV partnership development. Organizations are repositories of knowledge resources, and organizational learning is regarded as a key technique to increase organizational performance as it helps an organization to utilize knowledge

to make continuous progress and improvement in organizational development (Badaracco, 1991; Inkpen and Dinur, 1998).

This paper contributes to the emerging research stream in managing international knowledge transfer across borders. However, this paper is not without limitations. Future research development in this field can be made to incorporate more industry specific elements, and to link the issues of knowledge transfer decision with post-alliance performance evaluation. A future study can also address a more generalized research framework from various industries in different country combinations where significant knowledge transfer activities can be found.

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