

The Relationship between Control Mechanisms and Acquisition of Managerial Knowledge in International Joint Ventures: The Korean Experience

Abstract

Our study examines the impacts of control mechanisms on the acquisition of managerial knowledge in international joint ventures (IJVs). Data were collected by a survey of IJVs in the Korean context, where knowledge acquisition from the foreign investors is particularly critical to further upgrade her economy. We attempt to look at the ownership – knowledge acquisition links, and find that equally shared ownership is the most favorable organizational structure for knowledge acquisition from the foreign parent. In addition, most of the control mechanisms (i.e., ‘participation in the policy and planning process’, ‘staffing the top management positions’, ‘participation of foreign expatriates in key functional areas’, and ‘socialization with venture managers through active training’) show the positively significant association with knowledge acquisition. We also suggest the partial supports for the effects on ‘influence on decision-making by integrating with foreign network’ and ‘communication between top managements and foreign parents’. Our study contributes significantly to the body of control literature and the understanding of IJVs, and the role of foreign parents in transferring knowledge.

Keywords: international joint venture; control; knowledge acquisition; Korea

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Introduction

International joint ventures (IJVs) are increasingly recognized as a popular device of market entry for multinational enterprises (Demirbag and Mirza, 2000). Due to its growing popularity and strategic importance, a number of major changes in international business environment have been considered to stem from the augmented activities of joint ventures. Although there are various reasons that make IJVs to become a prevalent strategic choice for multinational enterprises (MNEs), one of the common elements to promote the formation of the inter-firm linkage involves the “joint maximisation of complementary resources by sharing” with local firms (Koza and Lewin, 1998; 256). In addition, among those resources, the transference of complementary knowledge between participating firms is known as a crucial motivating factor in establishing the IJV, and one of the criteria by which joint venture success is estimated is also the knowledge transfer between the parties (Si and Bruton, 1999).

Decision to enter into foreign market involves greater risks than domestic investment, because MNEs are required to submit themselves to a number of unfamiliar factors. For example, the lack of perfect knowledge about environmental fluctuations in host country is a considerable risk, which threatens successful market developments. In this situation, IJVs can be a voluntary cooperative relationship in which the participating firms reduce internal and external risks by sharing complementary knowledge. That is, an IJV proposes diverse strategic benefits for the MNEs, as local firms are expected to be a source of necessary knowledge of country, industry and other local environments including political trend (Barringer and Harrison, 2000; Chen and Hennart, 2002; Cannice et al., 2003). On the other hand, MNEs bring advanced technology and sophisticated managerial knowledge, which are difficult to imitate and independently develop in the market, into IJVs (Hitt et al., 2000; Tsang, 2002). Consequently, an IJV is commonly regarded as a vehicle to diffuse knowledge and effective means for the acquisition of knowledge (Hamel, 1991; Lane et al., 2001), involving tacit know-how and skills from one firm to another. According to scholars researching international business, many joint ventures increasingly aim at solely the transference of knowledge from parents because of the strategic judgment that the exchange of knowledge within the structure may strengthen their own competencies and thereby their competitive positions in the global markets (Mutinelli and Piscitello, 1998; Demirbag and Mirza, 2000).

Moreover, managerial knowledge and know-how, being transferred from MNEs to IJVs, particularly provide a crucial foundation for improvement in joint venture competitiveness and in many cases foreign parent's knowledge eventually promises current and future organization success (Demirbag and Mirza, 2000). In addition, acquisition of managerial knowledge often encourages performance enhancement by facilitating the absorption of technological knowledge, which has more explicit nature (Leonard-Barton, 1995; Lyles and Salk, 1996).

Intuitively, the gains from foreign knowledge augment the net present value of hybrid mechanisms and, in turn, increase the impetus to cooperate (Phan and Peridis, 2000). Despite the importance of managerial knowledge acquisition in IJVs, however, there is a limited systematic investigation on the linkage between learning by IJVs and foreign parent's managerial knowledge. That is, a number of previous studies concern technology acquisition in the joint venture context (e.g., Nagarajan and Mitchell, 1998; Rebentisch and Ferretti, 1995; Stuart, 2000) rather than managerial knowledge absorption. Second, although a number of empirical studies increasingly look at factors affecting knowledge acquisition (Lane et al., 2001; Lyles and Salk, 1996), most of them do not recognize the significant value of control mechanisms on learning by IJVs (Lin, 2005).

Thus, this paper strives to fill in the research gap by finding an answer to a research question: what are the relationship between control mechanisms and knowledge acquisition in international joint venture? Since proprietary managerial knowledge is more likely to be possessed by the foreign parent, the knowledge holder is likely to influence the control system to a greater degree than the local parent (Chalos and O'Connor, 2004). Based on the premise, this paper contributes on the existing IJV literature by offering new insight into IJVs and control mechanisms, and links the control issue to the managerial knowledge acquisition from foreign parents. To explore this research area, the rest of the paper is consisted of five sections. Firstly, the literature explaining main constructs on control mechanism is reviewed. Secondly, hypotheses developments are conducted to investigate the phenomenon. Thirdly, methodology involving data analysis and variable measurements are described. Fourthly, results and discussion are presented, and subsequently, conclusion and further research are in the final section.

IJV control and control mechanisms

Control refers to the process in which the foreign and local parents ensure that the joint venture is managed to meet the parents' strategic interests by influencing managerial and operational decisions through the use of power, authority, and a wide range of bureaucratic, cultural, and informal mechanisms (Hebert, 1996). In IJVs the effective control is a much more subtle and complex issue than a proxy like centralization of decision-making is liable to capture in that both foreign and local parents, who have different organizational goals and objectives, simultaneously participate in the same entity (Geringer and Hebert, 1989). However, firms are also likely to suffer great difficulty in dealing with joint venture operations without effective control efforts. On the basis of the definition, there are two different classes of controls: management and operational controls.

There is a debate whether control is a strict and automatic consequent of ownership. Some scholars suggest that ownership and management control over the IJV are closely related each other. For example, Glaister (1995) finds that management control is dependent upon relative equity share and relative capital input. Management control in IJVs traditionally has been considered to be equivalent to equity structure, most of recent studies, however, distinguish management control from ownership for the idea that amount of control may not be precisely measured by ownership in multifaceted global environment (Grossman and Hart, 1986; Lin, 2005;

Mjoen and Tallman, 1997; Yan and Gray, 1994). According to them, ownership control refers to a type of influence, which renders the residual rights deciding how to use organizational assets. This is the legal authority, which can be exercised over assets and resources, and the ownership is determined by the percentage of capital that each partner invests in the venture. Management control, in contrast, “is the observable pattern of decision-making power. Although ownership control may lead to management control over the IJV through board membership, other more informal control mechanisms ... may provide decision-making power apart from that which is derived from ownership” (Steensma and Lyles, 2000: 833).

As previously discussed, parent control is not a single facet, and another route to exercise parent control is operational control. Operational control refers to the specific process, which selectively targets functional areas such as production, marketing, distribution, and financial management in order to manage effective applications of parent’s knowledge in strategically important areas (Luo et al., 2001; Zhang and Li, 2001). This type of control is particularly important because operational control can promote a parent firm’s achievement of operational objectives, which are different from its counterparts, even with a smaller share of the overall equity (Luo et al., 2001). The empirical study conducted by Yan and Gray (2001) also confirms that the level of operational control exercised by a parent over a certain strategic areas has a positive effect on the extent to which this parent’s goals are accomplished.

Geringer and Hebert (1989) characterize control as more comprehensive three dimensions in joint ventures: (1) the extent of control, (2) the focus of control, and (3) the mechanisms of control. The extent of control refers to the degree to which the parents exercise control over joint ventures. A parent firm needs to exert an appropriate level of control to make the achievement of organizational goals more predictable (Li, 2003). The focus of control is the scope of the joint venture’s activities, which are chosen by parents to exercise control. A parent firm should select activities, which it perceive as critical, rather than attempt to control the entire range of an IJV’s activities due to the limited resources available for controlling (Wang et al., 1998). On the contrary to those two parameters, the mechanisms of control refer to the methods, which are used to control joint ventures by parents. Although respective asset contributions are largely determined by majority position in equity, various other control mechanisms such as intangible nature of partner assets are commonly utilized for a foreign parent to exercise effective IJV control (Chalos and O’Connor, 2004; Geringer and Hebert, 1989).

In extending this stream, we believe that these intangible contributions affecting IJV control (including management and operational controls) may have different impact on the level of knowledge acquisition in the cooperative setting. According to Makhija and Ganesh (1997), the more explicit, regular, and codifiable information to be acquired by IJVs, the more formal and negative control mechanisms are likely to be. In contrast, the more implicit, tacit, and organizationally embedded the knowledge, the more informal and positive control mechanisms will be. Schaan (1983) explains that the formal and negative control mechanisms are employed by a parent to prevent the IJV from executing certain activities and behaviors. This type of control mechanisms involves ownership control, influences on decision-making by tight network and staffing the top management positions. The informal and positive control mechanisms are control means used by a parent to

promote the IJV's certain behaviors and decisions. This type of control often relies on participation in the policy and planning process, communication between top managements and foreign parent, participation of foreign expatriates in key functions, and socialization with venture managers through active training.

Although a few studies highlight the important role of a certain control mechanism (such as staffing) in the joint venture (e.g., Chalos and O'Connor, 2004; Kumar and Seth, 1998; Petrovic and Kakabadse, 2003), the conceptual model developed in this article will consider both formal and informal controls. In addition, we will particularly focus on the acquisition of managerial know-how rather than technological skills as the knowledge acquired from foreign parent through various control mechanisms. The underlying reason is that the existence of sophisticated managerial know-how within IJVs may be a crucial source of competitive advantage in the global market (Lin, 2005), but we know little about the factors influencing the acquisition of such viable asset. As Makhija and Ganesh (1997) argue, the formal control mechanisms may be more useful dynamics to transfer explicit and codifiable knowledge than tacit nature of knowledge. However, it is clear that they also contribute on the acquisition of implicit and tacit knowledge, which is innately difficult to be transferred one firm to another, in some extents. Accordingly, foreign parents may rely on a variety of mechanisms for transferring managerial knowledge, and thus both types of control mechanisms need to be identified as critical elements in the knowledge acquisition.

Framework

According to Makhija and Ganesh (1997), control mechanisms inadequately exercised by venture parents may generate significant impediment for an IJV to acquire new knowledge through distortion, suppression, and delay of feedback. In other words, the conceptualization of control mechanisms is highly consistent with an organizational learning via teaching capability (i.e., transformative capacity), which helps to improve the joint venture's exchange of ideas, redirection of organizational motivation and goals, and guidance to efficient shortcut for knowledge acquisition. In this point of view, the conceptual model highlights that appropriate control mechanisms are crucial not only for effective management and operational controls but also for knowledge acquisition in IJVs.

Ownership control

Ownership control is conventionally regarded as an attractive mode of operation because it provides considerable benefits to the parent, which possesses the majority share of equity (Ramaswamy et al., 1998). One of those benefits can be found from the decrease in dispute between the foreign and the local parents based on the imbalanced power. Consequently, it significantly lessens the conflicts in the decision-making process and facilitates improvement in organizational effectiveness and rapid organizational responses to environmental uncertainty (Lewis, 1990). In contrast, equally shared ownership ventures often experience organizational rigidity and suffer a drain on resources in order to enforce contracts and prevent from the partner's opportunistic

behaviors (Williamson, 1981). Such ownership structure of an IJV is often determined by the respective bargaining power between both parents (Yan and Gray, 1994). Bargaining power is based mainly on a firm's tenure of precious complementary assets and its contributions to the IJV. As ownership control is built on the ability to bring superior resources and knowledge, it is logical that the majority equity position of a foreign parent helps to achieve greater joint venture performance (Killing, 1983; Lecraw, 1984). In addition, Demirbag and Mirza (2000) argue that to enhance the performance, many joint ventures increasingly aim at solely the acquisition of knowledge from the foreign parents because the exchange of knowledge within the structure may strengthen their own competencies and their competitive positions in the global markets. In this context,

H1 Ownership control by the foreign parents increases the joint ventures' knowledge acquisition from the parents.

Influence on decision-making by integration with foreign network

Foreign parents can influence a joint ventures' decision-making by integrating the children into their own network. The influence on decision-making refers to the degree of control of the children's strategic and operational decisions to gain organizational objectives and interests (Chalos and O'Connor, 2004). Further, integration with foreign network represents a wide range of inter-organizational linkages with the foreign parent (Powell, 1998). Under the same umbrella, decision authority over a variety of joint venture operations can often be found to reside with foreign parents, because the latter usually has technical superiority and greater managerial skills. In other words, possession of superior technology and management skills provides sufficient rationale for the parent's decision responsibilities through incorporation with tight network. Chalos and O'Connor (2004) argue that this facilitates the gradual knowledge transition to the joint venture and encourages the children's eventual improvement in knowledge acquisition. In their empirical studies, Park and Giroud (2006) similarly suggest that the strong foreign influence via network may have more positive impacts on the joint venture's knowledge acquisition than venture autonomy. In this regard,

H2 Influence on decision-making by integration with foreign network increases the joint ventures' knowledge acquisition from foreign parents.

Participation in the policy and planning process

Demirbag and Mirza (1996) suggest that the parent's participation in the IJV's policy and planning process is an appropriate measure of control in the perspective of the foreign parents. This would be particularly true not in developed countries (e.g., Korea, the current research context) where the foreign parents often own more sophisticated expertise and knowledge than local firms, and thus the joint venture heavily relies on such know-how. In this regard, Steensma and Lyles (2000) argue that the foreign parent's active support in management activities (e.g., policy and planning formulation) facilitates the objectification of tacit knowledge so that the joint venture enables to apply and connect information to the large progression and the high extent of knowledge

acquisition. Kumar and Seth (1998) indicate that the foreign parent's participation in setting up the joint venture's planning and process is one of critical control mechanisms, and Makhija and Ganesh (1997) stress that use of appropriate control mechanisms are essential to facilitate knowledge acquisition in the joint ventures. This argument is consistent with findings by Wang et al. (1998). According to their empirical experiments, the level of knowledge acquisition is commonly determined by the foreign parent's involvement in the joint venture's policy and planning process. Thus,

H3 Participation in the policy and planning process increases the joint ventures' knowledge acquisition from foreign parents.

Staffing the top management positions

The right to appoint personnel to the top management positions in IJVs is considered by parents as a major control mechanism (Geringer and Hebert, 1989; Kumar and Seth, 1998; Petrovic and Kakabadse, 2003). Wang et al. (1998) compare two groups of joint ventures, which influence the staffing of an IJV's management positions and do not have the right to do so. From the empirical study, they find that the parent firms with the right feel greater control over their joint ventures and high satisfaction on performance. However, control by nominating the top management positions is not automatically given to the foreign parent, and it requires the parent's respective contributions on technology and expertise, which affects venture performance (Yan and Gray, 1994). The relationship between the foreign parents' right to appoint that position and the level of knowledge they contribute is also articulated by prior research. A number of researchers (e.g., Lin, 2005; Lyles and Salk, 1996; Makhija and Ganesh, 1997 among others) suggest that key managerial knowledge is most readily available to the foreign parent. Wang et al. (1998) argue that the provision of such knowledge is magnified by the foreign parents when they are satisfied by occupying the board of directors including chairman. Lyles and Salk (1996) further shed light on the role of top management in acquiring knowledge. They suggest that foreign parent's staffing in the top management facilitates knowledge acquisition because top management plays an important role in defining knowledge structure. Chalos and O'Connor (2004) similarly propose that recruitment and staffing of the joint venture's top management positions increases foreign parents' motivation to contribute their knowledge and thereby improves transmission of that knowledge in the joint ventures. From these explanations,

H4 Staffing the top management positions by the foreign parents increases the joint ventures' knowledge acquisition from them.

Communication between top managements and foreign parents

Communication between joint venture top managements and foreign parents refers to the frequency of strategic and operational interactions, which strengthen the tie and brings the IJVs into close relation with the foreign parents (Chalos and O'Connor, 2004). From the definition, it can be expected that improvement of the joint venture's capacity to acquire knowledge may be difficult without frequent communication of the children and the

parents. This is consistent with explanations by Cohen and Levinthal (1990) and Nonaka (1994). They suggest that idea development is typically affected by interactions, and a firm's capacity to acquire knowledge should be augmented by the greater frequency of communications because it encourages goal setting and the transmission of learning feedback (also see Chalos and O'Connor, 2004). Cohen and Levinthal (1990) further point out that the benefits through the communications are highly associated with the distribution of expertise. The fluent channel for communication commonly act as a catalyst for sharing of ideas, and in this regard, the IJVs enable to acquire more knowledge when there is the presence of the frequent communication between top managements and the foreign parents (Si and Bruton, 1999; Swierczek and Dhakal, 2004).

H5 Communication between top managements and foreign parents increases the joint ventures' knowledge acquisition from them.

Participation of foreign expatriates in key functional areas

Expatriate staffing has been characterized as one of common JV control mechanisms (Chalos and O'Connor, 2004). Foreign expatriate experts, who have better knowledge in functional areas such as marketing, finance/accounting and human resource management, are frequently employed in key joint venture positions. The reason is particularly derived from the fact that by concentrating authority in appointing expatriates in key functional positions the foreign parents can strengthen operational control with 50/50 or even a minority equity position (Wang et al., 1998). In addition, underlying the use of expatriate staffing as a control mechanism often results in better transmission of tacit information and know-how between the foreign parents and the IJVs because foreign expatriates possess superior management skills and techniques (Chalos and O'Connor, 2004; Lyles and Salk, 1996). This has been documented by many previous studies. For instance, Torbiörn (1994) and Park et al. (2006) suggest that expatriates are utilized by the foreign parents as prime movers for transferring knowledge to the joint ventures where the more expatriates deal with the functional areas, the larger extent of knowledge may be acquired. Based on the arguments presented above,

H6 Participation of expatriates in key functional areas increases the joint ventures' knowledge acquisition from the foreign parents.

Socialization with venture managers through active training

Socialization practices have been found to promote the transference of information via experience sharing (Chalos and O'Connor, 2004). Socialization is a knowledge conversion process that enables an organization to convert tacit knowledge to explicit information through which its managers interact with knowledge holder (Nonaka, 1994). There are various models of socialization practices to facilitate the flow of information between the foreign parents and the IJVs (Chalos and O'Connor, 2004). This process of converting tacit knowledge through sharing experience includes such practices as meeting, seminar, rotation of individuals from one organization to another and the development of a verbal information network (Kumar and Seth, 1998; Wang et

al., 1998). Among those practices, training of joint venture managers by foreign parents is a common vehicle not only for transmitting informational content (explicit knowledge) but also transferring socially embedded information (Lyles and Salk, 1996). Similarly, Fabry and Zeghni (2003) suggest that training program can be an important vehicle for knowledge acquisition because it helps joint venture managers to adapt their skills to modern equipment and practices through close socialization between the foreign parents and the IJVs. Thus,

H7. Socialization with venture managers through active training increases the joint ventures' knowledge acquisition from foreign parents.

Methodology

Sample and data collection

The data set used in this article are obtained from the *Foreign Direct Investment* (2002) published by the Korean government's Ministry of Commerce, Industry and Energy (MOCIE). The information is reliable, as it was the government's materials providing comprehensive data about listings of more than approximately 12,169 foreign investments and firms that have been operating across all industries in Korea. In particular, previous studies examining IJVs in Korea (e.g., Choi and Beamish, 2004; Pak and Park, 2004) also utilised the same information for their researches. Based on the publication, total of 688 Korean IJVs were drawn. The following sampling criteria are firstly suggested for selecting the 688 IJVs: (1) IJVs operating either manufacturing or service industries, (2) IJVs established with European, US and Japanese partners, and (3) IJVs in which either foreign partner holds more than 20 per cent or less than 80 per cent of the equity;

Both previous studies associated with Korean IJVs (Choi and Beamish, 2004; Pak and Park, 2004) focused on only manufacturing ventures. This research is differentiated from those studies, because it includes service industries to understand factors affecting knowledge acquisition in overall situations. In other words, by doing this, it is expected that the results generated will better explain the knowledge acquisition of IJVs as the whole phenomenon. In terms of the second criterion, Pak and Park (2004) indicate that the majority of MNEs, which have established IJVs with Korean local partners, come from three national origins represented by Japan, US, and European countries. This is also confirmed by the government figure. The 2002 edition of *Foreign Direct Investment* also presents that 96% of FDI in Korea is conducted by those three major investors. Finally, some researchers suggest that 5 to 10 per cent of foreign equity participation is also an IJV (e.g., Dhanaraj and Beamish, 2004). However, such a small share of equity ownership may not mirror the reality of joint ventures and the character of inter-partner relations (Demirbag and Mirza, 2000), and thus this research considers an entity with a foreign shareholding of less than 20% to be portfolio investments.

The survey questionnaires were posted to CEOs in those 688 IJVs. A total number of 153 questionnaires were returned from the respondents with a response rate of 22.2%. However, 25 out of the 153 returned questionnaires did not contain valuable information, as they were marked only in the same figures without careful consideration.

Consequently, 25 were found unusable for the empirical research, and thus 128 were chosen for further subsequent analysis (finally, 18.6% of response rate).

Variable Measurements

Dependent Variable

Dependent variable was measured by the extent to which IJVs acquired managerial knowledge from the foreign parents. Following to Lyles and Salk (1996), it was measured by using a five-point Likert scale (where 1=very little; 5=to a great extent). The list of skills/techniques on managerial knowledge included 24 areas: strategic decision making, planning under certain business environment, appropriate resource allocation, strategies to managerial rivalry, recruitment, employee relations, performance appraisal, motivation (rewards), budgeting, measuring cash flows, analyzing financial position, measuring financial performance, information system design, data management, total quality management, supply chain management, customer relationship management, development of powerful brand, promotion strategy, sales forecast, integration with other corporate activities, way to build an efficient team, management of product/service life cycle, and product planning. This measure was adapted from Yavas and Cavusgil (1989). The Cronbach's α was 0.94 for the 24 items of managerial knowledge, indicating adequate internal consistency (the details are available in the appendix A).

Factor analysis on these 24 items using varimax rotation identifies four dimensions (see table 1). The first factor includes 8 items. These items under the first factor solutions are all techniques, which determine the overall direction of IJV business by designing future plans based on corporate strategies. Thus, the first dimension is called as the practices of *corporate strategy and planning skills*. The second factor solution includes all 4 items associated with finance and accounting. In addition to those knowledge, information system design, and data management are additionally designated under the broad same categorization. Due to the addition of two variables, the dimension includes all skills associated with reckoning and computation. Given the emphasis on the characteristics of the dimension, this second dimension is nominated as *accounting, finance and data management skills*. The third factor includes 5 items associated with unique nature of marketing skills. Moreover, factor analysis also reveals that management of product life cycle is an acquirable set of knowledge along with relevant other marketing skills, and therefore is termed *management of product life cycle and marketing skills*. The final factor comprises the remaining 5 items including skills related to human relations, internal effectiveness, and organizational know-how, which make the dimension as *internal management / organizational skills*.

Table 1 Dimensions of managerial knowledge: Varimax rotated matrix

Knowledge	Factor 1	Factor 2	Factor 3	Factor 4
Integration of research functions with other corporate activities	.512			
Product/service planning	.553			
Strategic decision making	.790			
Planning under uncertain business conditions	.799			
Design and allocation of internal resources	.872			
Ways to respond to competition in the market	.755			
Total quality management	.705			
Supply chain management	.742			
Budgeting		.926		
Cash flow measurement		.943		
Financial position analysis		.910		
Financial performance measurement		.884		
Information system design		.624		
Data management		.676		
Management of the product /service life cycle			.822	
Customer relationship management			.890	
Brand development and management			.895	
Promotion strategy			.886	
Sales forecasting			.884	
Techniques to build efficient and effective research teams				.574
Recruitment and recruitment policy				.844
Management of employee relations				.911
Performance appraisal				.906
Employees motivation				.872
Eigenvalue	10.028	4.123	2.669	1.885
% of variance explained	41.785	17.179	11.120	7.854
Cumulative % of variance explained	41.785	58.964	70.084	77.938

Explanatory/Control Variables

Explanatory variables included in this empirical investigation are associated with formal and informal factors affecting the foreign parent's management and operational control over the joint ventures. They include ownership, influence on decision-making by integration with foreign network, participation in the policy and planning process, staffing the top management positions, communication between top managements and foreign parents, participation of foreign expatriates in key functional areas, and socialization with venture managers through active training. Among those explanatory variables, ownership is commonly measured by three different types of equity share in many previous studies: the foreign parent's majority ownership, equal share (i.e., 50:50), and the foreign parent's minority ownership (e.g., Lee et al., 1998; Lyles and Salk, 1996; Wang et al., 1998). Except the ownership factor, other explanatory variables are assessed by a five-point Likert scale (where 1=very little; 5=to a great extent), as they are associated with the respondents' opinion on the level of foreign parent's

control (Saunders et al., 2003).

With respect to control variables, industry characteristics, origin of foreign parents, intensity of market competition, IJV size, and IJV age are included in the model as a potential factors affecting the relationship between control and knowledge acquisition. Industry characteristics are perceived as an impact to the relationship (Lee et al., 1998), as service industry may more require a process to translate tacit into explicit knowledge than manufacturing industry (Minbaeva et al., 2003). Therefore, in this logic, this article controls for the industry characteristics with dummy variables (1=service industry, and 0=manufacturing industry). Origin of foreign parents is included because different attributes of foreign parents are likely to show different patterns and effects of foreign investments (Makino and Neupert, 2000; Tatoglu and Glaister, 1998). Hamel (1991) specially acknowledges that Japanese has a propensity to show different behavioral patterns in transferring knowledge to others. Thus, this is divided into dummy categories (1=IJV with Japanese parents, 0 otherwise). As pointed out by Barnett et al. (1994), intensity of market competition may motivate the foreign parents to bring more sophisticated knowledge and know-how into IJVs in order to win market competition against other competitors, which may lead to greater management and operational control by them. The respondents are asked to indicate the market competition on a five point Likert-type scale (thus, 1=very low level of competition, and 5=very high level of competition). Adopting from Lee et al. (1998), size and age are additionally included as control variables, and both variables are measured by number of employees (Pak and Park, 2004) and duration of joint venture agreement (Wang et al., 1998).

Analyses and Results

Two different statistical analyses are attempted to examine the relationship between control and knowledge acquisition. The first statistical experiment particularly focuses on the acquisition of managerial knowledge by ownership type via using ANOVA technique. The second, in contrast, looks at the impacts on control mechanisms on knowledge acquisition, and a series of multiple regressions are employed to explore the influences of control mechanisms on the acquisitions of different managerial knowledge. Before those investigations are conducted, the correlations among the explanatory variables are tested to scrutinize the multicollinearity problem (Saunders et al., 2003). Table 2 confirms that there is no serious multicollinearity problem and thus we include both explanatory and control variables in a model for the statistical analyses.

Table 2. Pearson correlation matrix ($N = 128$)

	<i>Mean</i>	<i>S.D</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
(1) Industry characteristics ^a	0.44	.498	1.000											
(2) Origin or foreign parents ^b	0.53	.904	-.084	1.000										
(3) Intensity of market competition	3.42	.936	-.095	-.018	1.000									
(4) IJV size	2.20	1.280	.063	.092	-.181*	1.000								
(5) IJV age	3.43	1.202	-.001	.106	-.015	.165	1.000							
(6) Ownership	1.96	.891	.092	-.290**	.133	-.035	-.043	1.000						
(7) Influence on decision-making by integration with foreign network	3.16	.988	.037	.014	-.172	-.176*	-.118	-.016	1.000					
(8) Participation in the policy & planning process	2.84	.811	-.003	-.150	-.166	.076	.028	.176*	.253**	1.000				
(9) Staffing the top management positions	2.41	1.090	.033	-.096	-.092	.129	.082	.195*	-.031	.267**	1.000			
(10) Communication between top managements & foreign parents	2.92	.936	.006	.052	-.052	.092	-.040	0.166	-.078	.224*	.471**	1.000		
(11) Participation of foreign expatriates in key functions	2.12	.657	-.020	.005	-.064	.034	.208*	.064	-.033	.331**	.241**	.303**	1.000	
(12) Socialization with joint venture managers through active training	2.61	.899	.020	.022	-.062	.066	.038	.015	-.028	.318**	.318**	.273**	.419**	1.000

*Note:*** $p < 0.01$; * $p < 0.05$ ^a Dummy variable: 1 = service industry; 0 = manufacturing industry^b Dummy variable: 1 = IJVs with Japanese parents, 0 otherwise

Acquisition of managerial knowledge by ownership type

Table 3 presents the results of the ANOVA employed to examine H1. We have initially suggested that the foreign majority owned joint ventures are likely to acquire more knowledge, because the foreign parents may contribute more skills and know-how to those ventures. However, the results generated by the statistical analysis report significantly different outcomes unlikely to the expectation. Table 3 shows that IJVs, which enjoy the highest level of knowledge acquisition, are 50/50 shared ownership joint ventures rather than foreign majority owned cooperative settings, though the local parent's dominant ownership reports the least extent of knowledge acquisition. This result rejects H1, but supports other researchers, who observe the phenomenon through a different lens. Lyles and Salk (1996), for example, argue that shared control requires more interaction among the parents and the IJV in order to discuss and negotiate decisions, which rapidly reduces conflict and misunderstandings. Beamish and Banks (1987) also suggest that shared control increases trust between partners and decreases incentives for opportunism, which promotes strong cooperation and accordingly contributes venture stability and success. These researchers view that knowledge acquisition is facilitated in the shared ownership, because it affords the opportunity for the joint venture to gain access to the foreign parents knowledge based on such interactions, trust, and cooperation (Lyles and Salk, 1996).

Table 3. ANOVA of knowledge acquisition by foreign ownership categories

	N	Mean	S.D.	F-Ratio	Sig.
Majority foreign owned IJVs	48	2.54	0.54	28.637	.000
Equally owned IJVs (50/50)	27	3.04	0.52		
Minority foreign owned IJVs	53	2.04	0.62		

The impact of control mechanisms on acquisition of managerial knowledge

Model 1 presents results for the acquisition of 'corporate strategy and planning skills' (hereafter, strategic planning skills). As the most important factor predicting the acquisition of the first dimension of managerial knowledge, the regression estimation clearly indicates that 'participation in the policy and planning process' plays a pivotal role ($p < 0.01$). In discussing the joint venture's knowledge acquisition, the significant influence of this factor is logical because the development of the strategic planning skills is probably difficult without the parents' contribution to the policy (strategy) formulation and the involvement in the planning procedure. Another key factor in acquiring strategic planning skills is 'influence on decision-making by integration with foreign network' ($p < 0.05$). This result also seems plausibly appealing since the foreign parent's share in executive and supervisory task can lessen the dissipative roam in devising strategic planning by bringing necessary experience and know-how. Although the size of the significance is marginal in the regression estimation, 'staffing the top

management positions' is also positively associated with the acquisition of strategic planning skills ($p < 0.10$).

Model 2 indicates key variables affecting the acquisition of 'accounting, finance and data management skills' (hereafter, financial skills). When the model estimates the second dimension of knowledge, the analysis provides support for 'staffing the top management positions' and 'participation of foreign expatriates in key functions' as the most influential factors ($p < 0.001$ in both factors). Interestingly, both factors are explanatory variables associated with mechanisms used to control over the joint ventures by dispatching expatriates from the foreign parents. This result suggests that expatriate managers both in management and operation mainly concerns the joint venture's financial areas and significantly influence on the relevant activities. In addition, the positive effect of 'participation in the policy and planning process' on the acquisition of financial skills proposes that the more the parent's active involvement in the joint venture's overall direction, the more improvement in the effective allocation of financial resources ($p < 0.10$). However, the negative impact of 'influence on decision-making by integration with foreign network' is somewhat surprising result ($p < 0.10$). The regression estimation reveals that the foreign parent's engagement in decision-making responsibility does not always perform as a positive ingredient in acquiring new managerial knowledge.

Model 3 explains the results for the acquisition of 'management of product life cycle and marketing skills' (hereafter, marketing skills). Among the explanatory variables, two of the effects are positively significant in the expected direction. Those mechanisms designated as key factors in acquiring the marketing skills are 'participation in the policy and planning process' and 'socialization with joint venture managers through active training' ($p < 0.05$ in both variables). These results underscore the fact that the acquisition of marketing knowledge is less promoted by the foreign parent's direct participation in either management or daily operation, but more enlarged by its intended careful strategic design and continuous education / training.

In contrast, model 4 shows results from the estimation of the relationship between control mechanisms and the acquisition of 'internal management / organizational skills' (hereafter, organizational skills). Our analysis generally suggests that the venture managers' personal contact and interface with the foreign parents significantly facilitates the absorption of this particular type of knowledge in the IJVs. As the first example, Model 4 shed light on the role of management communication in acquiring organizational knowledge ($p < 0.10$). In addition to communication between the management, organizational skills seem to be strongly transferred from the foreign parents when the functional managers have frequent tête-à-têtes with foreign expatriates in the daily routine ($p < 0.05$). According to results from Model 4, training, however, is the most effective catalyst to learn skills to appropriately manage organization and human resources ($p < 0.001$). These results are not surprising, given that organizational skills are related to managing people, and thus it is expected to be affected by direct interaction between knowledge holder and acquirer. Also, 'influence on decision-making by integration with foreign network' is marginally significant in the expected direction.

Model 5 looks at the influence of control mechanisms on the acquisition of overall management knowledge. Model 5 reveals that most of factors exercised by the foreign parents to control over the joint venture affect the

children's level of knowledge acquisition with one exception of communication. Our analysis particularly supports to the factor, 'staffing the top management positions' ($p < 0.001$), which highlights that the use of expatriate top management is a shortcut to transfer tacit and embedded knowledge to the IJVs. This is probably because expatriate top management is more familiar with the parent's system and knowledge. Thus, they create an effective channel for knowledge exchange and coordination between IJVs and parent firms (Torbiörn, 1994).

The series of regression analysis is presented in Table 4. This table shows critical control mechanisms affecting the acquisition of managerial knowledge, and indicates the significance level and the sign of the relationship between the explanatory and dependent variables for different types of knowledge. Table 5 summarizes major findings by this empirical experiment. Interestingly, control variables are generally insignificant in explaining an IJV's knowledge acquisition from its foreign parent. In contrast, this research finds that explanatory variables for the foreign parent's control mechanisms highly influence knowledge acquisition in the Korean context. The following illustrates the different impacts of each predictor in discussing the relationship between control mechanisms and knowledge acquisition.

Table 4. Control mechanisms affecting knowledge acquisition: multiple regression

	Model 1	Model 2	Model 3	Model 4	Model 5
	β	β	β	β	β
Industry characteristics	.030	-.030	-.135	-.001	-.057
Origin or foreign parents	-.128	.048	-.085	.093	-.095
Intensity of competition	.131	-.182*	.071	.042	.058
IJV size	-.084	-.019	.050	.005	.004
IJV age	-.019	-.045	.039	-.067	-.007
Influence on decision-making by integration with foreign network	.190*	-.147†	.032	.144†	.146*
Participation in the policy & planning process	.252**	.155†	.224*	-.092	.195**
Staffing the top management positions	.173†	.300***	.006	-.023	.410***
Communication between top managements & foreign parents	-.073	.052	.078	.151†	.035
Participation of foreign expatriates in key functions	-.027	.297***	-.032	.194*	.172*
Socialization with joint venture managers through active training	.116	-.055	.198*	.430***	.206**
Adjusted R ²	.159	.294	.086	.279	.507
F	3.186***	5.798***	2.090**	5.472***	12.858***

Note:

N = 128; † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Our results challenge the view that the foreign parent's majority ownership is the key determinant of knowledge

acquisition. ANOVA examination clearly indicates that 50/50 shared ownership is the more favorable ownership structure to achieve the highest level of knowledge acquisition than a certain parent's dominant equity position. Thus, H1 was rejected.

In most regression estimations, 'influence on decision-making by integration with foreign network' shows a significant explanatory power in the explanation of the joint venture's knowledge acquisition from the foreign parent. However, surprisingly, the sign of the relationship is negatively associated with the acquisition of financial skills, which prevents from full support for H2. 'Participation in the policy & planning process' is an important control mechanism that helps the IJVs to learn new knowledge stemming from foreign parent. Although the acquisition of marketing skills is an exception, this factor is highly associated with learning from foreign parent with a good level of significance. In each case, a positive sign indicates that the more foreign parents participate in the policy and planning process the more likely the IJVs have an ability to digest foreign knowledge. Therefore, H3 was strongly supported. 'Staffing the top management positions' is another key component, which enables the IJVs to absorb new knowledge by coordinating the venture activities with the foreign parents. The factor is highly significant in acquiring most of different types of skill as well as acquiring overall knowledge from the foreign parents; hence H4 was confirmed. On the contrary to other control mechanisms, the regression results from 'communication between top managements & foreign parents' are rather disappointing, because it is moderately significant only in the acquisition of organizational skills; accordingly H5 was partially supported.

Table 5. Summary of major findings

	Hypotheses	Results	Remarks
H1	Ownership control by the foreign parents increases the joint ventures' knowledge acquisition from the parents.	Rejected	
H2	Influence on decision-making by integration with foreign network increases the joint ventures' knowledge acquisition from foreign parents.	Partially supported	The statement H2 is negatively associated with the acquisition of financial skills.
H3	Participation in the policy and planning process increases the joint ventures' knowledge acquisition from foreign parents.	Supported	
H4	Staffing the top management positions by the foreign parents increases the joint ventures' knowledge acquisition from them.	Supported	
H5	Communication between top managements and foreign parents increases the joint ventures' knowledge acquisition from them.	Partially supported	The statement H5 is significantly related to organizational skill learning, but not other know-how.
H6	Participation of expatriates in key functional areas increases the joint ventures' knowledge acquisition from the foreign parents.	Supported	
H7	Socialization with venture managers through active training increases the joint ventures' knowledge acquisition from foreign parents.	Supported	

In considering of interactions between the foreign parents and venture employees, both 'participation of foreign

expatriates in key functional areas' and 'socialization with venture managers through active training' show a positive and statistical significance in most regression estimations. Thus, H6 and H7 were supported. The foreign expatriates are expected to possess superior knowledge in operating functional areas, and thus this finding confirms that interaction with knowledge holder in daily routine significantly facilitates knowledge acquisition. The positive association of these mechanisms with organizational skills suggests that human resource management practices can be improved by the internal communication and interplay with foreign parents, which have better organizational management system. With respect to the influences of training on knowledge acquisition, this article particularly finds that 'socialization with venture managers through training' is a significant contributing force for the development of organizational skills.

Discussion and Conclusion

In the joint venture established between foreign and local parents, the type of knowledge that they want to acquire tends to be asymmetrical. That is, local parents use IJVs to transfer knowledge about unfamiliar market and host environment to foreign partners, whereas foreign parents offer opportunities to access internationally diffused and integrated complementary assets such as the latest technology or management skills through the framework of IJV (Lyles and Salk, 1996; Park and Giroud, 2006). Accordingly, when knowledge acquisition is particularly a prime motive for joint venture formation, the local parent's dominant equity position would not help to assure the children's acquisition of managerial knowledge. Moreover, other empirical studies such as Lyles and Salk (1996) suggest that dominant ownership is a serious obstacle for venture success. This is because one party's dominant ownership leads to conflicts that arise from the unilateral decision on the use of organizational assets and another counterpart's antipathy. This attribute often impedes horizontal flow of knowledge between the parents, and retards the joint venture's knowledge acquisition. In contrast, if the ownership is designed on the basis of balanced power, it increases trust between partners and provides much incentive for cooperation. In this situation, each partner would have greater ability to ensure that the joint venture can be a vehicle to acquire mutual knowledge and provide effective information processing (Makhija and Ganesh, 1997).

Makhija and Ganesh (1997) argue that control is a purposeful activity that affects the acquisition, interpretation, and dissemination of knowledge within an organizational setting. As previously discussed, management control is different from ownership (Lin, 2005; Mjoen and Tallman, 1997; Steensma and Lyles, 2000). While ownership refers to unilateral power, which can make a decision how to dispose organizational resources (Steensma and Lyles, 2000), the ultimate purpose of control process is to ensure that the required resources, including knowledge, are appropriately managed to attain mutual goals and interests (Makhija and Ganesh, 1997). Consequently, control mechanisms exercised by the foreign parents are often seen as crucial components that they use to transfer managerial knowledge, instead of acquiring information from their local counterparts (Lin, 2005).

Despite the importance of the control mechanisms on the acquisition of managerial knowledge in the IJVs,

however, there is a serious research gap to fill in the existing literature. In other words, although the selective use of control mechanisms significantly helps to acquire managerial knowledge by managing the development, exchange, and sharing of information within the IJVs the relationship between control mechanisms and knowledge acquisition has received little attention from previous studies (Lin, 2005; Makhija and Ganesh, 1997). While control is highlighted in the literature on IJVs as being important characteristics of this organisational form, the focus has been the effect of control on the linkage with organizational performance (Geringer and Hebert, 1989; Wang et al., 1998) and the control mechanisms – knowledge acquisition association has been attended by only exceptional studies. In addition, when we consider the impacts of synthesized control mechanisms on the acquisition of several different types of managerial knowledge the research gap seems to be even greater.

As the expectation, our results indicate that control mechanisms largely play a primary role in the joint venture's acquisition of managerial knowledge from the foreign parents, and accordingly the appropriate devise of these control mechanisms is important. This is consistent with Lin (2005), who documents that the foreign parent's management control is an enabling condition for local partner's knowledge acquisition. Despite the general evidences given to support the importance of control mechanisms in acquiring knowledge, this article finds two surprising results. 'Influence on decision-making by integration with foreign network' is consistently significant as indicators of knowledge acquisition. However, the sign of significance turns into a negative signal in the acquisition of financial skills. Likewise, previous studies also differently propose the impact of the predictor on learning. Some researchers suggest that the enlarged control by the foreign parent and tight integration to the foreign network can be used as a hurdle, which impedes unwanted transference of the foreign parent's "crown jewels" and subsequently reduces the children's knowledge acquisition (Berdrow and Lane, 2003; Oxley, 1999; Steensma and Lyles, 2000). On the other hand, its rival school argues that the foreign parent's control through larger and more tight foreign network is anticipated to enjoy superior knowledge transfer, because it provides a greater opportunity for accessing and learning relevant information and capabilities (Kale et al., 2000). In this regard, this seems to suggest that future research needs to further investigate the relationship between management control via network and knowledge acquisition.

Another mechanism, which fails to strongly support the initial anticipation, is related to the factor, 'communication between top managements and foreign parents'. The reason why this article has yielded such results may be found from Fabry and Zeghni (2003). They find that managers generally suffer a lack of ability to communicate in transitional countries because the management style is highly hierarchical. Similarly to the organizations in those countries, the Korean management often suffers communication problems in linking organizational members, though the internal flow of expertise within the IJVs is dependent upon information sharing with employees (Barkema and Vermeulen, 1998; Nonaka, 1994). In other words, through better communication, knowledge becomes accessible to other employees, because it lowers the obstacles to the sharing of information, which is derived from the foreign parents. However, the Korean management's typical feature characterized by the strict rigidity on authority may be the detrimental component and it may be the main ground to generate such partial support for the knowledge acquisition.

The key lesson from this empirical study is associated with the question, how control mechanisms relates to knowledge acquisition in the IJVs. According to our findings, the most of control mechanisms introduced and exercised by the foreign parents are strong predictors of knowledge acquisition, which implies that the parents play a pivotal role in assisting the learning to take place. In particular, both management and operational controls provide crucial opportunity for the children to understand and assimilate the new managerial knowledge, which may, in turn, lead to performance improvement. As shown, although the relationship between control mechanisms and knowledge acquisition is close, the control – learning link has apparently been overlooked by previous studies. While recent few studies seem to embark upon the cultivation of the underdeveloped research area, our study is different from those existing literature in that we attempt to synthesize both management and operational controls in order to scrutinize the consequence of different mechanisms on the acquisition of a range of managerial knowledge. Our study therefore contributes significantly to the body of literature and the understanding of IJVs, and the role of foreign parents in transferring knowledge. By doing this, we suggest that control mechanisms are important means for influencing the dynamics of the joint venture's knowledge acquisition, and thus the foreign parents should carefully design those instruments through which such learning takes place in the IJVs.

Although our study finds some interesting results, its value is limited in that the models are tested in a certain national context. Therefore, the important next step is to compare the control – knowledge acquisition association with the results in the different countries. We also suggest that future research should take account of the impacts of other dimensions of control (i.e., the extent of control and the focus of control) on knowledge acquisition in the IJVs. Since control is the process in which the parents influence managerial and operational decisions (Hebert, 1996), other dimensions of control may also affect the children's level of knowledge acquisition from the foreign parents. In addition, the explanatory variables included in our study are limited to emphasize the relationship between the control mechanisms and knowledge acquisition. Future studies should consider an alternative and more fully specified models accounting for potential moderation effects (Lin, 2005, Lyles and Salk, 1996). Finally, the results generated by 'influence on decision-making by integrating joint venture with foreign network' are not consistent, showing both positive and negative signs by turns according to different types of knowledge. Thus, the effect of this mechanism needs to be further investigated by other survey experiments.

References

- Barkema, H. G. and Vermeulen, F. (1998), International expansion through start-up or acquisition: A learning perspective, *Academy of Management Journal* 41(1): 7-26.
- Barnett, W. P., Greve, H. R. and Park, D. Y. (1994), An evolutionary model of organizational performance, *Strategic Management Journal* 15: 11-28.
- Beamish, P. W. and Banks, J. C. (1987), Equity joint venture and the theory of the multinational enterprise, *Journal of International Business Studies* 18(2): 1-16.
- Bonache, J. and Brewster, C. (2001), Knowledge transfer and the management of expatriation, *Thunderbird international Business Review* 43(1): 145-168.
- Barringer, B. R. and Harrison, J. S. (2000), Walking a tightrope: Creating value through interorganizational relationships, *Journal of Management* 26(3): 367-403.

- Berdrow, I. and Lane H. W. (2003), International joint ventures: Creating value through successful knowledge management, *Journal of World Business* 38: 15-30.
- Cannice, M. V., Chen, R. R., and Daniels, J. D. (2003), Managing international technology transfer risk: A case analysis of U.S. high-technology firms in Asia, *The Journal of High Technology Management Research* 14(2): 171-187.
- Chalos, P. and O'Connor, N. G. (2004), Determinants of the use of various control mechanisms in US-Chinese joint ventures, *Accounting, Organizations and Society* 29: 591-608.
- Chen, S-F. and Hennart, J-F. (2002), Japanese investors' choice of joint ventures versus wholly-owned subsidiaries in the US: The role of market barriers and firm capabilities, *Journal of International Business Studies* 33(1): 1-18.
- Choi, C-B and Beamish, P. W. (2004), Split management control and international joint venture performance, *Journal of International Business Studies* 35: 201-215.
- Cohen, W. M. and Levinthal, D. A. (1990), Absorptive capacity: A new perspective on learning and innovation, *Administrative Science Quarterly* 35: 128-152.
- Demirbag, M. and Mirza, H. (1996), Inter-partner reliance, exchange of resources and partners' influence on joint venture's strategy. Asia Pacific Research and Development Unit Discussion Paper Series, Bradford, UK: University of Bradford Management Centre.
- Demirbag, M. and Mirza, H. (2000), Factors affecting international joint venture success: An empirical analysis of foreign-local partner relationships and performance in joint venture in Turkey, *International Business Review* 9: 1-35.
- Dhanaraj, C. and Beamish, P. W. (2004), Effect of equity ownership on the survival of international joint ventures, *Strategic Management Journal* 25: 295-305.
- Fabry, N. H. and Zeghni, S. H. (2003), FDI in CEECs: How do Western investors survive? *Thunderbird International Business Review* 45(2): 133-147.
- Geringer, J. M. and Hebert, L. (1989), Control and performance of international joint ventures, *Journal of International Business Studies* 10(2): 235-254.
- Glaister, K. W. (1995), Dimensions of control in UK international joint ventures, *British Journal of Management* 6: 77-96.
- Grossman, S. J. and Hart, O. D. (1986), The costs and benefits of ownership: A theory of vertical and lateral integration, *Journal of Political Economy* 94: 691-719.
- Hamel, G. (1991), Competition for competence and inter-partner learning within international strategic alliances, *Strategic Management Journal* 12: 83-103.
- Hebert, L. (1996), Does control matter? A path model of the control-performance relationship in international joint ventures, *Management International* 1(1): 27-38.
- Hitt, M. A., Dacin, M. T., Levitas, E., Arregle, J. and Borza, A. (2000), Partner selection in emerging and developed market contexts: Resource-based and organizational learning perspectives, *Academy of Management Journal* 43(3): 449-467.
- Kale, P., Singh, H. and Perlmutter, H. (2000), Learning and protection of proprietary assets in strategic alliances: Building relational capital, *Strategic Management Journal* 21: 217-237.
- Killing, J. P. (1983), *Strategies for joint venture success*, New York: Praeger.
- Koza, M. P. and Lewin, A. Y. (1998), The co-evolution of strategic alliances, *Organization Science* 9(3): 255-264.
- Kumar, S. and Seth, A. (1998), The design of coordination and control mechanisms for managing joint venture – parent relationships, *Strategic Management Journal* 19(6): 579-599.
- Lane, P. J., Salk, J. E., and Lyles, M. A. (2001), Absorptive capacity, learning, and performance in international joint ventures, *Strategic Management Journal* 22: 1139-1161.
- Lecraw, D. (1984), Bargaining power, ownership, and profitability of transnational corporations in developing countries, *Journal of International Business Studies* 15: 27-42.
- Lee, J-R., Chen, W-R., Kao, C. (1998), Bargaining power and the trade-off between the ownership and control of international joint venture in China, *Journal of International Management* 4: 353-385.
- Leonard-Barton, D. (1995), *Wellsprings of knowledge: Building and sustaining the sources of innovation*, Boston, MA: Harvard Business School Press.
- Lewis, J. D. (1990), *Partnership for profit: Structuring and managing strategic alliances*. New York: Free Press.
- Li, X. (2003), Control in Japanese-Chinese joint ventures: Antecedent factors and effect on performance from the Japanese viewpoint, *Asian Business & Management* 2: 371-391.
- Lin, X. (2005), Local partner acquisition of managerial knowledge in international joint ventures: Focusing on foreign management control, *Management International Review* 45(2): 219-237.
- Luo, Y., Shenkar, O. and Nyaw, M-K. (2001), A dual parent perspective on control and performance in

- international joint ventures: Lessons from a developing economy, *Journal of International Business Studies* 32(1): 41-58.
- Lyles, M. A. and Salk, J. (1996), Knowledge acquisition from foreign parents in international joint ventures: An empirical examination in the Hungarian context, *Journal of International Business Studies* 27(5): 877-903.
- Makhija, M. V. and Ganesh, U. (1997), The relationship between control and partner learning in learning-related joint ventures, *Organization Science*, 8(5): 508-527.
- Makino, S. and Neupert, K. E. (2000), National culture, transaction cost, and the choice between joint venture and wholly owned subsidiary, *Journal of International Business Studies* 31(4): 705-713.
- Mjoen, H. and Tallman, S. (1997), Control and performance in international joint venture, *Organization Science* 8(3): 257-274.
- Ministry of Commerce, Industry and Energy (2000), *Foreign Direct Investment*, Seoul: MOCIE Press.
- Minbaeva, D., Pedersen, T., Bjorkman, I., Fey, C. F., and Park, H. J. (2003), MNC knowledge transfer, subsidiary absorptive capacity, and HRM, *Journal of International Business Studies* 34: 586-599.
- Mutinelli, M. and Piscitello, L. (1998), The entry mode choice of MNEs: An evolutionary approach, *Research Policy* 27(5): 491-506.
- Nagarajan, A. and Mitchell, W. (1998), Evolutionary diffusion: Internal and external methods used to acquire encompassing, complementary and incremental technological changes in the lithotripsy industry, *Strategic Management Journal* 19: 1063-1077.
- Nonaka, I. (1994), A dynamic theory of organizational knowledge creation, *Organization Science* 5(1): 14-37.
- Oxley, J. E. (1999), Institutional environment and the mechanisms of governance: The impact of intellectual property protection on the structure of inter-firm alliances, *Journal of Economic Behavior & Organization* 38(3), 283-308.
- Pak, Y. S. and Park, Y-R. (2004), A framework of knowledge transfer in cross-border joint ventures: An empirical test of the Korean context, *Management International Review* 44(4): 417-434.
- Park, B. I. and Giroud, A. (2006), Acquisition of managerial knowledge in international joint ventures: The Korean context, Paper Presented at the 32nd Annual Conference of European International Business Academy, Fribourg, Switzerland.
- Park, B. I., Giroud, A., and Mirza, H. (2006), Knowledge acquisition in IJVs: Has the Asia crisis changed the rule of the game in Korea?, Paper Presented at the 23rd Annual Conference of Euro-Asia Management Studies Association, Seoul, Korea.
- Petrovic, J. and Kakabadse, N. K. (2003), Strategic staffing of international joint ventures (IJVs): An integrative perspective for future research, *Management Decision* 41(4): 394-406.
- Phan, P. H. and Peridis, T. (2000), Knowledge creation in strategic alliances: Another look at organizational learning, *Asia Pacific Journal of Management* 17, 201-222
- Powell, W. W. (1998), Learning from collaboration: Knowledge and networks in the biotechnology and pharmaceutical industries, *California Management Review* 40(3): 228-240.
- Ramaswamy, K., Gomes, L. and Veliyath, R. (1998), The performance correlates of ownership control: A study of U.S. and European MNE joint ventures in India, *International Business Review* 7: 423-441.
- Rebentisch, E. S. and Ferretti, M. (1995), A knowledge asset-based view of technology transfer in international joint ventures, *Journal of Engineering and Technology Management* 12: 1-25.
- Saunders, M., Lewis, P. and Thornhill, A. (2003), *Research methods for business students*, Harlow: Financial Times Prentice Hall.
- Schaan, J. L. (1983), Parent control and joint venture success: The case of Mexico. Unpublished doctoral dissertation. University of Western Ontario.
- Si, S. X. and Bruton, G. D. (1999), Knowledge transfer in international joint ventures in transitional economies: The China experience, *Academy of Management Executives* 13(1): 83-90.
- Steensma, H. K. and Lyles, M. (2000), Explaining IJV survival in a transitional economy through social exchange and knowledge-based perspectives, *Strategic Management Journal* 21: 831-851.
- Stuart, T. E. (2000), Interorganizational alliances and the performance of firms: A study of growth and innovation rates in a high-technology industry, *Strategic Management Journal* 21: 791-811.
- Swierczek, F. W. and Dhakal, G. P. (2004), Learning and its impact on the performance of manufacturing joint ventures in developing countries, *Technovation* 24: 53-62.
- Tatoglu, E. and Glaister, K. W. (1998), Western MNC's FDI in Turkey: An analysis of location specific factors, *Management International Review* 38: 133-159.
- Torbiörn, I. (1994), Operative and strategic use of expatriates in new organizations and market structures, *International Studies of Management & Organization* 24(3): 5-17.
- Tsang, E. W. K. (2002), Acquiring knowledge by foreign partners from international joint venture in a transition economy: Learning-by-doing and learning myopia, *Strategic Management Journal* 23: 835-854.

- Wang, P., Wee, C. H. and Koh, P. H. (1998), Control mechanisms, key personnel appointment, control and performance of Sino-Singaporean joint ventures, *International Business Review* 7: 351-375.
- Williamson, O. E. (1981), The economics of organization: The transaction cost approach, *American Journal of Sociology* 87(3): 548-577.
- Yan, A. and Gray, B. (1994), Bargaining power, management control, and performance in United States-China joint ventures: A comparative case study, *Academy of Management Journal* 37: 1478-1517.
- Yan, A. and Gray, B. (2001), Antecedents and effects of parent control in international joint ventures, *Journal of Management Studies* 38(3): 393-416.
- Yavas, U. and Cavusgil, T. (1989), Management know-how transfer to developing countries: Efficacy of specialized training courses, *Management International Review* 29(3): 72-80.
- Zhang, Y. and Li, H. (2001), The control design and performance in international joint ventures: a dynamic evolution perspective, *International Business Review* 10: 341-362.

Appendix A. Cronbach's alpha and mean value

Types of Knowledge	Items	Cronbach's alpha ($\alpha = .9372$)	Means
<i>Corporate strategy and planning skills</i>	Integration of research functions with other corporate activities	.9361	2.53
	Product/service planning	.9360	2.55
	Strategic decision making	.9344	2.63
	Planning under uncertain business conditions	.9327	2.66
	Design and allocation of internal resources	.9326	2.79
	Ways to respond to competition in the market	.9341	2.69
	Total quality management	.9344	2.44
	Supply chain management	.9343	2.27
<i>Accounting, finance and data management skills</i>	Budgeting	.9341	2.19
	Cash flow measurement	.9338	2.09
	Financial position analysis	.9328	2.19
	Financial performance measurement	.9340	2.19
	Information system design	.9346	2.24
	Data management	.9325	2.28
<i>Management of product life cycle and marketing skills</i>	Management of the product/service life cycle	.9352	2.51
	Customer relationship management	.9356	2.58
	Brand development and management	.9358	2.59
	Promotion strategy	.9348	2.59
	Sales forecasting	.9346	2.60
<i>Internal management / organizational skills</i>	Techniques to build efficient and effective research teams	.9382	2.89
	Recruitment and recruitment policy	.9344	2.19
	Management of employee relations	.9362	2.10
	Performance appraisal	.9354	2.22
	Employees motivation	.9346	2.20