THE NON-LINEAR RELATIONSHIP BETWEEN OWNERSHIP, CONTROL, AND PERFORMANCE IN INTERNATIONAL JOINT VENTURES

Sangcheol Song[1]
Bryant University, USA
E-mail: **ssong@bryant.edu**

ABSTRACT

This study examines the relationship between ownership, management control, and performance in international joint ventures (IJVs). In particular, this study examines a non-linear relationship among these three constructs. Considering non-ownership factors affect management control and performance in IJVs, our model includes the types of contributing resources and level of partner credibility. Empirical results show that the effective control and performance of IJVs are affected not only by majority ownership but also by the types of key resources contributed by IJV partners as well as the ways these resources are combined for the joint businesses. Furthermore, we find that relational assets like trust between partners influence management control and performance as well.

Key words: International joint ventures, ownership, control, performance, resources, trust.

JEL Codes: D22, F23

[1] Sangcheol Song, Bryant University, 1150 Douglas Pike, Smithfield, RI, USA,Telephone: 4 01-232-6745.

I. INTRODUCTION

It is notable that international joint ventures (IJVs) fail without achieving the intended objectives due to conflicts between partners, diffusion of exclusive knowledge, or the possibility of fostering future competitors (Serapio & Cascio, 1996; Das & Teng, 2000; Hennart, Kim, & Zeng, 1996). These unique characteristics of IJVs explain why there has been an increasing volume in studies on post-IJV management with special focus on control and performance.

In IJVs, the efficient control over the joint business with foreign partners is an urgent matter for multinational companies, because effective management control is necessary to maximize the benefits and minimize the costs. For this reason the relationship between ownership, management control, and performance has been importantly examined in the IJV literature. However, the past studies have not analyzed the relationship of these three constructs systematically, and thus have not yielded consistent results. Regarding these divergent findings, we find that most of prior studies assumed that ownership was the only way to exert control over IJVs, and therefore higher ownership brought about higher management control and performance in IJVs.

However, we find from some relevant literature that in IJVs in developing countries, the relationship is not always linear. For example, Lecraw (1984) found a U-shaped relationship between management control and ownership, and J-shaped relationship between ownership and performance in IJVs conducted in five Asian countries. Regarding these findings, Lecraw argued that equal ownership structure disperses the management control among participating firms and thus negatively affects effective management performance. His finding on non-linear relationship implies in another aspect that even minority ownership holders are able to exert control over IJV operations.

The question at hand is: "what factors explain these potential non-linear relationships between ownership, management control, and performance in IJVs?" The purpose of this research is to examine those factors. For empirical analyses, we utilized a dataset of IJVs conducted by Korean MNCs in developing countries. We found from our empirical test that the type of contributing resources of each partner and the degree of partner credibility explain these non-linearly relationship.

II. THEORETICAL BACKGROUND

A. Ownership and Control in IJVs

Management control is highly important for the enterprises that are attempting to achieve their goals via IJVs (Yan & Gray, 1994). Since insufficient control limits its regulation of the activities, usage of key resources, and strategic goal of its parent firm, IJV firms usually try to obtain an optimal level of control

(Stopford & Wells, 1972; Anderson & Gatignon, 1986). In IJVs, the ownership level of each alliance partner commonly reflects the relative control level of each partner (Fagre & Wells, 1982; Blogett, 1991; Yan & Gray, 1994).

However, some studies find that ownership level does not necessarily reflect the actual control level. For instance, Yan and Gray (1994) attempted to explain the relationship between ownership and control under the framework of not only resource-based bargaining power, but also context-based bargaining power. They examined these two bargaining powers using four IJV cases between US MNCs and Chinese firms. They found a non-linear relationship between ownership level and control level. Based on this finding, they argued that other non-ownership factors such as resources, mutual trust or goal-sharing explain the non-linear relationship (Beamish, 1987; Koenig & Van Wijk, 1991).

B. Contributing Resources and Bargaining Power

The relationship between IJV ownership and management control can be influenced by the resources that each IJV partner actually contributes. The bargaining power perspective argues that an IJV partner can acquire majority ownership based on the relative importance of its contributing resources to the focal IJV. Relevantly, Pfeffer and Salancik (1978) argued that IJV partners have interdependent relationship based on nature of contributing resources of each partner. Inkpen and Beamish (1997) also argued that management control of IJV partner firms relies on the importance of resources that each partner provides. For example, if an IJV partner possesses the ability to innovate or to explore the local markets, the company can have relatively higher bargaining power than its partner(s) (Fagre & Wells, 1982; Pan, 1996). Based on its higher bargaining power, the firm can take a majority ownership position. Another resource type relating to relative bargaining power is a firm’s relationship to local government. Since local government influences the primary investment policies and rules (Lecraw, 1984; Shenkar, 1990; Pan, 1996), relationship to local government is commonly considered the most important factor for IJV businesses, especially in developing countries (Kobrin, 1988; Gomes-Casseres, 1990; Blogett, 1991; Gray & Yan, 1992).

In sum, the relative bargaining power of each JV partner is influenced by it contributing resource type. And it implies that a firm with small ownership can have a higher bargaining power and management control by providing specific contributing resources to IJV businesses.

C. Investment Region and Partner Credibility

The relationship between ownership, management control, and performance in IJVs is also affected by the characteristics of the regions where IJVs are taking place. Some studies examine this relationship in developing countries relative to developed countries. For example, Killing (1983) found out that while in IJVs in developed countries the relationship between ownership and control is positive, but in developing countries, the relationship is weaker. This is similar to the result of the studies of Beamish (1984) and Tomlinson (1970) who both found that strong control affects lower performance in IJVs in developing countries.

In the joint businesses among different national firms, social factors become more important for management control and performance. MNCs cannot control the danger of IJV businesses in other countries by the formal contract such as ownership only (Simon, 1991). Madhok (1995) argued that besides official mechanisms for potential conflicts among IJV partners, social informal mechanisms such as well-nurtured relationship or social reputation help firms reduce potential risks relating to shared ownership (Johanson & Mattsson, 1987; Jarillo, 1988).

III. RESEARCH METHODLOGY

A. Data and Sample

Our primary sample comes from "The current status of foreign subsidiaries of Korean MNCs," published half-quarterly from the Bank of Korea. The observation years of this study are 1990 to 2001 when the IJVs of Korean firms were the most active in Korean FDI history. We define an investment with an ownership level of 5 to 95% as a JV. We included in our sample two-party joint ventures between one Korean subsidiary and one local partner in a host country. We consider only cases where joint ventures lasted for at least three years which is considered the minimum period that affects alliance stability (Beamish, 1984). Additionally we only incorporate investment amounts over 300,000 US Dollars which is commonly considered a meaningful investment amount in IJVs.

Through these selection criteria, we incorporate 202 IJVs for our survey. We used both phone and paper surveys for managers in the global business department of each company. The survey was comprised of three parts. We first confirmed the information about its IJV and foreign subsidiaries. We double-checked initial ownership status, investment area, investment amount, and investment year. Second, we evaluated prior experience with its IJV partner, partner credibility, and contributing resources of each partner. Last, we inquired about the meaning of ownership in its IJV, motive for initial ownership, and overall satisfaction with its IJV business. Finally 99 IJV cases were collected and used for the primary analysis. T-test shows that there is no significant difference in the two groups (202 vs. 99) in terms of ownership, investment areas, and investment amount.

In IJVs in Indonesia and Malaysia, Korean firms have invested more in installation industries related to natural resources such as leather, cloth, wood, and oils. On the other hand, in China and Eastern-European countries, Korean MNCs have invested in manufacturing and assembling industries. Regarding the partner types, there are considerable differences between two groups. In south-eastern Asia, including Malaysia and Indonesia, local firms were the main IJV partners of Korean MNCs. However in China and Eastern European countries, the local government and public enterprises are the main IJV partners. This is most likely due to these countries attracting industrial projects with foreign enterprises during and after their economic privatization period.

B. Variables and Measures

In this study, following Killing (1983) or Beamish (1988), we measured overall management control of each IJV partner as to how two JV partners share authority and responsibility in ten decision-making areas in IJVs: raw materials acquisition, product design, quality control, pricing, selling, hiring and training a legal manager, sales estimates, cost objectives, cost payment, and funding. We measured the relative importance of each item using a seven Likert scale and averaged total scores. The Cronbach's alpha is reliable at 0.75.

Regarding the measure of IJV performance, we used the averaged score in the four items suggested by Geringer and Hebert (1991): satisfaction of the parent firm with alliance performance, efforts to achieve intended goals, fit between efforts and goals, fit between the initial goal and current business. The Cronbach's alpha is reliable at 0.85.

We divided IJV ownership into three types following Blodegtt's (1991) way: minority, equal, and majority ownership. We considered 49% as a minor ownership and 51% as major ownership.

In order to examine the influences of the resources that affect ownership and control, we considered the two types of resource combinations as Blodgett (1991) did: 1) technology vs. relationship to government; 2) technology vs. local knowledge.

In order to measure partner credibility we used three items by a seven Likert scale following Inkpen (1995): partner's execution of the contract, former experiences with the partner, and perceived partner's opportunism.

IV. EMPIRICAL FINDINGS

First, we attempt to find the relationship among ownership, control, and performance using whole sample. There are considerable correlation between ownership and control at the 1% significance level. This result is the same as prior research, because in the case of Korean enterprises operating in developing countries, the managers want active and leading participation in the industries based on more ownership and control involvement. However, the finding that the relationship between ownership and control, and control and performance is lower supports the argument of this research that control and performance are affected by other factors.

Table 1. Correlation of Ownership, Control, and Performance

	Ownership	Control	Performance
Ownership	1.0	.38***	.07
Control		1.0	.10
Performance			1.0

***. Correlation is significant at the 0.01 level (two tailed test)

A. The Impact of Contributing Resources

According to the bargaining power perspective, the types of contributing resources of each partner affect the relative bargaining power and control. Our results say that in the first resource combination (technology vs. relationship to government) there are no differences between ownership and control level, but the effect of control on performance is considerable. This finding implies that even when Korean subsidiaries have minor ownership their control is high due to the enhanced bargaining power by more advanced technology. In other words, in developing countries local firms are more interested in advanced technology from other countries' MNCs. Therefore the technology provided by Korean MNCs enables their foreign subsidiaries to exert stronger control and higher performance.

On the other hand, in the second combination (technology vs. local knowledge) the relationship between ownership and control is very high, but that of control and performance is very low. This finding implies that the ownership level determines management control more than resource-based bargaining power. In IJVs, technology and local knowledge are equally important for IJV success. Relevantly, some research has emphasized the importance of the local knowledge in IJVs between foreign enterprises and local enterprises, and shared control is better than dominant control. Management with equal opportunity is more important than dominant control, and the satisfaction of the cooperation is actually higher in an equal ownership situation.

Table 2. Correlation among ownership, control, and performance: In case of (Technology vs. Relationship to government)

	Ownership	Control	Performance
Ownership	1.00	0.14	0.22
Control		1.00	0.32**
Performance			1.00

Table 3. Correlation among ownership, control, and performance: In case of (Technology vs. Local knowledge)

	Ownership	Control	Performance
Ownership	1.00	0.62***	-0.12
Control		1.00	-0.14
Performance			1.00

Table 4 One-way ANOVA Result

Contributing Resource types	Ownership Types	Control			
		N	Mean	F-value	Significance
Technology + Relationship to Government	Minority	24	0.68	0.07	0.90
	50:50	15	0.70		
	Majority	13	0.70		
Technology + local knowledge	Minority	24	0.52	8.68	0.00**
	50	15	0.72		
	Majority	13	0.80		

Table 5 One-way ANOVA Result (Cont'd)

Contributing Resource types	Ownership Types	Performance			
		N	Mean	F-value	Significance
Technology + Relationship to Government	Minority	14	4.10	0.10	0.92
	50:50	8	4.08		
	Majority	25	3.78		
Technology + local knowledge	Minority	14	4.06	0.94	0.35
	50:50	8	5.22		
	Majority	25	8.90		

1) The first resource and ownership type are possessed by Korean foreign subsidiaries
2) The second resource and ownership type are possessed by local partner.
3) ***(**): Correlation is significant at the 0.01(0.05) level (two-tailed test)

B. **The Impact of Partner Credibility**

The mutual trust between IJV partners would have important influences on control and performance in actual IJV management. Particularly in the case of investments in developing countries, non-financial factors such as the mutual trust or the social contract are most important for the control-performance relationship (Johanson & Mattsson, 1987; Jarillo, 1988; Madhok, 1995). Relevantly, we compared the impact of different national cultures on the primary relationship. Our finding shows that the prior experiences of the business with a local partner or recognition of partner opportunism is more important than the regional cultural differences in the developing country. For instance, when considering the regional characteristics in China, mutual trust based on prior experience affects IJV performance more than ownership-based control. On the other hand, in Malaysia and Indonesia, ownership-based control is effective, but the influence on performance is negative; trust-based control more matters. These findings reflect the regional characteristics. In these two regions, the manufacturing and assembling industry dominate industry, and there is constant cooperation with local public enterprises. On the other hand, in Eastern Europe the influence of ownership level on management control and performance is positive. In this area the impact of ownership itself on management control is more salient than in other areas.

Table 6 Correlation among ownership, control, performance, and partner credibility

	Ownership	Control	Performance	Credibility
Ownership	1.00	0.40**	0.04	0.10
Control		1.00	0.12	0.17
Performance			1.00	0.50***
Credibility				1.00

***(**): Correlation is significant at the 0.01(0.05) level (two-tailed test)

V. DISCUSSION AND CONCLUSION

In this study we attempted to find the factors which influence the non-linear relationship among ownership, control, and performance. We found that the relationship between ownership and control was strong and positive because this reflects the Korean managers' desire to control their IJVs in foreign businesses. On the other hand, there was no significant relationship between control and performance, or ownership and performance. These findings suggest that factors other than ownership-based control influence performance. We found that technology influences the control level and IJV satisfaction more than the ownership level itself. On the other hand, in the resource combination of technology and local knowledge the relationship between ownership and control is positive, but in control-performance ownership-performance is weak.

When investing in developing countries, the relationship with the government is a very important resource that is closely related to the structure of control in IJVs. On the other hand, in IJVs characterized with a resource combination of technology and local knowledge, joint business based on equal ownership and control can have a positive influence on the control-performance relationship. In the sense, Korean enterprises should reconsider their preferences to have dominant control with majority ownership in developing countries.

There are still some issues we must need to address in the future. First, we must consider more specific strategies for MNCs that influence ownership and the control structure. For instance, two types of global strategies, such as multi-domestic and global strategy, can be compared. MNCs pursing a global strategy may try to acquire higher control based on ownership. Relevantly the relationship between domestic headquarters and their foreign subsidiaries can be taken into further consideration. Second, we attempted to include the multilateral factors in our measures of primary variables, but still fell short. For example, in the following research we may want to use more objective measurements such as the financial performance. Third, in this study we focused on developing countries, but we must examine the differences between investments in developing and developed countries. Last, it will be necessary to assess whether our findings and arguments apply to other country FDI in the same way.

REFERENCES

Beamish, P. W. (1987). Multinational joint ventures in developing countries, London: Routledge, 1988.

Blodgett. (1991). Partner Contribution as Predictors of Equity Share in Joint Ventures, *Journal of International Business Studies*, 22, 63-78.

Blodgett. (1992). Factors in the Instability of international joint ventures: An event history analysis, *Strategic Management Journal*, 13, 475-481.

Das. T. K., & Teng, B-S. (2000). Instabilities of strategic alliances: An internal tensions perspective, *Organizational Science*, 11(1), 77-101.

Fagre, N., & Wells. L. T. (1982). Bargaining power of multinationals and host governments, *Journal of International Business Studies*, Fall, 9-24.

Gatignon, H., & Anderson, E. (1988). The multinational corporation's degree of control over foreign subsidiaries: An empirical test of a transaction cost explanation, *Journal of Law, Economics, and Organization,* 4 (2), 305 - 336.

Gomes-Casseres, B. (1990). Firm ownership preference and host government restrictions: An integrated approach, *Journal of International Business Studies*, 21, 1-22.

Gray, B., & Yan. A. 1992. Negociation model of joint venture formation, structure, and Performance, *Advances in International Comparative Management,* 7, 41-75.

Harrigan, K.R. (1987). Managing joint ventures, *Management Review*, 76(2), 24-38.

Hennart J-F., Kim, D. J., & Zeng, M. (1996). The impact of joint venture status on the longevity of Japanese stakes in U.S. manufacturing affiliates, *Organization Science*, 9(3), 1-14.

Hill, R.C., & Hellriegel, D. (1994). Critical contingencies in joint venture management: Some lessons from managers, *Organization Science*, 5, 594-607.

Inkpen, A. C. & Beamish, P. W. 1997.Knowledge, Bargaining Power, and the Instability of International Joint Ventures, *Academy of Management Review*, 22(1), 177-202.

Jarillo, J. C. (1988). On strategic networks, *Strategic Management Journal,* 9, 31-41.

Johanson, J., & Mattsson, L-S. (1987). Interorganizational relations in industrial systems: A network approach compared with the transaction-cost approach. *International Studies of Management and Organization*, 17(1), 34-48.

Kobrin, S. J. (1988). Expatriate reduction and strategic control in American multinational corporations, *Human Resource Management*, 27, 63-75.

Koenig, C., & Van Wijk, G. (1991). Inter-firm alliances: The role of trust. In: Thépot, J.,Thiétart, R.-A. (eds.), Microeconomic contributions to strategic management. North-Holland, Amsterdam

Kogut, B. (1983). Strategies for joint venture success, New York: Praeger, 1983.

Lecraw, D.J. (1984). Bargaining power, ownership, and profitability of transnational corporations in developing countries, *Journal of International Business Studies*, Spring/Summer, 27-43.

Madhok, A. (1995). Revisiting multinational firms' tolerance for joint ventures: A trust-based approach, *Journal of International Business Studies,* 26 (1), 117-138.

Pan, Y. (1996). Influences on foreign equity ownership level in joint ventures in China, *Journal of International Business Studies*, First Quarter, 1-26.

Pfeffer, J., & Salancik, G. R. (1978). The external control of organizations: A resource dependence perspective, New York: Harper & Row.

Serapio, M., & Cascio, W. (1996). End-games in international alliances. *Academy of Management Executive*, 10 (1), 62-73.

Simons, R. (1991). Strategic orientation and top management attention to control systems, *Strategic Management Journal*, 12(1), 49-62.

Stopford, J. M., & Wells. L.T. J. (1972). Managing the multinational enterprises, New York: Basic Books.

Tomlinson, J.W.C. (1970). The Joint Venture Process in International Business: India and Pakistan, Cambridge, MA:MIT Press.

Varadarjan, P. R., & Cunningham, M. H. (1995). Strategic alliances: A synthesis of conceptual foundation, *Journal of the Academy of Marketing Science*, 23(4), 282-296.

Yan A., & Gray, B. (1994). Bargaining Power, mangement Control, and performance in United States-China joint ventures: A comparative case study, *Academy of Management Journal*, 37(6), 1478-1517.