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Investors' Resources and Management Participation in International Joint Ventures: A Control Perspective

YANNI YAN mkyany@cityu.edu.hk
Department of Marketing, City University of Hong Kong, Hong Kong

JOHN CHILD J.Child@bham.ac.uk
Birmingham Business School, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK

Introduction

Control over decision-making in International Joint Ventures (IJVs) provides investing firms with the potential to combine their partners' strengths with their own resource and capability attributes in a way that enhances the attainment of their own goals. IJVs are notoriously difficult organizations to control, as all the parent firms contribute to decision-making activities (Sarkar, Aulakh and Cavusgil, 1998). Prior research demonstrates that investing firms may find it very difficult to identify the underlying connections between the quality of the partners' resources invested and the partners' intellectual knowledge and functional expertise that are employed in pursuit of better performance (Lyles and Baird, 1994; Zander and Kogut, 1995). Many studies have addressed ways that the organizational structure and emergent management of IJVs that are used to enhance a partner's resource investments, and how they affect that partner's resource-based activities (Inkpen and Beamish, 1997; Luo, Shenkar and Nyaw, 2001). These studies indicate that a wide spectrum of organization styles are used in IJVs to deploy the parent firms' resource investments that give participating partners' economic benefits from their combined competencies (Inkpen, 1995; Beamish and Delios, 1997).

Given the complex nature of the relational role of partners' resource commitments that are exercised in IJVs, researchers face various challenges in identifying their partners' resource-based advantages. One stream of research looks at the initial conditions of the parent firms' investment in terms of whether these are provided on a contractual basis or not. Transaction cost economics indicates that the optimization of the partners' resources is the level of their partners' expertise and technologies that have been successfully transferred and employed in IJVs (Tsang, 2000). The second stream of research reports a method of measuring the connections between a partner's resource investments and its governance in generating an IJV's superior performance (Wernerfelt, 1984; Barney, 1991, 1997). In this stream of research, the effective use of partner firms' technological and managerial expertise in culturally different environments often requires them to exercise critical roles in safeguarding the resources that they have invested in IJVs. Hence, the allocation of value to the competitive dimensions of organizations' assets codifies the situation wherein the partner firms have strong interests in ventures in which they have committed resources, and in decision-making activities that enable them to enhance the ventures' strategic competitiveness (Hambrick, 1995; Lam, 1997; Yan, 2000).

Although there is increasing concern about the importance of how IJV partners manage their investments across their organizational boundaries, it remains unclear whether IJV performance is affected by the extent to which that such investments are accompanied by direct managerial involvement in the IJV (Child and Yan, 1999; Makino and Beamish, 1999). The use of both resource-based theory and transaction cost economics specifically focuses on the interactions between the effects of an investing firm's investments and its partner's control and influence over decision-making. An IJV's organizational commitments require analytical explanations of the underlying paradigms of how partner firms establish, share, and promote decision-making which ensures that the IJV properly utilizes the resources that are provided by the partner firms (Shenkar and Nyaw, 1994; Sohn and Paik, 1997; Yan, 2000).

This study makes three contributions that advance our understanding of investors' resource and management participation in IJVs. First, the complexity of an IJV partner's investments is simplified by considering the partner's initial resource condition on contractual and non-contractual bases. The effects of such investments are used to highlight the process by which the level of contribution is set for the creation, deployment, and upgrading of the partner's asset specificities. Second, empirical tests provide significant insights into the underlying interactions between partner firms' profiles of resource and capabilities that are employed in an IJV and the deployment of relevant control mechanisms to safeguard those investments. We argue that the manner in which the investing firms' controls are exercised depends on the number of decisions that each partner influences within the IJV. Third, we contribute to both the resource-based literature and transaction cost economics by identifying how the quality of IJV partners' control is empirically calibrated against their organizational objectives, resource investments, and influence over decisions. The conclusions are drawn from a sample of twenty-eight Sino-foreign joint ventures.

This paper begins with a brief literature review and then offers hypotheses about IJV partners' involvement in the resources that they provide to establish control, which subsequently determines performance. It then describes the research method and findings. Finally, it summarizes the managerial implications upon which our conclusions are based.

Theoretical framework

The provision of equity capital through the purchase of shares conveys legal rights that allow the establishment of formal and compatible institutional structures for joint ventures (Blodgett, 1991). The possession of a majority equity share appears to be used by IJV management to define the guiding principles of where the ultimate control might lie (Child and Yan, 1999; Luo, Shenkar and Nyaw, 2001). The concept of an equity share reveals insights into how financial and strategic management inputs affect the nature of control in an organization (Anthony, Broadbent and Otley, 1995). Critical resource commitments that are invested by partners provide a necessary condition and a platform for IJV decisions to be successfully implemented (Peteraf, 1993; Child and Rodrigues, 1996). The view of an IJV as a control mechanism for exploiting and developing organizational resources of given partners is a key theoretical development. Moreover, the types of resource employed within IJVs, and their attributes, are likely to impact on their performance (Child and Yan, 2003).

IJV partner resource commitments

The provision of investments in non-capital resources allows the partner firms to reduce resource scarcity and uncertainty for the IJV. Partners' "contractual" resources are usually specific to certain areas and boundary conditions that are defined in terms of the use of resources, including a set of written rules of how certain organizational functions should be conducted (Beamish, 1988; Reed and DeFillippi, 1990; Kostova, 1999). Several studies indicate the importance of the use of such "contractual" resources, including the technological know-how, management systems, management services, and training that are provided to a joint venture by its investing firms on the basis of formal contracts and written agreements (Yan, 2000; Luo, Shenkar and Nyaw, 2001). Rugman (1982) mentions that the negotiation of a contractual agreement for a non-standardized product is a very difficult task, but nevertheless finds that these contractual arrangements are of increasing importance in international production and marketing. Dunning and McQueen (1981) explain that contractual resources can minimize these costs by involving local investors, who offer the advantage of knowledge about local conditions to the joint venture.

The "non-contractual" resources are those provided by IJV partners beyond any formal contracts and written agreements. Non-contractual resources are likely to include technological know-how, management services, and training (Child, Yan and Lu, 1997). Such resources have assumed increasing importance as a key to the success that emanates from the knowledge and skill of managing complex interdependencies within and across joint venture boundaries, and in the ability to manage multi-cultural units (Ohmae, 1993; Nonaka and Takeuchi, 1995). Cullen, Johnson and Sakano (1995) suggest that the provision of non-contractual resources may reflect a high level of commitment to a joint venture by the parent firm. These commitments are likely to give rise to de facto ownership rights through claims to expertise and the goodwill that they generate (Tung, 1993; Coad, 1995).

Management participation as a commitment

Viewed from the resource-based perspective, the management participation of partners can be regarded as a human resource to develop the venture. It is clear that those partners who nominate their own technologists and managers to the key functions within an IJV can facilitate knowledge transfer between partners at low cost, and can more effectively control those resources they supply that are difficult to acquire and complex to imitate (Luo, Shenkar and Nyaw, 2001). An appropriate appointment can therefore reinforce management commitment as a source of competitive advantage (Hitt et al., 2000). High levels of management participation also ensure the freedom to make and implement decisions independently of the wishes of other partners, if necessary. The partners must exert control and influence over IJV decision-making to ensure that their goals are realized while delivering enough assets to the organization for it to survive in the marketplace (Harrigan, 1985).

Hypotheses

Barney (1991) defines non-capital resources as physical, human, and organizational resources, arguing that each is aligned with its investors' interests by specifying contractual rigidities to ensure resource effectiveness. The decisions to control a parent firm's investments in an IJV require the provision of those competencies, human capital development, and high quality physical resources that in turn will bring a unique organizational capability and resource-rent potential to the venture (Prahalad and Doz, 1981). A combination of contractual and non-contractual resources is required to provide an IJV with the competencies and capabilities that are necessary for it to adapt to deviations in the target market from the market conditions in which the parent firms originally built their knowledge base and resources (Grant, 1996).

Contractual resources in an IJV are closely linked with the partners' investments in their asset specificities that are purposely defined in their actions upon the forming of an IJV. The contractual resources may offer opportunities to investing firms, and a platform from which their management development systems or proprietary technologies can be effectively operated. These investing firms may need to provision their asset specificities such as competencies, human capital development, and physical resources so that "free-riding risks" can be mitigated. Provisional proprietary expertise that is transferred from a partner firm to its IJV subsidiary may increase efficiencies in the employment of tacitly based knowledge and resources. The provision of partners' asset specificities allows a partner firm to reinforce its resource rent potential and specific organizational capabilities. Therefore, increasing an investing firm's enforcement capabilities in its proprietary technology can allow the firm to exert substantial power and influence over the use of investments.

Non-contractual resources in an IJV are investments that can be employed effectively through enhancing partner firms' abilities to coordinate their resource complementarities. Such resources are perceived as being extremely important for the establishment of a business presence in a new market. The creation of an IJV's non-contractual resources is comprised of capital, natural resources, plant, equipment, facilities, brand names, products, and production knowledge (Child, Yan and Lu, 1997). The performance achieved by an IJV may be a compromise between the partner's desire to retain exclusive control over its non-contractual resources and its willingness to share its expertise with other partners. The exploitation of a partner's non-contractual resources is associated with the leverage of those resources and the capabilities that can be employed, shared, and developed in the IJV operation (Rugman and Verbeke, 2001).

> *Hypothesis 1.* The greater the IJV partner's (i) contractual or (ii) non-contractual resource investments, the greater will be its influence over the use of those investments in the IJV.

Eisenhardt and Schoonoven (1996) suggest that an important attribute of management expertise and technological resources in an organization is the extent to which they are unique in achieving a particular exchange relationship. The presence of a firm's specific assets with a proper control mechanism may lead to superior performance. The active management participation, the power of technology and management expertise, and the goal congruence between partners are identified as significant factors that can positively affect IJV performance (Eisenhardt and Zbaracki, 1992; Luo, 1997; Hitt et al., 2000). Transaction cost economics suggests that a high level of transfer for the tacit knowledge of IJV partners will confer on them higher control and influence, as these investing firms will be able to demand more control concessions from their partners (Pearce, 1997; Johnson et al., 2002). Child, Yan and Lu (1997) suggest that the level of partners' control and influence can be more predictable if contractual resources are effectively implemented between an IJV and its parents. The critical technology and knowledge of provisional partners can be treated as one of the protection mechanisms that can lower their monitoring and enforcement costs of their investments (Conner and Prahalad, 1996; Lu and Bjorkman, 1997). The superior performance of an IJV is achieved if investing firms gain effective control over their contractual-resource inputs by using their tacitly based knowledge and resources more appropriately.

Non-contractual resources are easily absorbed by IJV management with the active involvement of partner firms in building knowledge development systems in the IJV. An IJV fosters its partner firms' non-contractual resources such as technical and managerial expertise that will encourage long-term business development. Creating goodwill or business reputation from non-contractual resources in an IJV may allow investing firms to redefine the possession and re-composition of their technology employed on a relatively broad scale. Hence, the contribution of non-contractual resources may offer investing partners opportunities to enhance their management role in business operations. Partners' learning incentives to achieve better performance are driven by the expected pay-offs to be obtained from the transfer of non-contractual inputs of technology and management expertise in an IJV.

> *Hypothesis 2.* The greater the IJV partner's (i) contractual or (ii) non-contractual resource investments, the higher the level of performance that will be attained.

Partners' commitments to their contractual resources are likely to be a reflection of their rationales for controlling, transferring, and developing the resources that they invest in an IJV (Geringer and Hebert, 1991). Superior IJV performance is associated with partners' rights that are brought from their resource rent potential and specific product development. Hence, partners' governance is supported by those rights that are built into their technical abilities to mobilize, share, and deploy their applications of such resources. The level of management participation that is exercised by a partner over some or all IJV decisional activities can reveal the partner's strategic intentions and technical capabilities with respect to the other partners (Prahalad and Hamel, 1990; Richard, 2000). It should be noted that the evaluation of the management participation of partners in terms of their resource investments often involves assessing each partner's performance expectations on the returns from their IJV investments of knowledge or capacity (Winter, 1987; Doz, 1996).

Although partner firms operate under different national regulations, comparing partners' non-contractual resource inputs that are associated with their product development in an IJV may provide fertile ground for examining the exact performance expectations that are placed on their investments. From the IJV organizational perspective, superior operation leads to the effective employment of the non-contractual resources that partners invest in an IJV (Hill and Hellriegel, 1994; Yan, 2000). Osborn and Baughn (1993) indicate that an IJV, despite being a separate legal business entity, has a reciprocal interdependence with its parents that require the interchange of a combination of skills, training, abilities, technical expertise, and management experience. Consistent with resource-based theory, the identification of partners' non-contractual resources can offer an analytical explanation as to how partners' resource potential provides leverage for increasing their management participation. When an IJV partner increases its management involvement in its "non-contractual" resources, it invariably strengthens its organizational capacity as a means of securing or protecting its business reputation and goodwill. To allocate the value of a partner's resource contribution to an IJV, its non-contractual resources need to be evaluated in terms of its current and potential resource advantages (Grant, 1991; Lam, 1997).

> *Hypothesis 3.* Where there is a high level of a partner's influence over its (i) contractual or (ii) non-contractual investments, the higher the level of management participation, the greater the level of performance will be attained.

Method

Sample. The choice of the sample allows an understanding of the importance of investing firms' resources and management participation in IJVs. The sample consists of twenty-eight Sino-foreign joint ventures. The foreign equity shares range from 35 to 92.5%. Records were consulted to obtain financial information where permission was granted, and background company documentation was also collected. The IJVs studied were from diverse sectors of engineering (2), chemical and allied industries (6), electronics (10), food, beverage, and tobacco (9) and telecoms (1). The choice of the sample was influenced by the following considerations. First, there are different primary business needs that generate varying resource and control priorities. In the engineering industry, the technological system and its management is an important factor. In the chemical and allied industries, product design is a major focus of expertise. In the food, beverage, and tobacco industries, the brand name and its associated marketing are particularly powerful tools of influence. Second, the sectors to be chosen exhibit different types of resource investments required from IJV partners. Third, all sectors chosen contain a large number of foreign firms that are operating in China, from which a selection was made for interview. The scope and depth of the sample, combined with the overall good quality of information obtained through tape-recorded interviews, provides a basis for fruitful analysis and the ability to draw useful conclusions.

Procedures. The questionnaire design was guided by research fieldwork and theoretical consideration. It was originally developed in English and then translated into Chinese. Data was collected using in-company interviews and respondents were assured of the confidentiality of any information divulged. The series of interviews were conducted with general managers, deputy general managers, R&D engineers, technologists, and functional directors. We believed that these senior managers were likely to hold a high commitment in the resource and capability development within their IJVs. We have conducted more than 2000 e-mails and calls to China-based IJVs. A total of 158 face-to-face interviews were conducted in China and in the regional offices of foreign companies located in Hong Kong, Malaysia, and Singapore. On-site visits were made to all of the joint ventures. All but twelve of the interviews were tape-recorded. The questions covered the main areas listed below, and in each case the information collected was relevant to both foreign and Chinese partners and their joint venture managers.

Measures. We separated the data from interviews with the most senior general and deputy managers available and the responses from functional managers to show from *t*-tests that the two groups' responses did not differ significantly. Furthermore, the results exhibit high internal consistencies with the questions that were answered independently by foreign and local respondents from each venture relating to partner resource investment profiles. Hence, we concluded that the qualitative data collected from the interviews could justifiably be used in the analyses.

Construct analysis. The percentage *equity share* is that held by the foreign parent company. Dent (1990) argues that equity capital may be used to institutionalize control and promote an inward looking organization because it regulates competition for resources and defines the economic constraints within which the venture operates. The setting of a firm's strategic objectives tends to be strongly influenced by the majority equity shareholders (Killing, 1982; Beamish, 1988; Tsang, 2000). Yan and Gray (1994) suggest that equity share provides a lever through the board of directors for determining key appointments, especially those of the general manager and the heads of key functions.

Foreign parent firms were assessed through 10 binary indicators using the identified resource types listed to indicate whether they were provided on a contractual or non-contractual basis. The inspection of internal reliability coefficients suggests that it is acceptable to aggregate these indicators into a measure of overall contractual resourcing (KR20 = .824) and non-contractual resourcing (KR20 = .722).

The assessment was measured using 7-point scales that ranged from 1 = "not at all important" to 7 = "extremely important". The examined items included (1) an IJV's contractual and non-contractual resource profile, (2) strategic and operational influence, and (3) management participation.

Questions on *contractual resources* asked whether the parents had contributed any of five different resources including product design, production technology, management systems, management services, and training, as a consequence of contracts or agreements. The value of partner contractual resource investments is assessed through the measurement of the worth of a partner's inputs (Child, Yan and Lu, 1997). The IJV has emerged as one of the dominant forms of organization, where significant investments are contributed by parent firms in the form of collections of "contractual resources" (Richard, 2000).

The value of partner *non-contractual resource investment* is assessed through measurement of the worth of an IJV partner's investments that are independent of any formal contracts or agreements. These resource types are product design, production technology, management systems, management services, and training. The exploitation of "non-contractual" resources can be associated with the leverage of those leading edge competences and capabilities that might relatively easily be codified, shared, and developed in the IJV operation (Khanna, Gulati and Nohria, 1998; Rugman and Verbeke, 2001).

The general managers, deputy general managers, and heads of finance, HRM, marketing, production, and technical functions in IJVs are appointed by the Chinese and foreign parent companies. The occupancy of key managerial functions is a highly effective method of introducing specific managerial approaches, methods, and skills to an IJV (Eisenhardt, 1985; Warner, 1993). A partner's technical and managerial expertise tends to be built up over a long period through the accumulation of knowledge and experience. The benefits of management nomination are particularly relevant where those managers have vision, the ability to perceive opportunities, a strong value system, and a belief in what the IJV is trying to achieve (Yan and Gray, 1994).

The five areas of *strategic influence* include: the use of profit, re-investment policy, the setting of strategic priorities, the allocation of senior managerial positions, and financial control. The justification for the procedure lies in the conceptual homogeneity of the influence construct. To simplify subsequent analysis, tests of internal reliability were conducted for the five strategic points of influence. Sub-scales of strategic influence were constructed by aggregating the scores for the 5 items of influence previously listed, with Alpha $= 0.77$ and 0.73 for the Chinese and foreign strategic influence, respectively.

The eight areas of *operational influence* include reward and incentive policies, technological innovation, training and development policies, sales and distribution, product pricing, quality control, purchasing policies, and production planning. These areas are included because research suggests they are important for control and decision making for IJV's that operate in China (Geringer and Hebert, 1989; Child, Yan and Lu, 1997). Sub-scales of operational influence were constructed by aggregating scores for these items of decision-making influence where Alpha $= 0.682$ and 0.760 for the Chinese and foreign partner's influence over operational decisions respectively.

Responses associated with *management participation* in the joint venture were assessed. The most senior IJV manager available gave evaluations on factors that affected management in the joint venture, as perceived respectively by the Chinese and foreign parent firms. The six items covered were: supply issues, marketing, HRM, the attitudes of managers, the competence of managers, and communication within the IJV. A commitment to management participation enables a partner to place individuals possessing the necessary skills, experience and knowledge in positions where they can provide economic value to the IJV (Osland and Cavusgil, 1996). Sub-scales of management participation were constructed by aggregating scores for 6 items, with Alpha $= 0.712$ and 0.716 for the Chinese and foreign management participation.

The most senior IJV managers available gave evaluations on seven-point scales that ranged from "not achieved at all" (score $= 1$) to "fully achieved" (score $= 7$) of the *performance* perceived by the Chinese and foreign parent firms. The areas covered were: profitability, growth of sales, and market share. A scale of overall performance was constructed by aggregating scores for these three items, and this has an Alpha of 0.77. Hence, the construct reliabilities appear to be more than adequate.

Control variables. Company size was measured by the number of full-time employees. Business duration was measured by the number of years that the IJV had been in operation. The age of the IJV was estimated by subtracting the year of its formation from the year of the survey.

Findings

Table 1 shows the profile of the resource commitments of the foreign parent firms, including equity held by the partners, "contractual" and "non-contractual" resources, and the managerial appointments. Twelve of the IJVs have greater than fifty percent of the equity share held by the foreign partner, eleven have a fifty-fifty split, while in the remaining five IJVs the foreign parents hold under fifty percent of the equity. Most IJV general managers and some key functional headships within the joint ventures are foreign nationals. In twenty out of twenty-eight cases, expatriates are the IJV general managers. The appointment of foreign nominees to key functional headships within the joint venture shows lower but very significant proportions: marketing (41 percent), finance (39 percent), and technical (42 percent). The roles adopted by the chairman of the joint venture board, general manager, and key functional heads vary depending upon nationality and this illustrates the different managerial approaches of the Chinese and the foreign parent firms.

Table 2 sets out the control and influence that parent firms are perceived to exercise over the thirteen decision-making areas within the joint ventures. Judging from a combination of the Chinese and foreign responses, the decisions most frequently referred to the foreign parent company are strategic in nature, namely financial control, strategic priority setting, product pricing, re-investment policy, and the use of profit. The results suggest that the foreign parent strategic influence reflects their relative strengths in the supply of high quality resources and technological competence. The foreign partner's operational influence also predominates in the areas of sales and distribution, training and development policies, purchasing policy, and production planning. It is apparent that the control and influence gained over the venture by the foreign partner is derived from the "contractual" and "non-contractual" resources in areas of technology and management systems. The Chinese partners are seen to exercise significant influence over decisions that relate to financial control, reward and incentive policies, market promotion techniques, training, and staff development.

Table 3 reports a regression analysis on foreign partners' resource commitments, their management participation, and the overall performance achieved. We draw attention to a comparison of IJV partners' contractual and non-contractual investments with respect to levels of control and influence exercised. An IJV partner firm's asset specificities provide leverage to safeguard its resource-based advantages. Our results show that regressions between an IJV partner's contractual resources and its influence over the use of those investments are positive and statistically significant. Hence, H1(i) is fully supported because our results suggest that IJV partners with a higher level of contractual resources that are invested in an IJV tend to gain more control and influence. H1(ii) suggests that the greater the

Table 1. Profile of resource commitments supplied by foreign parent firms.

Joint venture case	Equity shares	Contractual investment	Non-contractual investment	IJV general manager	Percent foreign functional heads
1	92.5	Process tech, product design, services	All categories	FOREIGN	60
2	90	Process tech, product design, services, training	All categories	FOREIGN	100
3	90	Process tech, product design	All categories	FOREIGN	100
4	90	Process tech, product design, services, training	All categories	FOREIGN	35
5	75	Process tech, product design, services, training	All categories	FOREIGN	25
6	75	Process tech, product design, systems	All categories	FOREIGN	13
7	65	Process tech, product design	All categories	FOREIGN	20
8	65	Services, training	All categories	FOREIGN	50
9	60	Systems, services	Process tech, systems	CHINA	0
10	55	Process tech, product design, training	All categories	FOREIGN	56
11	55	Product design	Systems	CHINA	0
12	51	Process tech, product design, services, training	All categories	FOREIGN	43
13	50	Services	Process tech, product design, training	FOREIGN	17
14	50	Process tech, product design, systems, services	Process tech, product design, systems	FOREIGN	14
15	50	Process tech, product design, services	Process tech, systems, training	FOREIGN	13
16	50	Process tech, product design, services	Process tech, product design, services	CHINA	0
17	50	Process tech, product design, systems	Systems	CHINA	17
18	50	Process tech	Process tech, product design, systems, training	CHINA	38
19	50	Process tech, product design, systems	Systems	FOREIGN	29
20	50	Process tech, product design, services	Process tech, product design, services	FOREIGN	0
21	50	Process tech, product design, systems	Systems	CHINA	17
22	50	Process tech	Process tech, product design, systems, training	FOREIGN	38
23	50	Process tech, product design, systems	Systems	CHINA	29
24	49	Services, training	Product design, systems, training	FOREIGN	50
25	44	Process tech, product design, services	Systems	FOREIGN	17
26	40	Process tech, product design, services	Process tech, systems, training	CHINA	0
27	35	Services, training	Process tech, systems, training	FOREIGN	13
28	35	Process tech, product design, services	Systems	FOREIGN	17

Table 2. Partners' control and influence over the thirteen decision-making areas within the IJVs.

	Mean scores		Paired sample t-test	
Decisions	Foreign partner	Chinese partner	Value of T	Value of p
Strategic influence	5.9	3.8	4.7	.004
Operational influence	4.2	2.3	4.0	.000
Use of profit	4.9	3.7	2.6	.013
Allocating senior managerial positions	4.1	3.4	1.2	.220
Setting strategic priorities	5.1	3.0	4.9	.000
Product pricing	3.5	2.2	3.1	.003
Training and Development policies	4.1	2.3	3.8	.001
Reward and Incentive policies	3.3	3.5	.31	.751
Financial control	5.1	2.8	5.6	.000
Reinvestment policy	5.4	3.7	3.6	.001
Purchasing policy	3.7	2.0	4.6	.000
Production planning	2.8	1.9	3.0	.005
Sales and distribution	5.6	1.7	9.7	.000
Technical innovation	5.7	1.8	10.0	.000
Quality control	4.1	2.0	5.3	.000

Note: $N = 28$ IJVs; One-tail probabilities: $^{*}p < 0.05$; $^{**}p < .01$; $^{***}p < .001$.

IJV partner's non-contractual resource investments, the greater will be its influence. Our respondents confirmed that foreign partners which invested more non-contractual resources do in fact tend to exercise greater influence.

Our findings indicate that a partner's contractual resources are significantly associated with its asset specificities that in turn generate superior market performance. Contractual resources are perceived to have significant effects on an IJV's absorption of the specific technology and acquisition of management expertise. This result suggests that foreign partners tend to place important proprietary knowledge and resources under contractual terms. These practices contribute to overall performance and therefore achieve their resource-based advantages. H2(i) is supported. Partners' non-contractual resources help an IJV subsidiary to overcome shortages of technologies, managerial practices, and other tangible assets through resource sharing. However, most investing firms do not invest advanced technologies and management systems on a non-contractual basis. The performance enhancing potential of non-contractual resources appears not to be achieved and H2(ii) is not supported.

Where IJVs are provided with large resource-specific investments, there are greater opportunities for resource providers to have a higher level of participation in the decision-making within IJVs. Our results suggest that when partners combine the provision of contractual resources with a managerial involvement in an IJV, the joint venture's performance improves, though only marginally. Thus, Hypothesis 3(i) is only partially supported. A combination of non-contractual resourcing with managerial involvement is not associated with levels of IJV performance. H3 (ii) is not supported.

Table 3. Regressions on foreign partners' overall influence and performance achieved.

	Dependent variables: overall influence[a]		Dependent variables: overall performance[b,c]			
	Hypothesis 1		Hypothesis 2		Hypothesis 3	
Areas	H1a	H1b	H2a	H2b	H3a	H3b
Contractual resources	.685 (000)		.308 (.128)		.285 (.163)	
Non-contractual resources		.538 (.001)		.125 (.495)		.175 (.311)
Strategic influence			.232 (.272)	.130 (.525)		
Operational influence			−.383 (.055)	−.208 (.312)		
Management involvement					.212 (.237)	.287 (.088)
Number of employees	.168 (.174)	.252 (.065)	−.111 (481)	−.068 (.691)	.082 (.654)	.153 (.371)
Business duration	.025 (.859)	.195 (.173)	.074 (.683)	.191 (.263)	−.057 (−.365)	−.032 (.839)
Adjusted Multiple R	.471	.370	.167	−.004	.130	.105
R Square	.514	.421	.279	.124	.224	.202
F-value	11.99	8.229	2.481	.965	2.383	2.02
Sig.	.000	.000	.052	.453	.071	.105

Notes: $N = 28$ IJVs.
[a]The dependent variable of overall influence is aggregated by strategic and operational influence as listed alphas of 0.72 for the sample firm.
[b]The dependent variable of overall performance is aggregated by profitability, growth on sales, and market share.
[c]Correlations for hypotheses 1 to 3 are made between foreign partners' control and overall performance achieved as identified against foreign partners with contractual and non-contractual resource investments in IJVs. Figures in parentheses indicate one-tail probabilities.

Discussion

This study offers three significant contributions that advance the understanding of partners' investment boundaries for "contractual" and "non-contractual" resources and the strength of partners' management participation in their relevant resources. The first contribution is that an IJV partner's investments should be differentiated on "contractual" and "non-contractual" bases for exploiting its resource-based advantages. The differentiation is useful in determining the style of creation, deployment, and upgrading of the partner's asset specificities. The establishment of "contractual" and "non-contractual" resources exposes a partner's critical inputs of technological know-how and managerial expertise that are employed in an IJV. It is believed that this facilitates the partner's ability to make decisions to protect and control those critical resources. Our findings suggest that the greater the IJV partner's contractual and non-contractual resource investments, the greater will be the influence gained over the use of those investments in the IJV.

The combination of contractual and non-contractual resources demands a higher degree of management support to accompany the resource commitments. Most foreign respondents confirmed that their technological investments involve the provision of substantial resources that must be assimilated and adapted to the needs of the IJV's production system. These resources have to be actively integrated into the IJV's on-going management process. The provision of such quality resources offers significant opportunities for the foreign parent firms to exert influence over decisions that involve financial control, product pricing, and technical innovation. With regard to the contracting partners' resource specificities, our results suggest that it is an IJV's resource endowment in the contractual form that serves to define its organizational capability and influence decision activities. Partners provide a collection of resources that establish an IJV as an operating entity wherein each part of the collection may contain a bundle of potential constructive services that are packaged together to define their management system.

The management system of a provisional partner in an IJV tends to increase its power and control by defining the technology or management resources to be exercised in the IJV (Yan and Gray, 2001). Overall, the ability of one party to control those resources that are vital for the success of an organization gives it power over the whole organization. This means that the ability of an investor to exercise decision influence over some or all IJV activity depends on its ability to provide more valued resources than do its partners. The ability to leverage current and potential "non-contractual" resources is also identified as an important factor that determines the effectiveness of learning. Exploiting "non-contractual" resources has led the foreign partners to be actively involved in the explicit exhibition of diverse forms of cooperation with the local partners. Managing "non-contractual" resources allows partner firms to manage the IJV's technology and resources more effectively.

The second important contribution developed in this study is that the investing firms' strategic and operational influence is derived from underlying connections between the resources and capabilities that are employed in an IJV and the control mechanisms they use to safeguard such investments. The partner equity investment results suggest that the correlations between the foreign parents' equity share and both the strategic ($r = .67$, $p < .01$) and operational ($r = .42$, $p < .05$) decisions it controls are positively and statistically significant. Equity share predicts that the foreign parent firms will have more control and influence over strategic and operational matters in the IJVs. Holding a majority equity share enables a greater degree of dominance in management, but this does not imply that the majority shareholder dictates every strategic decision. The evidence suggests that the foreign managers who are assigned to IJV management positions appear to assume greater control over the complete range of strategic and operational decision-making activities. The influence gained by the foreign parent firms is derived mainly from their technology resource inputs into the venture. International venturing experience, specialist expertise, clear delineation of job boundaries and predefined reporting systems within specific hierarchical relationships, positively facilitate control and influence over the venture. Foreign parent firms emphasise work procedures and knowledge specialization, providing that managers are adequately qualified to undertake their directives.

In addition to the relationship between a partner's resource commitment and IJV control, our findings provide explanations of *what* types of managerial experience and expert knowledge need to be invested in an IJV, and how such specific resources provide leverage for the investing firms to strengthen their control and influence over the venture. The foreign managers' roles in an IJV are based upon the use of resource-based control because the key criterion in nominating the general manager and key functional heads is professional expertise. As the parent venture relationships are formally structured, the foreign parent firms have to balance shared resources against the need to preserve highly valued autonomy. The results show that, for each of the management positions in an IJV, the performance effectiveness of the Chinese and the foreign managers differs greatly. In all of the twenty-eight cases, the foreign parent firms invested the majority of quality resources in the venture. Hence, these firms may pressure their managers to pro-actively protect their "hard" technologies and managerial expertise. The foreign partner often reinforces its control and influence by establishing rules, regulations, and procedures.

There is a high level of association between the management and technology that is invested in a venture by the foreign parent firms and the strength of their involvement in exercising strategic and operational control over those areas. Foreign partners' specific resource assets provide leverage to ensure control over areas that enable the IJV to maintain cutting edge sophistication in technology, and other partners come to depend upon them in this respect. The importance of resource contributions from the foreign partner not only enables IJV managers to leverage their foreign parents' technical and managerial skills, but also brings down the costs of inter-partner cooperation. The experience of the foreign parent firms is used to construct IJV control in a specific way, whereby a provider's proprietary technology and its occupation of management positions are fully integrated. Parental resource and management support are intrinsic to the parameters of IJV control, and all partners accept that the providing firm should exercise control and influence over decision-making. The foreign parent, when it supplies the critical resources and the specialist expertise to the venture, must set appropriate levels of strategic and operational influence over the venture. The exercise of such strategic influence offers some protection from the risk of exposing technological or other proprietary assets to other partners.

The third contribution of this study is to identify how the quality of IJV decision-making can be empirically calibrated against partners' objectives, resource investments, and influence over decisional activities. The strategic choices of the foreign IJV partner are characterized by a strong desire for control over the exploration of new markets, technology transfer, and managerial knowledge sharing. The choice of a Chinese partner operating in the same business is dependent upon the provision of rapid access to customers and other advantages that are available through long-established Chinese networks. In most IJVs, a high level of complementarity has been achieved between the two partners, whereby the foreign partner provides technical know-how and brand name and the Chinese partner provides the plant and equipment, experienced workers, and an ability to exploit the domestic market. For Chinese parent firms, the main motives for entering an IJV agreement are the acquisition of foreign technology, the inflow of cash through foreign investment, and the assimilation of management expertise. The influence and control that is derived from the Chinese partners' resource inputs into the joint venture are very much affected by their privileged access to the labor market, the domestic distribution infrastructure, and their understanding of local management practices and regulations.

The Chinese parent firms place great emphasis on recruiting employees and managers for the joint venture from within their own ranks and their control techniques are then based upon emphasizing the individual personnel dossier, divergent skills, organizational allegiance, and overlapping responsibility for the division of labor. Personal visits and informal contacts are the methods most frequently adopted by the Chinese parent firms to acquire an understanding of the IJV's strategic and operational status. Our interviews confirmed that the recruitment of managers with a strong organizational allegiance, and established wider "guanxi" (traditional Chinese connections) is perceived in Chinese culture as an efficient way of increasing control and influence over the venture by the Chinese parent firms. The Chinese partners' influence over decision-making is enhanced if the benefits from the transfer of technology and management are facilitated by the foreign counterpart, as learning is an important factor in enabling Chinese managers to make consistent and valuable inputs.

Our results suggest that control by foreign parent firms is exercised through the possession of unique technology resources, whereas the Chinese parent firms have at least equal control of the personnel management field even when they hold a minority of the equity. For foreign firms, the linear relationship between the percentage of equity and strategic/operational influence is driven by the desire to gain a strategic position in China vis-à-vis competitors, as well as the facilitation of the type of international expansion that establishes the opportunity to earn long-term profits. The Chinese respondents emphasized the importance of strengthening their decision-making capability in areas where the least technological and managerial expertise is required to manage the venture, or where the Chinese parent has committed critical resources that need to be protected. Management involvement by the Chinese parent firms is positively facilitated when they are able to achieve their objectives of increased management knowledge and acquisition of technology, and where there is quality cooperation between partners that leads to development throughout the IJV. The Chinese control and influence over an IJV's activities largely relies on the legal rights that are embodied in equity and the provision of non-capital resources, such as access to the local market network, interaction with the Chinese higher authorities, and the ability to interpret local regulations.

Conclusion

The theoretical complementarities of examining the initial resource conditions on contractual and non-contractual bases and the strength of a partner's management participation in the relevant resources provide the foundation for this study. Both resource-based theories and transaction cost economics have been the focus. Current applications of resource-based theory take a more inward looking view of the investing firm in that they assume the initial establishment of a resource base and that the commitment to a specific business opportunity which has already taken place. Our analysis of IJV operations suggests that the mere possession of a unique resource by an IJV is not enough to maximize performance effectiveness. The partner that provides the resources must effectively orchestrate the use of resources and knowledge if performance effectiveness is to be properly enhanced. This study extends the examination of resource commitments by teasing out the resource connections between the contractual and non-contractual resources that are deployed by partners and the attributes that are valuable in improving IJV performance. These distinctions draw attention to how the investor's resources provided to an IJV enable the supplying partner to justify the system, structure, and process as the way of maximizing the benefit to the IJV.

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References

J.B. Anthony, J. Broadbent, and D. Otley, "Accounting systems and control," in J.B. Anthony, J. Broadbent, and D. Otley (eds.), *Management Control: Theories, Issues and Practices*, Macmillan, 1995.

J.B. Barney, "Firm resources and sustained competitive advantage," *Journal of Management*, vol. 17, pp. 99–120, 1991.

J.B. Barney, *Gaining and Sustaining Competitive Advantage*. Reading, MA: Addison Wesley Publishing Company, 1997.

P.W. Beamish, *Multinational Joint Ventures in Developing Countries*. London: Routledge, 1988.

P.W. Beamish and A. Delios, "Improving joint venture performance through congruent measures of success," in Paul W. Beamish and J. Peter Killing (eds.), *Cooperative Strategies: European Perspectives*, San Francisco: New Lexington Press, pp. 103–127, 1997.

L.L. Blodgett, "Partner contributions as predictors of equity share in international joint ventures," *Journal of International Business Studies*, vol. 22, pp. 63–78, 1991.

J. Child and S. Rodrigues, "The role of social identity in the international transfer of knowledge through joint ventures," in S.R. Clegg and G. Palmer (eds.), *The Politics of Management Knowledge*. London: Sage, pp. 46–68, 1996.

J. Child and Y. Yan, "Investment and control in international joint ventures: The case of China," *Journal of World Business*, vol. 34, no. 1, pp. 3–15, 1999.

J. Child and Y. Yan, "Predicting the performance of international joint ventures: An investigation in China," *Journal of Management Studies*, vol. 40, no. 2, pp. 283–320, 2003.

J. Child, Y. Yan, and Y. Lu, "Ownership and control in sino-foreign joint ventures," in P.W. Beamish and J.P. Killing (eds.), *Cooperative Strategies: Asian Pacific Perspectives*. San Francisco: The New Lexington Press, pp. 181–225, 1997.

A. Coad, "Strategic control," in Anthony J. Berry, Jane Broadbent and David Otley (eds.), *Management Control: Theories, Issues and Practices*. Macmillan, 1995.

K.R. Conner and C.K. Prahalad, "A resource-based theory of the firm: Knowledge versus opportunism," *Organization Science*, vol. 7, pp. 477–501, 1996.

J.B. Cullen, J.L. Johnson, and T. Sakano, "Japanese and local partner commitment to IJVs: Psychological consequences of outcomes and investments in the IJV relationship," *Journal of International Business Studies*, vol. 26, pp. 91–115, 1995.

J.F. Dent, "Process model of relationship between business strategy and management control systems: Strategy, organizations and control: Some possibilities for accounting research, accounting," *Organizations and Society*, vol. 15, pp. 3–25, 1990.

Y.L. Doz, "The evolution of cooperation in strategic alliances: Initial conditions, or learning processes?" *Strategic Management Journal*, summer special issue, vol. 17, pp. 55–83, 1996.

J.H. Dunning and M. McQueen, "The eclectic theory of international production: A case studies of the international hotel industry," *Managerial and Decision Economics*, vol. 2, pp. 197–210, 1981.

K.M. Eisenhardt and M.J. Zbaracki, "Strategic decision making," *Strategic Management Journal*, vol. 13, pp. 17–37, 1992.

K.M. Eisenhardt, "Control: Organizational and economic approaches," *Management Science*, vol. 31, pp. 134–149, 1985.

K.M. Eisenhardt and B.C. Schoonoven, "Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms," *Organization Science*, vol. 7, pp. 136–150, 1996.

J.M. Geringer and L. Hebert, "Control and performance of international joint ventures," *Journal of International Business Studies*, vol. 22, pp. 41–62, 1989.

J.M. Geringer and L. Hebert, "Measuring performance of international joint ventures," *Journal of International Business Studies*, vol. 20, no. 2, pp. 97–101, 1991.

R.M. Grant, "A technology based theory of inter-firm collaboration," *Organization Science*, vol. 7, pp. 375–387, 1996.

R. Grant, "The resource-based theory of competitive advantage," *California Management Review*, vol. 33, pp. 114–134, 1991.

D.C. Hambrick, "Fragmentation and the other problems CEOs have with their top management teams," *California Management Review*, vol. 37, pp. 110–127, 1995.

K.R. Harrigan, *Strategies for Joint Ventures*. Lexington, Mass.: D.C. Heath, 1985.

R.C. Hill and D. Hellriegel, "Critical contingencies in joint venture management: Some lessons from managers," *Organization Science*, vol. 5, pp. 594–607, 1994.

M.A. Hitt, M.T. Dacin, E.A. Levitas, and J.L. Borza, "A partner selection in emerging and developed market contexts: Resource-based and organizational learning perspectives," *Academy of Management Journal*, vol. 43, pp. 449–467, 2000.

A. Inkpen, *The Management of International Joint Ventures: An Organizational Learning Perspective*. London: Routledge, 1995.

A. Inkpen and P.W. Beamish, "Knowledge, bargaining power, and the instability of international joint ventures," *Academy of Management Review*, vol. 22, pp. 177–202, 1997.

J.P. Johnson, M.A. Korsgaard, and H.J. Sapienza, "Perceived fairness, decision control, and commitment in international joint venture management teams," *Strategic Management Journal*, vol. 23, pp. 1141–1160, 2002.

T.R. Khanna, R. Gulati, and N. Nohria, "The dynamics of learning alliances: Competition, cooperation and relative scope," *Strategic Management Journal*, vol. 19, no. 3, pp. 193–200, 1998.

J.P. Killing, "How to make a global joint venture work," *Harvard Business Review*, May-June, pp. 120–127, 1982.

T. Kostova, "Transnational transfer of strategic organisational practices: A contextual perspective," *Academy of Management Review*, vol. 24, no. 2, pp. 308–324, 1999.

A. Lam, "Embedded firms, embedded knowledge: Problems of collaboration and knowledge transfer in global cooperative ventures," *Organization Studies*, vol. 18, no. 6, pp. 973–996, 1997.

Y. Lu and I. Bjorkman, "MNC standardization versus localization: HRM practices in China-western joint ventures," *International Journal of Human Resource Management*, vol. 8, pp. 614–628, 1997.

Y.D. Luo, "Partner selection and venturing success: The case of joint ventures with firms in the People's Republic of China," *Organization Science*, vol. 8, pp. 648–662, 1997.

Y. Luo, O. Shenkar, and M.K. Nyaw, "A dual parent perspective on control and performance in international joint ventures: Lessons from a developing economy," *Journal of International Business Studies*, Special Issue on the Impact of Developing Economies and Economies in Transition on the Future of International Business, vol. 32, no. 1, pp. 41–58, 2001.

M.A. Lyles and I.S. Baird, "Performance of international joint ventures in two eastern european countries: A case of hungary and poland," *Management International Review*, vol. 34, pp. 313–329, 1994.

S. Makino and P.W. Beamish, "Characteristics and performance of international joint ventures with non-conventional ownership structures," *Journal of International Business Studies*, vol. 29, no. 4, pp. 797–818, 1999.

I. Nonaka and H. Takeuchi, *The Knowledge-Creating Company*. New York: Oxford University Press, 1995.

K. Ohmae, "The global logic of strategic alliances," in J. Bleeke and D. Ernst (eds.), *Collaborate to Compete: Using Strategic Alliances and Acquisitions in the Global Marketplace*. New York: Wiley, 1993.

R. Osborn and C.C. Baughn, "Forms of interorganizational governance for multinational alliances," *Academy of Management Journal*, vol. 33, pp. 503–519, 1993.

G.E. Osland and T.S. Cavusgil, "Performance issues in US-China joint ventures," *California Management Review*, vol. 38, pp. 106–130, 1996.

R.J. Pearce, "Toward understanding joint venture performance and survival: A bargaining and influence approach to transaction cost theory," *Academy of Management Review*, vol. 22, pp. 203–225, 1997.

M.A. Peteraf, "The cornerstones of competitive advantage: A resource-based view," *Strategic Management Journal*, vol. 14, pp. 179–191, 1993.

C.K. Prahalad and G. Hamel, "The core competence of the corporation," *Harvard Business Review*, vol. 68, pp. 79–91, 1990.

C.K. Prahalad and Y. Doz, "An approach to strategic control in MNCs," *Sloan Management Review*, vol. 22, no. 4, pp. 5–13, 1981.

R. Reed and R.J. DeFillippi, "Causal ambiguity, barriers to imitation, and sustainable competitive advantage," *Academy of Management Review*, vol. 15, pp. 88–102, 1990.

O.G. Richard, "Racial diversity, business strategy, and firm performance: A resource-based view," *Academy of Management Journal*, vol. 43, pp. 164–177, 2000.

A.M. Rugman, Internalisation and non-equity forms of international involvement," in A.M. Rugman (ed.), *New Theories of the Multinational Enterprise*. New York: St. Martin's Press, 1982.

A.M. Rugman and A. Verbeke, "Subsidiary specific advantages in multinational enterprises," *Strategic Management Journal*, vol. 22, pp. 237–250, 2001.

M.B. Sarkar, P.S. Aulakh, and S.T. Cavusgil, "The strategic role of relational bonding in interorganizational collaborations: An empirical study of the global construction industry," *Journal of International Management*, vol. 4, pp. 85–107, 1998.

O. Shenkar and M.K. Nyaw, "How to run a successful joint venture in China," *Advances in Chinese Industrial Studies*, vol. 4, pp. 273–283, 1994.

J.H.D. Sohn and Y. Paik, "Diversification as a supplementary means of control in international joint venture: The case of Japanese MNCs in Korea," in P.W. Beamish and J. Peter Killing (eds.), *Cooperative Strategies: Asian Pacific Perspectives*. San Francisco: The New Lexington Press, 1997.

E.W.K. Tsang, "Transaction cost and resource-based explanations of joint ventures: A comparison and synthesis," *Organization Studies*, vol. 21, pp. 215–242, 2000.

R.L. Tung, "Managing cross-national and intra-national diversity," *Human Resource Management*, vol. 3, pp. 461–477, 1993.

M. Warner, "Human resources management with Chinese characteristics," *The International Journal of Human Resource Management*, vol. 4, pp. 45–65, 1993.

B. Wernerfelt, "A resource-based view of the firm," *Strategic Management Journal*, vol. 5, pp. 171–180, 1984.

S.G. Winter, "Knowledge and competence as strategic assets," in D.J. Teece (ed.), *The Competitive Challenge: Strategies for Industrial Innovation and Renewal*. Cambridge, MA: Ballinger, pp. 159–184, 1987.

A. Yan and B. Gray, "Bargaining power, management control, and performance. in U.S.-China joint ventures: A comparative case study," *Academy of Management Journal*, vol. 37, pp. 1478–1517, 1994.

Y. Yan, *International Joint Ventures in China: Ownership, Control and Performance*. London: Macmillan, 2000.

A. Yan and B. Gray, "Antecedents and effects of parent control in international joint ventures," *Journal of Management Studies*, vol. 38, no. 3, pp. 393–416, 2001.

U. Zander and B. Kogut, "Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test," *Organization Science*, vol. 6, no. 1, pp. 76–92, 1995.