

Economic Transition and Foreign Firms' Ownership Strategy in China: The Impact of Cultural Distance and Industry R&D Intensity

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This study investigates foreign firms' ownership strategy in a dynamic context characterized by economic transition. Using a sample of 598 international joint ventures in China during a period between 1986 and 1996, I found a positive relationship between foreign firms' entry time and their ownership position. In order to examine this relationship in more depth, I regrouped the foreign firms by incorporating two variables: cultural distance and industry R&D intensity. I found that the strength of the above relationship was not affected by cultural distance and industry R&D intensity. The empirical results of this study provide implications for theory application in the context of emerging economies. When "institutional voids" exist, theories such as mimetic learning and transaction cost economics may not be relevant.

INTRODUCTION

An emerging economy is a country that satisfies two conditions: a) a rapid pace of economic development and b) government policies favoring economic liberalization and the adoption of a free market system (Arnold & Quelch, 1998). These conditions lead to the entry of foreign firms and growth of strategic alliances between foreign and domestic businesses (Hoskisson et al, 2000). Among all forms of strategic alliances, international joint ventures (IJVs) are a rapidly growing arrangement and have emerged as one of the most important organizations (Dussauge & Garrette, 1999). They are launched by two or more parent firms that collectively invest capital and other resources to pursue certain strategic objectives (Pfeffer & Nowak, 1976). Parent firms may have different interests and competencies and their commitments to the IJVs may also vary. Therefore, the choice of appropriate ownership positions becomes an important issue facing foreign firms about to enter into IJVs (Blodgett, 1992).

In the IJV literature, foreign firms' ownership strategy has been widely researched. Scholars have identified a number of factors influencing foreign firms' ownership choices: legal restriction (Delios & Beamish, 1999; Brouthers, 2002), host country risk (Delios & Beamish, 1999), intellectual property protection (Delios & Beamish, 1999), cultural difference (Zhao & Zhu, 1998; Erramilli, 1992), industry R&D intensity (Zhao & Zhu, 1998), industry growth (Brouthers, 2002), international experience (Davidson, 1981; Li, 1995; Delios & Beamish, 1999), and IJV size (Zhao & Zhu, 1998). In the context of emerging economies, most studies have emphasized the "negative side" of the environment, such as poor legal frameworks and economic and political risks (Hoskisson et al, 2000). Relatively few studies have paid attention to the "positive side", such as economic liberalization (Arnold & Quelch, 1998) and institution building (Meyer, 2001). In addition, very few have employed longitudinal data. As a result,

little is known about how foreign firms' ownership strategy changes when a market-based economy is emerging.

This study attempts to fill the gap by investigating foreign firms' ownership choices in a dynamic context. Specifically, I focus on an early phase of China's economic transition in which the legal environment for foreign direct investment had just been clarified. I choose this phase for the following reason: both pros and cons were obvious when foreign firms were entering China during this time. On the one hand, China's economic transition was still in the early stage, so uncertainty was high. It could be very risky to invest in China. On the other hand, its institutional environment was improving. Given its huge internal market and low operating costs, its attractiveness for foreign investors could increase as it continued to transition. Would foreign firms emphasize the positive or negative side of its environment when making entry decisions? An answer to this question may provide implications for the application of different theories in a context of economic transition.

I investigate the relationship between economic transition and foreign firms' ownership strategy. It is likely that this relationship is different under different circumstances. In order to examine this relationship in more depth, I focus on two variables, cultural distance and industry R&D intensity, and study their impact on the above relationship. I use two theories, mimetic learning and transaction cost economics, to develop hypotheses. As a theoretical framework, transaction cost economics (TCE) is especially relevant in explaining the joint venture phenomenon (Kogut, 1988). Many studies have used this framework to explain foreign partners' ownership choices in IJVs (e.g., Anderson & Gatignon, 1986; Delio & Beamish, 1999; Meyer, 2001; Brouthers, 2002). Mimetic learning theory is often used to address uncertainty (Miner & Haunschild, 1995). According to Gimeno and Hoskisson (1997), foreign firms considering IJVs may obtain information and reduce uncertainty by examining and following other organizations' practices.

FOREIGN DIRECT INVESTMENT IN CHINA

China is the world's largest emerging economy in terms of GDP (Hoskisson et al, 2000). Since its adoption of the "open-door" and economic reform policies in 1979, massive institutional changes have taken place. Many barriers to a market-based economic system have been dismantled (Child, 1994). Child and Tse (2001) systematically studied China's key institutional reforms and grouped them into three categories: 1) the government – open-door policy, creation of a national market and reform of state-owned enterprises (SOEs); decentralization and privatization; development of competitive domestic markets and import of foreign technology and know-how; 2) the structure of industries and firms – SOE rationalization and experiments with different forms of business; mergers and acquisitions in the context of a national market; retention of government involvement in pillar firms; 3) business-relevant intermediate institutions – managerial, professional and technical training; enlistment of support from foreign professional bodies. These efforts have brought about changes in many areas including legal, accounting, technological, finance, distribution, and management education systems. All these reforms contribute to what Meyer (2001) called "institution building".

Foreign Direct Investment Climate in China

Accompanying the institutional building is China's implementation of "open-door" policy aiming at encouraging foreign direct investment (FDI). According to Luo (2001a), FDI in China has undergone three phases: 1) Phase 1 (1979-1985) – with the promulgation of the Joint Venture Law by the Chinese government, FDI began to enter China, and China experienced the initial FDI boom. The boom ended later in 1985 because of high inflation and a lack of legal clarity about FDI; 2) Phase 2 (1986-1989) – Chinese government's publication of the Provisions for the Encouragement of Foreign Investment in 1986, which clarified the legal environment for FDI and provided solutions to some major problems facing foreign-invested firms, leading to a quick recovery of FDI after 1986. The new investment boom ended in mid-1989 because of worsening economic and political conditions; 3) Phase 3 (1990 to date) – with the recognition of negative reactions from foreign investors to worsening investment climates, the Chinese government issued the Amendments to the Joint Venture Law in 1990, the Income Tax Law for

Enterprises with Foreign Capital and Foreign Enterprises in 1991, and a set of other commercial laws and regulations to improve the legal environment in which foreign businesses operated. As a result, foreign investments surged again, and the average capital size of foreign-investment projects increased. After nearly three decades of reform, China has now become the largest foreign direct investment recipient (Chang & Xu, 2008) and the most appealing host for investments (UNCTAD, 2009) in the world.

Complexity of Institutional Changes in China

Although China's economic transition has led to FDI boom, it has been non-linear, displaying a mixture of progress and regress (Nee, 1992; Nolan, 1995). As Child and Tse (2001) argued, institutional changes in China are highly complex because of its formerly closed, state-dominated system. Its institutions have even developed into such a complex system that business operation depends on, to a certain degree, political influence and personal relationship, as well as on concerns for efficiency. Tan (2005) noted that China's economic transition has been subject to two opposing forces: the "iron fist" control and the "invisible hand" control which "co-exist, compete, and counteract". The early phase of economic transition, dominated by the "iron fist" control, presented an unfavorable environment for non-state businesses. The struggle between the two forces has finally led to a more market-based, the "invisible hand" control model, though "uniquely Chinese". Tan's empirical study suggests that though China's marketization has been progressing since 1978, its entry into WTO in 2002 might be a turning point toward a more market-based control of its economy.

Research Setting

A main goal of this paper requires a setting that permits using the economic (TCE) and non-economic (mimetic learning) approaches to explain foreign firms' ownership strategies in an environment which is uncertain but improving towards a market-based economy. Because legal constraints can significantly influence foreign firms' ownership choices (Delios & Beamish, 1999; Luo, 2001b), an environment with legal clarity for FDI is needed. Based on Luo's (2001a) three phases of FDI in China, I divide the environment for FDI in China into two periods. The first period is from 1979 to 1985 in which a legally clear environment for FDI was not provided. The second period, 1986 to date, has seen a clarified legal environment. I choose the second period as the research background. The second period has been characterized by the coexistence of two competing forces: "iron fist" control and "invisible hand" control. I focus on an early phase in which the "iron fist" control was significant, though the "invisible hand" had begun to influence business activities.

THEORIES AND HYPOTHESES

Economic Transition

When China's economic transition was in the early phase, the "invisible hand" control was weak (Tan, 2005). Though the legal environment for FDI was clarified, the market-based rules had not been established. During this time, the institutional context was typically characteristic of what Khanna and Palepu (1997) called "institutional voids": underdeveloped capital markets, lack of reliable market information, extensive state intervention in business operations, and lack of effective mechanisms to enforce contracts. These situations can create significant uncertainties for foreign investors (Isobe et al, 2000). As a result, the early entrants were likely to shy away from high resource commitments in order to avoid risk (Johanson & Vahlne, 1977; Shan, 1991). They would assume low ownership position in their IJVs.

Though the overall uncertainty in China was high during the early stage of its economic transition, it could decrease as market-oriented institutions were gradually being established. Less uncertainty can increase China's attractiveness as an environment for FDI (Child & Tse, 2001) and encourage foreign firms to enhance their commitment of resources (Luo, 2001a). According to Luo and O'Connor (1998), foreign firms' investment strategies have been changing in China since its adoption of the economic reform policy. I argue that their ownership strategies in IJVs would also change. Decreased risk could

encourage later entrants to commit more resources in IJVs and thus increase their ownership. Therefore, I predict a positive relationship between economic transition and foreign firms' ownership position.

In this study, I compare two groups of foreign investors distinguished by cultural distance and industry R&D intensity. Great cultural distance may have negative impact on foreign firms' ownership position (Yamin & Golesorkhi, 2010), while high industry R&D intensity could affect their ownership position positively because of need for control. When China was in its early phase of economic transition, a primary issue facing all foreign investors was to reduce risk resulting from regulatory uncertainty. Thus, I have the following hypothesis:

Hypothesis 1: There is a positive relationship between foreign firms' entry time and their ownership position, regardless of cultural distance and industry R&D intensity.

In the following sections, I examine in more depth the positive relationship between foreign firms' entry time and their ownership position. I argue both cultural distance and industry R&D intensity may affect the strength of the positive relationship. I use mimetic learning theory to explain the impact of cultural distance and use Transaction Cost Economics to explain the impact of industry R&D intensity.

Cultural Distance and Mimetic Learning

Organizational learning theorists have contended that organizations learn from the experience of others (Miner & Haunschild, 1995; Baum & Ingram, 1998), imitating or avoiding specific actions or practices based on their perceived impact (Cyert & March, 1963). Miner and Haunschild (1995) used "mimetic learning" to describe an organization's obtaining information from other organizations in its decision-making when facing uncertainty. Uncertainty is a powerful force that encourages learning and imitation (DiMaggio & Powell, 1983). Learning can reduce uncertainty (Baum et al, 2000). When a firm is experiencing problems in an uncertain environment, it is likely to turn to other firms for information (Baum & Amburgey, 2001) and model itself after those it perceives to be successful in a similar set of environmental conditions (DiMaggio & Powell, 1983). Even unsuccessful organizations can provide valuable implications for others (Baum & Amburgey, 2001). The benefits of mimetic learning can be considerable because it may yield viable solutions with little expenses (Cyert and March, 1963).

When a firm goes global, one important source of uncertainty is cultural distance between the home and host countries (López-Duarte & Vidal-Suárez, 2010). Cultural distance affects foreign firms' ownership strategies because it creates uncertainty about cooperation with the local firms (Kogut & Singh, 1988). The larger the cultural distance, the more uncertainty the foreign firms would face. According to the mimetic learning theory, they may turn to other firms for possible solutions because this practice requires no specific investments and has little risk exposure (Baum & Amburgey, 2001).

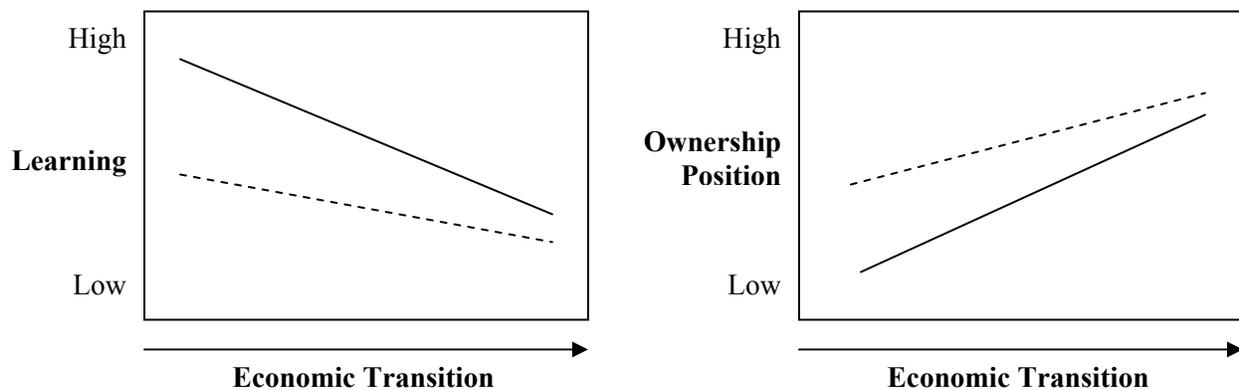
When China was in its early phase of economic transition, there was very little experience the early entrants could borrow from the IJV population. As argued above, they would commit limited resources and assume low ownership position in order to reduce risk. It can also be assumed that the levels of resource commitments would be different among the early entrants. According to Kogut and Singh (1988), large cultural distance could lead the investing firms to choose less risky entry modes. In the context of China, therefore, the early entrants of large cultural distance would be likely to choose lower ownership position than those of small cultural distance.

Learning and experience in the host country can encourage foreign firms to make further investments (Chang, 1995). Empirical studies have suggested a positive relationship between host country experience and foreign firms' ownership position (Davidson, 1981; Li, 1995; Delios & Beamish, 1999). Johanson and Vahlne (1977) used "incremental commitment" to address a situation in which foreign firms gradually increase their resource commitments with an accumulation of experience in the host country. According to Chang and Rosenzweig (2001), incremental commitment can also apply to the choice of cooperative entry mode in an uncertain environment. In China, early investors could increase their ownership position through further investments in their IJVs or adopt higher ownership position when investing in other projects (Vanhonacker, 1997).

Compared with early entrants, late movers have chances to learn at their entry from other foreign firms entering earlier. They can learn through different ways, such as reading about other foreign investors' experiences and practices from trade journals, listening to lectures about the country, observing their operations there, etc. (Baum and Amburgey, 2001). It may be argued that in the emerging economy of China, if the late movers have seen increased commitments of the early entrants in their IJVs, they would be likely to follow the early entrants' practices and commit more resources at their entry. Though learning may have positive impact on resource commitments and thus ownership position, the learning curve for firms of large cultural distance could be steeper than that for firms of small cultural distance. As China's economy transitions, later entrants may assume higher ownership position, but the degree of ownership increase is likely to be different. Small cultural distance may have less impact on ownership change than large cultural distance over time. The above arguments are illustrated in Figure 1. Therefore, I develop the following hypothesis based on the mimetic learning theory:

Hypothesis 2: The positive relationship between foreign firms' entry time and ownership position is stronger when cultural distance is large than when cultural distance is small.

**FIGURE 1
A COMPARISON OF FOREIGN INVESTORS OF
LARGE AND SMALL CULTURAL DISTANCE**



- a. Foreign firms with large cultural distance: solid line
- b. Foreign firms with small cultural distance: dotted line

Industry R&D Intensity and Transaction Cost Economics

Transaction cost economics (TCE) “is preoccupied with economizing” (Williamson, 1996) and is often used to explain organizational design and structure in economic terms (Williamson, 1975; 1979; 1985). It can also be employed to explain inter-partner relationships in IJVs (Hamel, 1991). Particularly, it is helpful for understanding ownership structures in IJVs (Anderson & Gatignon, 1986; Gatignon & Anderson, 1988; Gomes-Casseres, 1989a). Under the TCE framework, a joint venture can be viewed as an organization in which two or more firms transact (Kogut, 1988). How parent firms make governance choices will depend on which choice can minimize transaction costs (Peng & York, 2001).

Williamson (1975) noted that contractual relations are problematic in organizations based on his two behavioral assumptions: bounded rationality and opportunism, which are influenced by the degree of uncertainty surrounding the transactions. Transaction costs are known to be high in emerging economies (Hoskisson et al, 2000). A main reason is high uncertainty resulting from poorly developed legal systems that allow the existence of “opportunism, rent shifting, bribery, and corruption” (Nelson et al, 1998). Though transaction costs can be a big concern for foreign firms, the transactional relationship is controllable (Root, 1988). Empirical studies suggest that foreign firms can choose high ownership

position to control possible opportunism when they enter the emerging markets (Luo, 2001b; Meyer, 2001).

Although the lack of strong legal frameworks can lead to opportunism in business activities (Nelson et al, 1998), it is not likely that different industries have the same level of opportunism. In China, a main goal for Chinese firms to establish IJVs is to learn more advanced technologies from their foreign partners (Yan & Gray, 1994). Given its poor protection of property rights (Child & Rodrigues, 2000; Isobe et al, 2000; Child & Tse, 2001), foreign firms have reasons to worry about the safety of their technologies when they choose to enter industries with high R&D intensity. They would seek protection of their proprietary knowledge from leakage and infringement (Isobe et al, 2000; Meyer, 2001).

Hypothesis 1 suggests that early entrants would be more likely to use low ownership position for the purpose of minimizing risk, but there could be a difference in different industries. It may be argued that high R&D intensity industries necessitate more ownership for foreign partners to control their IJVs than low R&D intensity ones. In the early phase of economic transition, most Chinese firms were not familiar with the market-based “rule of game” (Vanhonacker, 1997). They might seek short-term interests (Vanhonacker, 1997; Deng, 2001) and display a low level of transparency (Child & Rodrigues, 2000), which would facilitate opportunism or free riding (Isobe et al, 2000; Deng, 2001). Therefore, it might be important for the foreign partners to have more control in high R&D intensity industries.

Though transaction costs could be high during the early phase of its economic transition, China has been making efforts to improve its business environment by gradually establishing market-oriented institutions since early 1980s. According to North (1990), efficient markets depend on supporting institutions that can provide formal and informal rules of the game for business activities. In emerging economies, the establishment of institutions can help reduce uncertainty, thus reducing transaction costs (Meyer, 2001). As the economic transition continues, the local firms are likely to behave less opportunistically because the invisible hand of the market is an “evolutionary selection mechanism” which would delete opportunistic actors (Hill, 1990). As a result, the later entrants in high R&D intensity industries might not need high levels of control in order to contain opportunism as the early entrants would need if all other things are equal.

In low R&D intensity industries, opportunism is relatively low, leading to relatively low concerns for transaction costs on the part of foreign firms, regardless of the stages of economic transition. According to Hypothesis 1, economic transition could have positive impact on foreign firms’ ownership position in their IJVs. Different industries may have different implications for this relationship. Given the following two arguments: 1) early entrants in high R&D intensity industries could assume higher ownership position than those in low R&D intensity industries and 2) economic transition would help reduce transaction costs, making high control less necessary in high R&D industries, I hypothesize:

Hypothesis 3: The positive relationship between foreign firms’ entry time and ownership position is weaker in high R&D intensity industries than in low R&D intensity industries.

METHODOLOGY

Data

Data for testing the hypotheses in this study were collected from Yearbooks in China. Information about IJVs was obtained from the *Almanac of Foreign Economic Relations and Trade of China* published annually by the Ministry of Foreign Economic Relations and Trade. The database includes 7957 IJVs established between 1979 and 1996, with their investors coming from over 40 countries and regions. The database presents the following information: IJV names, parent firms, locations, business scope, total investment amount, foreign equity share, foreign capital contribution, contractual duration, and registered capital. It is generally considered to be reliable (Chow, 1986) and has been widely used by researchers (e.g., Beamish & Wang, 1989; Pan, 1996; Pan, 1997). For the purpose of this study, I used the data during a period from 1986 to 1996. In order to obtain information regarding industry R&D intensity, I collected raw data related to industry-level R&D expenses from *China Statistical Yearbook on Science and*

Technology and raw data related to total sales of each industry from *China Industrial Economic Statistical Yearbook* and *China Statistical Yearbook*.

Five criteria were used to select the sample. First, the sample was restricted to manufacturing industries. Foreign firms have different “strategic competency, control necessity, and underlying objectives” in manufacturing and service industries (Luo, 2001b). Second, only those IJVs with two partners were included. Investment strategies are often different in joint ventures with two and multiple partners (Pan, 1996). Third, only those foreign firms that entered China the first time were included. Research suggests host country experience reduces foreign firms’ perception of uncertainty, thus affecting their ownership strategy when they form cooperative relationships with the local firms (Chang, 1995; Delios & Beamish, 1999; Luo, 2001c). Fourth, foreign investors were restricted to three sources, Hong Kong, the United States, and Western Europe, in order to examine the impact of cultural distance. Finally, to assess the impact of industry R&D intensity, I chose three highest R&D intensity industries and three lowest R&D intensity industries, as shown in Table 1. The three highest R&D intensity industries were electronic and communications, pharmaceutical products, and instrument and office machinery. The three lowest R&D intensity industries included garment and other fiber products, furniture, and food manufacturing.

The final sample included 598 foreign investors, with about 54 in each year during an 11- year period of time. Among all those foreign firms, 237 invested in the three highest R&D intensity industries, while 361 in the three lowest R&D intensity industries. 241 were from the United States and Western Europe, and 357 were from Hong Kong.

TABLE 1
HIGH AND LOW R&D INTENSITY INDUSTRIES

	High R&D Intensity Industries			Low R&D Intensity Industries		
	Electronic & Communications	Pharmaceutical Products	Instruments	Garments	Furniture	Food manufacturing
R&D Intensity (%)	1.83	1.57	1.86	0.16	0.10	0.13
Average (%)	1.75			0.13		

a. R&D intensity was measured as the ratio of R&D expenditure to the total sales in an industry.

b. R&D intensity was calculated on the basis of data from 1990 to 1996.

Variables and Measures

Ownership Position

Foreign firm’s ownership position is the dependent variable, measured by a foreign firm’s equity share in its IJV.

Entry Time

It is measured by the year between 1986 and 1996 when a foreign firm formed an IJV with a local firm. I assume that there is a positive relationship between entry time and economic transition.

Cultural Distance

Child and Yan (2001) classified foreign partners in IJVs located in China into four broad cultural categories: Anglo-Saxon (primarily US), Continental European, Japanese, and Overseas Chinese (primarily Hong Kong and Taiwan). Among the four categories, overseas Chinese have a similar cultural background with those in mainland China, while Anglo-Saxon and Continental European people display

relatively large cultural distance. In this study, I classified those investors from Hong Kong as having small cultural distance and those from the United States and the Western Europe (primarily France and Germany) as having large cultural distance.

Industry R&D Intensity

R&D intensity was measured as the ratio of R&D expenditure to the total sales in an industry. This study used two groups of industry: high and low R&D intensity industries. The former included the three highest R&D intensity industries, while the latter included three lowest R&D intensity industries. Because the data before 1990 were not available, I calculated the average R&D intensity based on the data from 1990 to 1996 and used this value in the study.

Controls

IJV size

IJV size may affect foreign firms’ ownership strategy. Large size requires more investments from the parent firms. High resource contributions lead to high risk. This is particularly true for foreign partners to invest in unfamiliar markets. As a result, they often opt for a low level of ownership (Luo, 1998; Pan, 1996). The size of an IJV was measured by the total amount of investment under the IJV agreement.

IJV Duration

IJV duration may affect foreign firms’ ownership choices because it has implications for the degree of exposure to uncertainty (Fagre & Wells, 1982; Pan, 1996; Zhao & Zhu, 1998). The IJV duration was measured by IJV contractual duration.

Data Analyses and Results

Table 2 presents Pearson correlation coefficients of all relevant variables. As shown in the table, ownership position was significantly correlated with entry time, IJV size, and duration. Besides, the effect of entry time on size and duration was also significant.

**TABLE 2
DESCRIPTIVE STATISTICS AND CORRELATIONS**

	Mean	s.d.	1	2	3	4	5
1. Ownership	50.81	19.69					
2. Entry time	90.85	3.04	.504***				
3. Industry	0.40	0.49	.003	.007			
4. Cultural distance	0.40	0.49	.033	.159***	.080		
5. Size	7.33	8.65	.413***	.605***	-.108**	.183***	
6. IJV duration	19.39	12.42	.467***	.417***	.014	.103	.439***

a. n = 598.

b. Size: millions of dollars.

* p < .05 ** p < .01 *** p < .001

To test Hypothesis 1, I ran four sets of regressions associated with two types of industries and two groups of foreign investors. Dummy coding was used for categorizing the industry types and foreign investor groups. Table 3 and Table 4 present the results of these regression analyses.

As shown in Table 3 and Table 4, foreign firms’ ownership position was positively associated with the entry time, regardless of cultural distance and industry R&D intensity. Therefore, Hypothesis 1 was supported. The results also show significant impact of the control variables. In both groups of foreign investors (Table 3), IJV size and duration had a positive effect on foreign firms’ ownership choice, that is,

the larger the IJV size and the longer the contractual duration, the higher the ownership position. In both types of industry (Table 4), duration affected the ownership position in a positive way, but IJV size did not have significant impact.

In order to examine whether the positive relationship between entry time and ownership position is stronger in the group of foreign investors with large cultural distance (Hypothesis 2) and weaker in the group of industries with high R&D intensity (Hypothesis 3), I ran two interaction tests: one between entry time and cultural distance and the other between entry time and industry R&D intensity. Table 5 presents the results of the two tests. The interaction between entry time and cultural distance was not significant, indicating that R&D intensity had no significant effect on the relationship between entry time and ownership position. As a result, Hypothesis 2 was not supported. Hypothesis 3 was not supported either for the same reason: the interaction between entry time and industry R&D intensity was not significant.

TABLE 3
RESULTS OF REGRESSION ANALYSIS OF OWNERSHIP POSITION
(CLASSIFIED BY CULTURAL DISTANCE)

Variables	Large Cultural Distance				Small Cultural Distance			
	Model 1		Model 2		Model 1		Model 2	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Entry Time			2.42***	0.37			1.98***	0.41
IJV Size	0.72***	0.13	0.33*	0.13	0.54***	0.13	0.14	0.15
Duration	0.46**	0.10	0.34**	0.09	0.63***	0.08	0.53***	0.08
n	241		241		357		357	
R ²	.33		.44		.24		.28	
F	58.91***		60.82***		55.44***		47.14***	
ΔR ²			.10***				.05***	

* p < .05 ** p < .01 *** p < .001

TABLE 4
RESULTS OF REGRESSION ANALYSIS OF OWNERSHIP POSITION
(CLASSIFIED BY INDUSTRY)

Variables	High R&D Intensity Industries				Low R&D Intensity Industries			
	Model 1		Model 2		Model 1		Model 2	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Entry Time			2.90***	0.41			1.45***	0.38
IJV Size	0.44**	0.14	0.03	0.14	0.74***	0.12	0.44**	0.14
Duration	0.44**	0.10	0.28**	0.09	0.63***	0.08	0.58***	0.08
n	237		237		361		361	
R ²	.18		.33		.34		.37	
F	26.16***		38.24***		93.83***		69.90***	
ΔR ²			.15***				.03***	

* p < .05 ** p < .01 *** p < .001

TABLE 5
RESULTS OF REGRESSION FOR INTERACTION EFFECT

Predictor	b	s.e	Sig.	ΔR	Sig.
Cultural difference * Entry Time	.519	.464	.264	1.251	.264
R&D intensity * Entry Time	.149	.464	.747	.000	.747

DISCUSSION

This study has two distinct but related purposes. One purpose is to investigate how foreign firms' ownership strategy changes when China moves toward a more market-based economy. I focused on an early phase of its economic transition: the overall environment was risky but gradually improving. The empirical results supported the positive relationship between economic transition and foreign firms' ownership position: the later they entered China, the higher the ownership position they assumed in their IJVs. This positive relationship may be explained from a risk minimization point of view. According to Das and Teng (2001), high perceived risk would lead partner firms to choose low ownership position. In the context of China, when the economic transition was in the early phase, risk was often perceived high because of "institutional voids" (Khanna & Palepu, 1997). In order to minimize risk, foreign partners would reduce their resource commitments.

The second purpose of this study is to examine whether the relationship between foreign firms' entry time and ownership position varies in different contexts. I focused on two factors, cultural distance and industry R&D intensity, and used mimetic learning theory and TCE as theoretical frameworks. I hypothesized that the more the foreign firms need to learn, the stronger this positive relationship. However, the empirical result did not support this hypothesis. I also hypothesized that the relationship between entry time and ownership position was weaker in high R&D intensity industries than in low R&D intensity industries, which was not supported either. Transaction costs could be high when foreign partners try to protect their intellectual properties. Therefore, they tend to use high ownership position to control their IJVs (Luo, 2001b). In this study, however, R&D intensity did not affect foreign firms' ownership choices, indicating that transaction costs might not be an important consideration.

This study makes two contributions. First, it examines foreign firms' ownership strategy in a dynamic context. Existing studies have largely used cross-sectional data to investigate the influencing factors. A static approach is problematic particularly in the emerging economies characterized by environmental dynamism. Second, the study provides implications for theory application. In the IJV literature, TCE has been widely used to explain foreign firms' ownership choices. This study suggests TCE may not apply in emerging economies where economic transition is still in the early stages. High uncertainty is probably one reason. Martinez and Dacin (1999) argued that it is problematic to use TCE to explain organizational design when it is difficult to interpret transaction costs. Another possible reason is that TCE may lose its explanatory power in a changing environment. Based on TCE, the rationale for the existence of any given organizational design is its efficiency compared to the available alternatives such as markets (Winter, 1991). According to Roberts and Greenwood (1997), the static, comparative-efficiency underpinning of TCE make no account of how organizations adopt different designs as circumstances change.

Martinez and Dacin (1999) proposed that if other alternatives prove compelling, efficiency would not be a good indicator of structural arrangement, though efficiency concerns are natural. In an uncertain environment where transaction costs are difficult to be estimated, it is not very likely that foreign partners choose ownership strategies based on calculated efficiency. The lack of transaction cost information may

compel managers to look to other sources of information, such as the actions of other firms (Thompson, 1967) and imitate what others are doing, a phenomenon which has been observed in new market entries (Haveman, 1993; Greve, 2000). However, this study indicates that mimetic learning theory may not explain foreign firms' ownership choices in a context of economic transition.

In this study, the proposed relationships were not supported on the basis of predications from TCE and mimetic learning theory. It seems we may need to explore other theoretical explanations of foreign firms' ownership strategy. According to Hoskisson and colleagues (2000), when economic transition is in the early stages, institutional theory is more helpful in explaining firm strategies because government and societal influences are particularly strong. As the market matures, other theories including TCE would become more relevant. Hypothesis 1 was developed from a risk minimization perspective. In emerging economies, risk is high because of "institutional voids" (Khanna & Palepu, 1997). The empirical evidence of this study appears to confirm the suggestion by Hoskisson and colleagues.

Limitations and Future Directions

The limitations of this study are threefold. First, it is empirically difficult to demonstrate whether the later investors actually learned from the earlier movers in their ownership choices. Though there has been much empirical evidence indicating that organizations imitate others' practices when facing uncertainty, it is not clear whether foreign investors actually learn from their counterparts in other IJVs when choosing ownership structures. Future studies may employ survey as a data source. Surveying foreign investors, rather than simply focusing on the contract terms between the foreign and local firms, may generate new insights on the learning theory and foreign investors' ownership decisions in the context of economic transition.

Second, the study did not control for two important variables because of the difficulty in obtaining data: foreign firms' size and project orientation. Firm size is often used as a control variable in IJV studies (Olk, 1997). It may affect the choice of ownership position. Large firms often have greater financial resources and capabilities to finance a project (Chang & Rosenzweig, 2001), so they may be more likely to adopt high ownership position in IJVs than small foreign firms. An IJV project may be oriented toward local markets or export-oriented. The success of projects with local market orientation will be to a large degree contingent on the host country's conditions, which are difficult to control in emerging economies (Shenkar & Von Glinow, 1994). Foreign firms may need to depend on the local partners for interpretation of information (Luo, 2001c). Therefore, high ownership position may not give them high control. In contrast, when a project is export-oriented, such a reliance on local partners is less imperative. As a result, foreign firms could assume high ownership position in order to control their IJVs and implement their overall strategy. Future research may benefit from taking into account foreign firms' size and project orientation.

Finally, the study did not include information regarding government regulations of IJV's ownership structure. The regulations, if any, would constrain foreign firms' ownership choice. However, this omission might not have significant impact on Hypothesis 2 and 3. The reason is that the two hypotheses focused on comparisons. The regulations would affect the compared groups at the same time.

CONCLUSION

Choosing ownership position is an important decision in IJVs (Luo, 2001b). When foreign firms invest and establish IJVs in emerging economies like China, appropriate ownership positions can help them implement their international strategy with a minimum risk exposure. This study attempts to explore foreign firms' ownership strategy in a dynamic context. It seems foreign firms' ownership choice is affected more by the institutional environment than by cultural distance and industry R&D intensity. TCE and mimetic learning theory, which have been widely used in the West, may not be able to explain organizational design well in a context where economic transition is still in the early stages. We may need to develop "more context sensitive theories" (Child & Tse, 2001).

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