

## **The Impact of Governance Mechanisms on Transaction-Specific Investments in Supplier-Manufacturer Relationships: A Comparison of Local and Foreign Manufacturers**

**Chwo-Ming Joseph Yu, Tsai-Ju Liao**

### **Abstract and Key Results**

- This study explores the impact that formal and relational governance mechanisms have in inducing local suppliers to make transaction-specific investments in foreign and local manufacturers, respectively.
- Analyses, in this regard, were based on a sample comprised of 77 local supplier/foreign manufacturer relationships and 57 local supplier/local manufacturer relationships in China.
- The efficacy of different governance mechanisms, as shaped by local and foreign manufacturers, exerts varying degrees of impact on suppliers' transaction-specific investments.

### **Key Words**

Formal Governance Mechanisms · Relational Governance Mechanisms · Transaction-Specific Investments · Calculative Trust · Benevolent Trust · Supplier-Manufacturer Relationships

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## Introduction

Interorganizational collaboration has become a key strategy by which firms are able to quickly respond to changing market demands (e.g., Dyer/Singh 1998). Indeed, through such corporate partnering, manufacturers are often able to gain access to important suppliers. Notably, in this regard, suppliers' transaction-specific investments in manufacturers (which are characterized as non-redeployable to alternative firms) are crucial to successful completion of the complex tasks associated with the production of customized products for both foreign and local manufacturers.

Surprisingly, given the seemingly obvious value of transaction-specific investments, there have been few studies which take the supplier's perspective, investigating the ways in which suppliers might be motivated to make transaction-specific investments in manufacturers (exceptions are Claro/Hagelaar/Omta 2003, Ghani/Khan 2004, Rokkan/Heide/Wathne 2003)<sup>1</sup>. Most studies, in accordance with the Transaction Cost Economics (TCE) paradigm, examine how transaction characteristics (e.g., the transaction-specific investments in this study) align with governance modes or with related constructs (e.g., joint actions) from a principal's perspective (i.e., a manufacturer's perspective, in this study) (e.g., Joshi/Stump 1999, Klein/Frazier/Roth 1990). However, after a manufacturer chooses the aligned governance mechanisms, a supplier, in turn, can decide whether to make transaction-specific investments in its manufacturer or not. Further, the effectiveness of governance mechanisms made by a manufacturer to lower conflict resulting from transaction-specific investments is based on suppliers' expectations, rather than on the force of organizational authority (Walker/Poppo 1991). Therefore, it is worth examining the impact of governance mechanisms on transaction-specific investments from a supplier's perspective.

Making transaction-specific investments in manufacturers is not without costs. Because transaction-specific investments made by suppliers may not be converted with ease into different sets of transactions with alternative manufacturers, these suppliers may find themselves locked into a small number of exchange positions (Williamson 1985). Thus, suppliers should be granting protection against opportunistic hold-up attempts by manufacturers to maintain viable business relationships (Petersen/Pedersen/Benito 2006). It is suggested that – theoretically – formal governance mechanisms (such as contracts) are used to eliminate, or at least mitigate, the risk of such hold-ups (Bradach/Eccles 1989, Petersen/Pedersen/Benito 2006).

In addition to examining formal governance mechanisms, some studies have recently begun to postulate with regard to the valuable cooperation that relational governance mechanisms can foster among partners (e.g., Zaheer/Venkatraman 1995). The relational governance perspective offers a less explicit set of governance mechanisms (i.e., trust) for persuading suppliers to make transaction-specific investments (Zaheer/Venkatraman 1995). Recently, some scholars have started to examine the relationships between a manufacturer's trust in a supplier and transaction-specific investments made by the supplier (e.g., Pillai/Sharma 2003, Suh/Kwon 2006). However, few studies have examined the impact of different types of trust on transaction-specific investments from a supplier's perspective. This study, then, has chosen to examine two types of trust: Calculative trust and benevolent trust. Both calculative trust (i.e., the rational component of trust) and be-

nevolent trust (i.e., an emotionally-based trust), may be characterized as the belief in another's goodwill, resulting in the reduced perception of the risk of hold-up (Doney/Cannon 1997). Accordingly, the first purpose of this study is to explore whether some types of governance mechanisms are more conducive to suppliers' making transaction-specific investments in manufacturers.

Given the importance of governance mechanisms to manufacturers' ability to compete in foreign markets, another important question is that of whether foreign manufacturers are able to take advantage of different governance mechanisms with the same degree of efficiency as local manufacturers are able to. Not surprisingly, institutional environments are likely to have a significant influence on the efficacy of different governance mechanisms (North 1990). So far, most research has examined the impact of different cultures on partners' propensity for trust (e.g., Buvik/Andersen 2002, Huff/Kelley 2003, Doney/Canon/Mullen 1998). For example, Huff and Kelley (2003) explored whether cultures in seven countries (i.e., Japan, Korea, Hong Kong, China, Taiwan, Malaysia, and the United States) are characterized by measurably different propensities for trust. Only a few studies, however, have explored how local suppliers react to governance mechanisms enacted by firms from different institutional environments (Doney et al. 1998). Accordingly, the second purpose of this study is to examine the difference between the impacts that formal and relational governance mechanisms, as implemented by local and foreign manufacturers, exert on suppliers' transaction-specific investments.

This study, as compared to existing research, offers several contributions to the governance-mechanism literature. First, given the ongoing attention paid to supplier-manufacturer relationships, we examine, from a supplier's perspective, whether formal governance mechanisms and relational governance mechanisms induce local suppliers to make transaction-specific investments in local and foreign manufacturers. Further, with regard to relational governance mechanisms, we explore the impacts of benevolent trust and calculative trust. Third, we explore whether foreign manufacturers' governance mechanisms, as compared to local manufacturers' mechanisms, will make local suppliers more or less prone to make transaction-specific investments. Finally, we feel that the implications likely to emerge from an examination of working in cooperation with local suppliers in China should be of value to foreign manufacturers operating (or planning to operate) in China.

## Literature Review and Hypotheses

A fundamental insight from transaction cost economics is that transactions with transaction-specific investments would be internalized to principals when arm's-length relationships do not adequately safeguards against expropriation by principals (i.e., a decision to make instead of a decision to buy) (David/Han 2004, Williamson 1985). Transaction-specific investments, such as a specific mold, are typically used to support a particular supplier-manufacturer relationship. Practically speaking, however, owing to the different levels of economies of scope or scale among different components or value activities, it is sometimes wise for manufacturers to let specialized firms (e.g., suppliers) concentrate on their domains so as to achieve maximum flexibility and efficiency (Nooteboom/Berger/

Noorderhaven 1997). Further, transaction-specific investments (i.e., one type of strategic resources) acquired by manufacturers are typically characterized by high mobility barriers, implying that vertical integration is a sub-optimal decision (Kim/Mahoney 2006); buying from the marketplace is a better decision.

However, as implied by the traditional TCE paradigm, because of bounded rationality and opportunism (Williamson 1985), a supplier making transaction-specific investments in its manufacturer is locked into the transactional supplier-manufacturer relationship, in which a fairly significant “hold-up” risk is inherent. In order to create value in relationships, manufacturers must provide safeguarding mechanisms to eliminate this perceived risk by suppliers, so as to induce suppliers to make transaction-specific investments. As indicated by the TCE approach, formal governance mechanisms such as contracts may be effectively used to protect suppliers’ dedicated investments. Although the implications of formal governance mechanisms seem promising, researchers have frequently criticized such mechanisms, arguing that they tend to underestimate the role of social interactions between exchange parties (Dyer/Singh 1998, Granovetter 1985). In this regard, researchers have tended to place their primary emphasis on relational governance mechanisms based on trust, which they see both as a means by which to safeguard a supplier’s idiosyncratic investments, as well as a means by which to foster cooperation (Dyer/Singh 1998).

Recently Ganesan (1994), Pillai and Sharma (2003), and Suh and Kwon (2006) indicated that trust will motivate agents to make transaction-specific investments for principals. However, these studies examined the issue from the principal’s viewpoint, rather than from the agent’s. Although Ghani and Khan (2004), using automobile industry suppliers as an example, argued that trust leads to suppliers’ making transaction-specific investments, they did not examine the relationship empirically. Further, most of the above-mentioned studies did not treat trust as a multi-dimensional construct (an exception is Ganesan 1994), nor did they explore the impact of trust, in addition to formal governance mechanisms, on transaction-specific investments. Scholars have already elaborated upon trust in a number of ways. Therefore, this study uses a broader set of governance variables (that is, two types of trust – calculative trust and benevolent trust – as well as formal governance mechanisms) with the aim of testing their impacts on transaction-specific investments.

Further, although both formal governance and relational governance mechanisms may affect local suppliers’ tendencies to make specialized investments, the perceived efficacy of different governance mechanisms, as shaped by different institutional environments, may also have varying degrees of impact. For example, if manufacturers from Taiwan enjoy higher levels of trust from their external partners than do manufacturers from China (Huff/Kelley 2003), then local Chinese suppliers may be more willing to make transaction-specific investments in Taiwanese manufacturers. Another related study was conducted by Buvik and Andersen (2002), showing the extent to which ex-post transaction costs differ between international and domestic supplier-manufacturer relationships.

The hypotheses in this study are empirically tested by using local Chinese suppliers as the sample group. Taiwanese firms investing in China are treated as foreign manufacturers, while Chinese manufacturing firms are regarded as local manufacturers. China has become one of the world’s largest recipients of foreign direct investment; Taiwan was its fifth largest foreign investor as of 2003 (Investment Commission 2003). While Taiwan

and China share the same language and Confucian value system, these two societies have largely developed independently since 1949, especially with regard to political policies and the extent of Westernization. That is, social norms and values have evolved differently in the two territories (Chang/Ding 1995).

In economic and legal terms, Taiwan has developed more or less according to the Western model of a free-market state, while retaining traditional Chinese values (Chang/Ding 1995). While China also has adopted some market-oriented economic policies since 1979, such policies continue to be influenced by Marxist-Leninist-Maoist ideology. Thus, these two societies have developed under markedly dissimilar institutional contexts. In addition, although rules regulating Western investors also apply to Taiwanese investors, Taiwanese firms do not enjoy the same status as foreign firms from developed countries, and are often subject to discriminatory treatment – particularly when conflicts between the governments of Taiwan and China flare up (Wang/Ralston 2000). When the influence of institutional environments is very much in evidence, then, it may be that some types of relational governance mechanisms are more important to foreign manufacturers with respect to local manufacturers, and vice versa. Therefore, a discussion of the efficiency of different governance mechanisms for firms from these two institutional environments is warranted, and we also hope to illustrate how the Taiwanese model might serve as an example for other foreign investors entering the Chinese market. In the following sections, we explain why formal governance mechanisms and relational governance mechanisms would influence the transaction-specific investments made by local suppliers and explain why such relationships will be different between foreign manufacturer-local supplier relationships and local manufacturer-local supplier relationships.

### Formal Governance Mechanisms

In order to eliminate the perceived risk of hold-ups resulting from transaction-specific investments, exchange partners may resort to formal governance mechanisms designed to secure suppliers' transaction-specific investments; that is, they may draw up explicit legal contracts (Williamson 1985). Transactions governed by such formal agreements may explicitly inhibit manufacturers' engagement in opportunistic behaviors, such as distorting information and/or cheating suppliers. Similarly, Buvik and Haugland (2005) also argued that suppliers' transaction-specific investments are positively associated with contract coordination, as well as contract enforcement by manufacturers. In sum, formal governance mechanisms can act to stabilize and facilitate cooperative relationships (Bensaou/Anderson 1999). Hence,

*Hypothesis 1-1.* Formal governance mechanisms are positively related to the transaction-specific investments made by local suppliers in local manufacturers.

*Hypothesis 1-2.* Formal governance mechanisms are positively related to the transaction-specific investments made by local suppliers in foreign manufacturers.

Further, institutional environments may influence the efficacy of formal governance mechanisms (Williamson 1991). For example, even though long-term contracts have regulated manufacturers' obligations to suppliers who have made transaction-specific in-

vestments in their manufacturers, transaction disturbances may still occur because of the asymmetry of information between ex-ante preparations and ex-post execution of cross-border transactions (Luo 2005). In general, emerging economies are noted for the ambiguity of property rights, and local firms have less trading experience with foreign manufacturers. Thus, in developing countries such as China, local suppliers tend to have less confidence in the efficacy of formal governance mechanisms, whether provided by local or foreign manufacturers. In addition, because local suppliers are not familiar with the business practices of foreign manufacturers, they may have less confidence in the efficacy of those mechanisms provided by foreign manufacturers, as compared with those offered by local manufacturers. This study uses the institutional environment of China as an example, and explains why formal governance mechanisms provided by foreign manufacturers are less effective than those provided by local manufacturers. There are three possible reasons: The (un)familiarity with foreign manufacturers, the difficulties of enforcing formal governance mechanisms, and government interference.

First, the unfamiliarity may reduce the efficacy of formal governance mechanisms provided by foreign manufacturers. Before China opened its doors to foreigners in 1979, local suppliers only had access to Chinese state-owned firms. During the period of economic development, most local suppliers remained unfamiliar with foreign manufacturers because of the different legal systems, business practices, and regulatory environments of foreign countries. Moreover, obstacles to the flow of information across national boundaries leave local firms with an imperfect knowledge of foreign firms' behavior patterns. Thus, local suppliers may view contract-writing as an impractical solution to the potential threat of opportunism (Wong/Ellis 2002). Similarly, Buvik and Andersen (2002) noticed that international buyer-seller relationships were often characterized by higher transaction costs during the exchange process. This indicates that the efficacy of formal governance mechanisms, as perceived by local suppliers, is lower for foreign manufacturers than for local manufacturers.

Second, it is generally extremely difficult for local suppliers to enforce legal standards across national borders, making cross-border transactions rife with opportunities for conflict. Such conflicts typically arise from misunderstandings of contract specifics and opportunistic behaviors. Additionally, due to environmental volatility, foreign manufacturers may choose to divest during periods of financial distress, liquidate unattractive assets, or relocate resources in new areas – and they may fail to take into account their obligations to local suppliers when they do so (Belderbos/Zou 2006, Hamilton/Chow 1993).

Third, government interference may play a significant role in influencing the effectiveness of contracts in transitional economies, because regulatory processes are affected by political institutions (Luo 2005). In China, if foreign firms complain to their home governments about Chinese-imposed regulations, their home governments may in fact choose to speak on their behalf (Chin 2002). Although the central government's support for Taiwanese firms has been relatively weak (for a variety of historical and political reasons), many Taiwanese firms have developed strong relationships at the local government level in China (Wang/Ralston 2000). Local governments can in fact wield significant political power, and are often able to dictate who gets what. As such, when considering regional development or economic growth, local governments may be of real benefit to foreign firms when conflicts occur between foreign firms and local firms. Hence,

*Hypothesis 1-3.* The positive relationship between formal governance mechanisms and transaction-specific investments made by local suppliers is weaker for foreign manufacturers than it is for local manufacturers.

### Relational Governance Mechanisms

In the absence of vertical integration, contracts serve to deter potentially opportunistic behavior on the part of suppliers (Williamson 1985). However, if principals' possible gain from opportunistic behavior more than offsets the greatest economic penalty the other could possibly impose, the power of a contract is significantly compromised (Kim/Mahoney 2006). Relational governance based on trust serves to facilitate cooperative interaction. In China, *guanxi* – which refers to a particular kind of social networking based on trust – acts as a powerful guiding force for a firm's behavior (Abramson/Ai 1999).

Trust may be regarded as “a set of beliefs or expectations” and “a willingness to act on those beliefs” (Doney et al. 1998, p. 603). But scholars have tended to define and elaborate upon such beliefs in very different ways. For example, economists typically emphasize the rational nature of relational governance so as to calculate the costs and benefits of maintaining a relationship, while sociologists and psychologists typically focus on the norms and social ties that tend to result in benevolent behavior (Doney et al. 1998). Taken together, trust may be characterized in two ways: Firstly, as calculative, and secondly, as benevolent (Doney/Cannon 1997, Kramer 1999). These two characterizations also correspond to the process of building trust in a collectivist culture, (such as that of China), in which risk is evaluated through a calculative process and trust is perceived through an intentionality process (Doney et al. 1998).

### Calculative Trust

Calculative trust implies that suppliers would be likely to calculate the cost of transaction-specific investments, the benefits required to make up for foregone investments, and the likelihood that the relationship will be terminated (Kramer 1999). For example, manufacturers who provide hold-up safeguards have a lower propensity to terminate relationships with their suppliers (Petersen/Pedersen/Benito 2006). Similarly, as argued by Williamson (1993), firms will take cost-effective actions to mitigate hazards and enhance benefits; thus, firms are predicted to make trust choices based on rationally-derived costs and benefits (e.g., Williamson 1993, Suh/Kwon 2006).

Further, calculative trust may be constructed from indirect ties within the context of a connected network (Holm/Eriksson/Johanson 1996). For example, a firm with prosperous customers will have no trouble supporting its business, and may even be able to introduce its suppliers to other customers (Holm/Eriksson/Johanson 1996). Similarly, Chung, Singh, and Lee (2000) argued that firms' indirect linkages, acting as conduits of information, motivate partners to cooperate with them. Additionally, calculative trust based on reputational signals also implies that a firm can have either knowledge-based or property-based resources to support its performance; such reputational capital may serve to enhance a firm's attractiveness when it comes to luring local suppliers to make transaction-specific investments. Parkhe (1993) came up with similar results: Visions of the fu-



ture, derived from existing network connections, may help encourage suppliers to make transaction-specific investments in manufacturers. Yli-Renko, Autio, and Sapienza (2001) indicated that customer network ties and social interaction raise the likelihood of cooperation. These arguments suggest that a connected network is an important factor in determining levels of calculative trust. Calculative trust is also very important in China's collectivistic culture. Generally speaking, the collectivistic culture is intolerant of variation in partners' behaviors, preferring consistency and predictability (Doney et al. 1998). Hence,

*Hypothesis 2-1.* Calculative trust is positively related to the transaction-specific investments made by local suppliers in local manufacturers.

*Hypothesis 2-2.* Calculative trust is positively related to the transaction-specific investments made by local suppliers in foreign manufacturers.

In the context of China, suppliers' calculative trust in local manufacturers may be weaker than their trust in foreign manufacturers. There are three possible reasons. First, local manufacturers in China typically have less well-established networks of relationships with prosperous foreign customers, as the operational efficiency – and hence the reputation – of local manufacturers might not be as great as those of foreign manufacturers (Chin 2002). In contrast, Taiwanese manufacturers, in comparison with Chinese manufacturers, tend to have more robust international networks, as witnessed by their strength as exporters (Investment Commission 2003). Moreover, Taiwanese firms are noted for the excellence of their contractual manufacturing services in global value chains (Lee/Chen 2003).

Secondly, entrepreneurial Chinese managers often tend to focus on short-term goals in their pursuit of rapid expansion; often, such managers are less concerned with the stability of the growth they might achieve (Chin 2002, National Bureau of Statistics of China Web 2004). As competition becomes more intense, local manufacturers lacking sustainable resources may be forced to leave the market or may have no choice but to succumb to acquisition by other firms. Accordingly, even though a local manufacturer may claim to have prosperous customers, local suppliers may discount the effect of calculative trust with regard to local manufacturers.

Thirdly, in China, competition is somewhat dysfunctional, as the business culture and credit systems are markedly underdeveloped (Chin 2002, Zhang 2001). For example, on-time payments are a problem among Chinese firms. "Triangular debt", a situation in which a buyer does not pay for the parts it has received, and in turn is not paid by its manufacturers, is increasingly threatening manufacturer-supplier relationships (Zhang 2001). In other words, manufacturers and suppliers in China make loans interchangeably and do not make on-time payments to one another. Even given such a seemingly serious problem as this, however, firms typically will not employ legal regulations as a solution (Central Daily News 2002). Accordingly, the rate of non-performing loans among Chinese firms was more than 59.09 percent in 2003 (National Bureau of Statistics of China Web 2004).

In contrast, foreign firms, such as Taiwanese firms, tend to follow the more typical pattern of on-time payments, due to the business practices in place in their home institutional environments. Further, the difficulties of collecting accounts receivable are considered a major problem for Taiwanese firms operating in China (Investment Commission



2003). Following this rationale, local suppliers cooperating with foreign manufacturers will likely not be too worried about the problem of collecting accounts receivable. Hence,

*Hypothesis 2-3.* The positive relationship between calculative trust and transaction-specific investments made by local suppliers is stronger for foreign manufacturers than it is for local manufacturers.

#### Benevolent Trust Established by Patterns of Assistance

Benevolent trust may be defined as one partner's genuine interest in the other's welfare and the motivation to seek out situations of mutual benefit (Doney/Cannon 1997) rather than engaging in purely self-interested actions with respect to suppliers. In a collectivistic culture like that of China, benevolent trust tends to emerge as the result of an intentional process (Doney et al. 1998). Such intentionality of process can improve a supplier's perception of manufacturers' benevolence of motivation, particularly when, throughout the course of a lengthy relationship, manufacturers repeatedly engage in such activities as providing assistance in times of need. In order to operationalize benevolent trust, we derived "assistance-giving routines" and "the length of a relationship" by interviewing executives, as well as through a review of the literature (see Dyer/Chu 2000).

Assistance-giving routines offered by manufacturers without requiring reciprocity from suppliers may be thought of as a means by which to build trusting relationships (Ghani/Khan 2004). That is, benevolent trust may emerge if a manufacturer has a reputation for providing assistance to other partners. For example, manufacturers may provide assistance in solving suppliers' technical problems, reducing suppliers' manufacturing costs, and improving suppliers' inventory management issues. When a manufacturer routinely assists a supplier, the supplier is likely to perceive such benevolent signals as a manifestation of the manufacturer's commitment to the relationship (Dyer/Chu 2000).

*Hypothesis 3-1.* Assistance-giving routines are positively related to the transaction-specific investments made by local suppliers in local manufacturers.

*Hypothesis 3-2.* Assistance-giving routines are positively related to the transaction-specific investments made by local suppliers in foreign manufacturers.

With regard to the comparison between foreign and local manufacturers, this study postulates that assistance from foreign manufacturers has a greater impact on local suppliers when it comes to making transaction-specific investments. Hymer (1960) and Buckley and Casson (1976) argued that competitive assets provide foreign manufacturers with an advantage in overcoming their liabilities of foreignness. In this regard, Taiwanese industry has significantly improved upon its technological capabilities (Lee/Chen 2003). This suggests that even if foreign and local manufacturers offer equal support in assisting local suppliers, local suppliers may feel that they stand to gain more, in terms of significant technological resources, from foreign manufacturers.

Secondly, as part of their efforts to overcome the liability of foreignness, foreign manufacturers will likely have to show greater concern for stakeholders, including suppliers and workers. For example, Mezias (2002) showed that Japanese subsidiaries in the U.S.

could, as a means to avoid disputes with workers, hire Americans executives to run subsidiary operations. Similarly, foreign manufacturers will likely also need to exhibit their good intentions by offering greater assistance to local suppliers.

Third, foreign manufacturers coming from home countries whose societies are characterized by external trust (such as that of Taiwan) may already possess the reputation and mechanisms necessary to fulfill their obligations (North 1990, Huff/Kelley 2003). The greater the usefulness and sincerity accompanying offers of assistance to local suppliers by foreign manufacturers, the higher the levels of trust with which local suppliers will emerge. Hence,

*Hypothesis 3-3.* The positive relationship between assistance-giving routines and transaction-specific investments made by local suppliers will be stronger with respect to foreign manufacturers than with respect to local manufacturers.

#### Benevolent Trust, Established by the Length of a Relationship

The length of a relationship is vital in the establishment of trust. As cooperation comes to be seen as a reliable characteristic in an ongoing relationship, manufacturers and their supplier-partners feel that they can rely on the other party's dependability and goodwill. That is, norms or social ties will emerge as exchange experience accumulates. Further, Doney et al. (1998) argued that manufacturers may build trust through intentional processes of repeated positive interaction. In such situations, manufacturers effectively establish their commitment not to engage in opportunistic behaviors.

In cases in which relationships have existed for some time, partners may be able to build similar value perspectives so as to seek conditions of mutual gain. Similarly, owing to the responsibilities inherent to a longstanding relationship, suppliers will tend to respond with reciprocal behaviors such as making transaction-specific investments in manufacturers. With regard to the impact of the length of the relationship on suppliers' tendencies to undertake specific investments, the current literature does not suggest a difference when it comes to foreign versus local manufacturers. As our intentions in this research are purely exploratory, we do not offer any hypotheses with regards to this matter in particular. Hence,

*Hypothesis 4-1.* The length of a relationship is positively related to the transaction-specific investments made by local suppliers in local manufacturers.

*Hypothesis 4-2.* The length of a relationship is positively related to the transaction-specific investments made by local suppliers in foreign manufacturers.

## Methodology

### Survey Procedure and Sample

Our sample was comprised of suppliers in China. We examined firms in the machinery and equipment manufacturing industry, the textile machinery industry, the wood machin-

ery industry, the electrical and electronic machinery industry, and the toy industry. These particular industries were used for two reasons. First, preliminary interviews revealed that suppliers' transaction-specific investments are important to the development and production of new products by manufacturers. Second, the industrial setting has been used in prior studies examining transaction-specific investments (e.g., Joshi/Stump 1999, Klein/Frazier/Roth 1990).

The data were collected in two steps. In the first step, we developed and revised a questionnaire based in part on a review of the literature and in part on three personal interviews (two executives managing production operations of Taiwanese firms in China, and one executive from a Chinese supplier). In the second step of the development process, we sought assistance from executives who were members of an association of Taiwanese enterprises investing in a coastal city in China. Six Taiwanese manufacturing firms expressed their willingness to cooperate in this study. After asking them to identify the suppliers who made transaction-specific investments in them, we sent the questionnaires to the managers of those Chinese suppliers who were responsible for the manufacturing operations. Because it was important to our study to have better access to firms which matched our focal variables, we were willing to sacrifice some degree of external validity (Cook/Campbell 1979).

Each Chinese supplier was able to refer up to six manufacturers, both Taiwanese and Chinese, in which it had made transaction-specific investments. In total, 50 Chinese suppliers answered 171 questionnaires. Forty-seven of the responses could not be used because of missing data associated with the variable representing transaction-specific investments, leaving us with 134 (77 Taiwanese manufacturers and 57 local manufacturers) usable responses, for a response rate of 78 percent. Following Dyer and Singh's (1998) suggestions, we treated a relationship, instead of a particular transaction, as the unit of analysis.

## Measures

*Transaction-specific Investments:* To avoid the possibility of redeployment with respect to transaction-specific investments<sup>2</sup>, which could muddy the specificity of the original definition of transaction-specific investments, we focused, in this study, on transaction-specific investments in physical assets<sup>3</sup>. Specifically, transaction-specific investments were measured by asking a supplier to evaluate the extent to which the molds it used to produce components for a manufacturer were unique to that manufacturer (noting that a "mold," as defined by the Random House Webster's College Dictionary (2000), is a hollow form for giving a particular shape to something in a molten or plastic state<sup>4</sup>). In the case of this evaluation, to measure the *degree of transaction-specific investment undertaken by the supplier*, we used a value of 1 to represent those cases in which molds were only used for the manufacturer, while 3 was used to represent those situations in which the molds could easily be used by other manufacturers<sup>5</sup>. The likelihood of changes in product design and the development of new molds might force the supplier to act as the primary bearer of hold-up hazards. Specifically, using "molds" as a proxy helped to reduce ambiguity related to the question of whether or not specialized investments might find alternative redeployment in the future. Finally, in effort to design this construct with

the highest possible level of specificity, and in relation to the highest level of transaction-specific investments, we reversed the coding in our analysis.

*Formal Governance Mechanisms:* Formal governance mechanisms refer to contracts (Williamson 1985). Consistent with previous studies, we operationalized formal governance mechanisms by using multiple scale items, reflecting the extent to which the manufacturer offer contracts to a supplier (Poppo/Zenger 2002). In our study, formal governance mechanisms were evaluated from 1 (indicating strong agreement) to 7 (indicating strong disagreement). There were two items designed to assess the degree to which a manufacturer was required to guarantee a) purchasing quantity and b) purchasing price. Formal governance mechanisms then were measured as the mean of the responses to the two questions.

*Relational Governance Mechanisms:* *Calculative trust*, which meant, in this context, the net gains which would likely be realized from business network connections (Holm/Eriksson/Johanson 1996, Yli-Renko/Autio/Sapienza 2001), was measured as the mean value respondents assigned to the following two items: a) the manufacturer had a large, dependable buyer to support his business; b) the manufacturer could introduce other manufacturers to the supplier. Benevolent trust (*assistance-giving routines*) was operationalized by means of three items, as suggested by Dyer and Chu (2000): a) the extent to which the manufacturer provided assistance in solving the supplier's technical problems; b) the extent to which the manufacturer provided assistance in helping the supplier reduce manufacturing costs; and c) the extent to which the manufacturer provided assistance to help the supplier improve inventory management. Consistent with previous studies, responses to these three items were summed and averaged to measure assistance-giving routines representing one type of benevolent trust (e.g., Dyer/Chu 2000). Benevolent trust (*the length of a relationship*) was measured by the number of years that the supplier and the manufacturer had been working with each other (Dyer/Chu 2000).

Five control variables were included in this study. Because the sample was drawn from different industries, we controlled for possible industry effects such as *technological change* (that is, the extent to which the rate of technological change was dramatic in a particular manufacturer's industry). Additionally, we also had to control for bargaining power. Doing so meant including four variables which reflect the bargaining power of a manufacturer (i.e., *Possibility of finding new suppliers*: The degree to which a firm was able to find new suppliers) and of a supplier (i.e., *Multiple manufacturers*: The degree to which a supplier had served multiple manufacturers; *Possibility of finding new manufacturers*: The degree to which a firm was able to find new manufacturers; *Firm size*: The various thresholds of size). We used the number of employees as a proxy for firm size, and found that there were 69 firms coded 1 (less than 100 employees), 29 firms coded 2 (100-300 employees), 26 firms coded 3 (300-500 employees), and 10 firms coded 4 (more than 500 employees).

When using a survey to gather data, non-response bias and common method variance need to be considered. Lacking population statistics, we tested for non-response bias by comparing early respondents with late respondents (Armstrong/Overton 1977). Buvik and Andersen (2002) and Claro, Hagelaar, and Omta (2003) used the same approach to test for non-response bias. Because no significant differences ( $p > 0.05$ ) were found between early and late respondents (defined as the questionnaires received after the questionnaires were sending out two weeks later) on key variables (e.g., firm size and multiple manufacturers), we concluded that non-response bias was not a critical issue.

Common method variance may occur when multiple measures are collected from a single data source in surveys. Because we relied on one informant for all of our information, we could not rule out the problem of common method variance. Following Podsakoff and Organ's (1986) suggestion, Harman's single-factor test was used to test for common method variance. This technique assumes that "if a substantial amount of common method variance is present, either (a) a single factor will emerge from the factor analysis, or (b) one 'general' factor will account for the majority of the covariance in the independent and criterion variables" (Podsakoff/Organ 1986, p. 536). Some studies (e.g., Aulakh/Kotabe/Sahay 1996) have demonstrated the applicability of this technique. As we performed factor analysis on all items in the model, no general factor was apparent in the factor structure, indicating that the results did not have serious problems of common method variance.

A Varimax rotation exploratory factor analysis, presenting convergent validity, revealed that there were 3 factors with eigenvalues greater than 1.0, which accounted for about 70 percent of the variance. These results provided evidence for the convergent validity of each of the measures. Additionally, when we assessed the reliability of our scales, the levels of Cronbach  $\alpha$  for all multi-item constructs, exceeded the 0.70 level. Table 1 presents the descriptive statistics and inter-correlations for the variables in the analysis.

## Results and Discussion

Separate Ordinary Least Squares (OLS) regression was estimated in order to compare foreign manufacturer-domestic supplier relationships versus domestic manufacturer-domestic supplier relationships. The increase in variance evident in Model 1 (representing the regression of the control variables on the dependent variable) was compared to that of Model 2 (adding explanatory variables to the set of regression) (Table 2). The significant change in adjusted  $R^2$  ( $\Delta$  Adjusted  $R^2$ ) illustrated the effect of the explanatory variables. The results were similar when contrasting Model 3 with Model 4<sup>6</sup>.

H1-1 and H1-2, which postulated a positive relationship between formal governance mechanisms and transaction-specific investments, are supported ( $\beta = 0.535$ ,  $p < 0.01$  and  $\beta = 0.297$ ,  $p < 0.01$  in Models 2 and 4, respectively). Furthermore, we tested the difference of the impact of formal governance mechanisms by performing the Chow test, as reflected in the regression coefficient across the two relationship groups (Cohen 1983). The comparison in the regression coefficient across the two subgroups ( $\Delta\beta = 0.238$ ) confirmed a significant difference across these two groups ( $F_{1, 114} = 38.371$ ,  $p < 0.05$ ). We thus concluded that the positive effect of formal governance mechanisms on suppliers' transaction-specific investments is stronger in the local supplier/local manufacturer sample than in the local supplier/foreign manufacturer sample. Hence, H1-3 is supported.

Calculative trust derived from business network connections was found to be positively related to transaction-specific investments in foreign manufacturers (in Model 4,  $\beta = 0.237$ ,  $p < 0.05$ ), although this was not found to be the case in Chinese manufacturers (in Model 2,  $\beta = 0.159$ ,  $p > 0.10$ ). Thus H2-2 is supported but H2-1 is not. This indicates that in China, calculative trust is not generated for local suppliers, even though local manufacturers may claim that they are prosperous manufacturers. The reason for this may

Table 1. Descriptive Statistics and Pearson Correlation Matrices<sup>a</sup>

	1	2	3	4	5	6	7	8	9	10
<b>Mean</b>	2.37	3.28	3.64	4.05	5.45	4.50	6.21	5.33	3.79	1.37
<b>SD</b>	0.79	2.15	1.66	1.83	3.09	1.87	1.65	1.56	1.91	0.59
<b>1. Transaction-specific Investments</b>	1.00	0.50**	0.20	0.42**	0.16	0.13	-0.20	-0.33**	0.06	0.20
<b>2. Formal Governance Mechanisms</b>	0.27*	1.00	-0.02	0.06	-0.10	0.12	-0.21	-0.17	0.38**	0.42**
<b>3. Calculative Trust</b>	1.69	-0.07	1.00	0.34**	0.07	0.38	-0.32**	-0.21	-0.03	0.19
<b>4. The Length of a Relationship</b>	-0.18	0.01	0.12	1.00	0.47**	0.55**	-0.15	-0.28**	-0.11	-0.11
<b>5. Assistance-giving Routines</b>	0.27*	-0.09	0.20*	0.09	1.00	0.22	-0.17	-0.35**	-0.03	-0.16
<b>6. Technological Change</b>	0.09	0.11	0.41**	0.13	0.19	1.00	-0.14	-0.32**	-0.17	-0.08
<b>7. Multiple Manufacturers</b>	0.17	0.01	0.08	0.12	0.00	0.06	1.00	-0.58**	0.05	-0.27*
<b>8. Finding New Manufacturers</b>	0.07	-0.01	-0.07	-0.11	-0.34**	-0.30**	0.32**	1.00	0.24	-0.02
<b>9. Finding New Suppliers</b>	0.02	-0.05	-0.07	0.11	-0.29*	0.14	0.09	0.31**	1.00	0.13
<b>10. Firm Size</b>	-0.01	-0.08	-0.01	0.06	0.09	-0.11	0.10	-0.13	-0.28*	1.00
<b>Mean</b>	2.81	3.88	4.27	4.74	4.45	4.55	6.62	5.28	4.34	2.06
<b>SD</b>	0.49	2.30	1.59	2.70	1.88	1.91	0.99	1.70	2.12	1.40

<sup>a</sup> Figures below the diagonal indicating the local supplier-foreign manufacturer relationship (N = 77) and above the diagonal indicating the local supplier-local manufacturer relationship (N = 57)

\*\*\* p < 0.05; \* p < 0.10.

**Table 2.** OLS Regression Analysis for Transaction-Specific Investments

	China (N = 57)		Taiwan (N = 77)	
	Model 1	Model 2	Model 3	Model 4
<b>Control Variables</b>				
Technological Change	0.052 <sup>a</sup>	-0.318**	0.116	-0.075
Multiple Manufacturers	0.087	0.140	0.134	0.131
Finding New Manufacturers	-0.382**	-0.240	0.042	0.035
Finding New Suppliers	0.125	-0.094	0.007	0.210*
Firm Size	0.206	0.015	0.192	0.243**
<b>Independent Variables</b>				
Formal Governance Mechanisms		0.535***		0.297***
Calculative Trust		0.159		0.237**
Assistance-giving Routines		0.457***		0.363**
The Length of a Relationship		-0.003		-0.253**
<b>F-Value</b>	1.963	5.258***	1.118	3.714***
<b>R<sup>2</sup></b>	0.161	0.502	0.073	0.333
<b>Adjusted R<sup>2</sup></b>	0.079	0.406	0.008	0.243
<b><math>\Delta</math> Adjusted R<sup>2</sup></b>	--	0.340	--	0.260
<b>Hierarchical F-Value</b>	1.963	8.023***	1.118	6.524***

<sup>a</sup> Beta ( $\beta$ ), standardized regression coefficients;

\*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$ .

be that – because the competence of local manufacturers may be questionable – local suppliers may lack confidence in them. Furthermore, because of the support of H2-2 and the non-significance of H2-1, H2-3 appears to be supported. These results suggest that calculative trust, in the case of foreign manufacturers, motivates local suppliers to make transaction-specific investments.

The impact of assistance-giving routines is shown to be significant in Models 2 and 4 ( $\beta = 0.457$ ,  $p < 0.01$  and  $\beta = 0.363$ ,  $p < 0.05$ , respectively), and the results strongly support H3-1 and H3-2. Although the difference in the impact of assistance-giving routines on transaction-specific investments ( $\Delta\beta = 0.094$ ) is statistically significant across the two groups ( $F_{1,114} = 4.160$ ,  $p < 0.05$ ), the coefficient in the local supplier/local manufacturer sample is higher than that in local supplier/foreign manufacturer sample. Thus, H3-3 is not supported. The reason for this may be that even though foreign manufacturers may indeed have more advanced technological capabilities, local suppliers may suspect that foreign manufacturers will not unreservedly transfer their technological know-how. A similar situation is evident in the case of joint ventures, in which local partners complain that their foreign partners are unwilling to share the agreed-upon technical skills (Child 1998).

Surprisingly, the length of a relationship is in fact found to be negatively correlated to transaction-specific investments in foreign manufacturers (in Model 4,  $\beta = -0.253$ ,  $p < 0.05$ ), and to have no significant impact on a supplier's transaction-specific investments in local manufacturers. Hence, H4-1 and H4-2 are not supported. The reason for this may be that although researchers in the past have examined the length of a relationship in a similar way (Dyer/Chu 2000), ongoing relationships are not simply a matter of durability



(i.e., time); other moderating variables may exist. For example, many supplier-manufacturer relationships are characterized by long-term market relationships in which manufacturers purchase simple components with the aim of reducing costs in the short-term; that is, relationships may be ongoing for strictly pragmatic (rather than benevolent) reasons.

As for the control variables, a higher degree of technological change lessens the possibility that local suppliers would make transaction-specific investments in local manufacturers (in Model 2,  $\beta = -0.318$ ,  $p < 0.05$ ), reflecting suppliers' concern that they may not be able to recoup their investments. The extent to which manufacturers could easily find new suppliers also has a positive relationship to transaction-specific investments in the local supplier/foreign manufacturer sample (in Model 4,  $\beta = 0.21$ ,  $p < 0.10$ ). Firm size is positively associated with transaction-specific investments in the local supplier/foreign manufacturer sample (in Model 4,  $\beta = 0.243$ ,  $p < 0.05$ ). A tentative explanation for this finding is that local suppliers with more resources are more willing to make transaction-specific investments in foreign manufacturers.

## Conclusion

The question driving the present examination had to do with the relationship between governance mechanisms and transaction-specific investments made by local suppliers in China. Specifically, we assessed the impact of both formal and relational governance on transaction-specific assets, especially by comparing the attitude towards local and foreign manufacturers from the local suppliers' viewpoint.

Our findings help to illuminate how suppliers from a collectivistic culture view the world, and suggest three implications for managers with regard to how foreign firms might use their economic and technological advantages to cooperate with such suppliers. First, formal governance mechanisms have a very clear effect on the likelihood that suppliers will make transaction-specific investments. Along these lines, as suggested by Child (1998), multinational corporations would be well-advised to design formal agreements with their Chinese partners. However, foreign manufacturers cannot rely solely on them. Local suppliers may question the legal enforceability of foreign manufacturers' contracts. This misalignment is in keeping with David and Han's (2004) argument that the perception of uncertainty and social interaction needs to be addressed in relation to transaction-specific investments.

Second, this study notes the importance of ensuring that a supportive network relationship is in place to overcome liabilities of foreignness when doing business in China. Although the possibility of cultivating internal capabilities may make a firm extremely attractive to its potential partner, the evidence from this study provides support for the argument that a firm can actively use a strategic element in the development of relationships – i.e., through the use of indirect ties, which provide a less costly way to support direct relationships with business partners.

Third, this study also encourages managers to invest resources in the provision of assistance-giving routines. These routines will raise expectations for the continuity of a relationship, and will, in turn, influence a supplier's decision to make transaction-specific investments in local as well as foreign manufacturers.

Fourth, our findings offer suggestions for other foreign manufacturers. As Zhang (2000) suggested, there is no distinctive difference between the long-term objectives of foreign manufacturers, whether they are established by the Taiwanese or by investors from the Western world. Further, the strategic behaviors designed to encourage suppliers to make transaction-specific investments may be characterized as an important objective in developing long-term relationships. Foreign manufacturers might wish to apply our findings related to design governance mechanisms to motivate Chinese local suppliers' transaction-specific investments.

Despite these encouraging results, several limitations of this study should be noted. Moreover, clarification of these limitations will, we feel, require future research. First, the sample we employed limits the generalizability of our results, as the samples were drawn from coastal cities in China, which may be characterized by a greater number of opportunities for cooperation with foreign manufacturers. We hope that future research will be conducted to examine whether Chinese suppliers behave differently in other regions of the country. Secondly, this study represents a cross-sectional analysis. Although our reasoning in this study implied certain causal relationships, the causality could not be confirmed using our cross-sectional research design. Similarly, Heide and John (1990) also indicated that, even using a structural equation model with cross-sectional data in their study, alternative explanations of the results cannot be completely eliminated without longitudinal data. A longitudinal research design would be beneficial, as it would help to confirm the directionality of the relationships identified in this study. Third, this study evaluated whether suppliers followed the prescriptions outlined by TCE and relational governance mechanisms. It is, of course, possible that different cultural dimensions influence suppliers' behaviors. Future research should strive for a more thorough understanding of how different cultural dimensions affect or moderate suppliers' behaviors. Fourth, as we focused on a context in which manufacturer-supplier relationships are not governed by a central, corporate authority, this study is, to some extent, incomplete. Further insight may be gained by a more general investigation into why a manufacturer would choose to replace a contractual relationship with a vertically-integrated supplier.

## Endnotes

- 1 Rokkan, Heide and Wathne (2003) examined the relationship between a supplier's specific investments and its customer's opportunism, but not with governance mechanisms; similarly, Claro, Hagelaar, and Omta (2003) showed a positive relationship between a supplier's transaction-specific investments and joint actions.
- 2 Williamson (1985) identified four kinds of transaction-specific investments: Site specificity, physical asset specificity, human asset specificity, and dedicated assets.
- 3 Other physical transaction-specific investments, such as equipments, which are attributed to transaction-specific investments in the beginning, may be modified to other alternative manufacturers after learning by doing or introducing new products in the future. However, the possibilities of modifying molds to fit other alternative manufacturers' requirement are quite small. Therefore, given the definition of transaction-specific investments as non-redeployment, we only used 'molds' as the proxy.
- 4 Although molds and moulds are used interchangeably in previous research, following the Random House Webster's College Dictionary's (2000) definition, we used 'molds' as a proxy for transaction-specific investments in this study.

- 5 Taking suggestions from managers whom we interviewed, it was easier to measure the degree of TSI by interpreting that, in practice, molds either can be used for only one manufacturer, few manufacturers or many manufacturers.
- 6 As pointed out by a reviewer, "transaction-specific investments" can also be considered as a discrete variable. Thus, the ordered logit regression is more appropriate for data analysis. In fact, the results of ordered logit regression were quite similar with those of Ordinary Least Squares (OLS) regression. Because one purpose of this study is to compare the impact across two groups and the ordered logit regression can not satisfy that purpose, we only present the results of regression analyses here.

## References

- Abramson, N. R./Ai, J. X., Canadian Companies Doing Business in China: Key Success Factors, *Management International Review*, 39, 1, 1999, pp. 7–35.
- Armstrong, J. S./Overton, T. S., Estimating Nonresponse Bias in Mail Surveys, *Journal of Marketing Research*, 14, 3, 1977, pp. 396–402.
- Aulakh, P. S./Kotabe, M./Sahay, A., Trust and Performance in Cross-Border Marketing Partnerships: A Behavioral Approach, *Journal of International Business Studies*, 27, 5, 1996, pp. 1005–1032.
- Belderbos, R./Zou, J., Foreign Investment, Divestment and Relocation by Japanese Electronics Firms in East Asia, *Asian Economic Journal*, 20, 1, 2006, pp. 1–27.
- Bensaou, M./Anderson, E., Buyer-Supplier Relations in Industrial Markets: When Do Buyers Risk Making Idiosyncratic Investment?, *Organization Science*, 10, 4, 1999, pp. 460–481.
- Bradach, J. L./Eccles, R. G., Price, Authority, and Trust: From Ideal Types to Plural Forms, *Annual Review of Sociology*, 15, 1989, pp. 97–118.
- Buckley, P./Casson, M., *The Future of Multinational Enterprises*, London: Macmillan Press 1976.
- Buvik, A./Andersen, O., The Impact of Vertical Coordination on Ex Post Transaction Costs in Domestic and International Buyer-Seller Relationships, *Journal of International Marketing*, 10, 1, 2002, pp. 1–24.
- Buvik, A./Haugland, S. A., The Allocation of Specific Assets, Relationship Duration, and Contractual Coordination in Buyer-Seller Relationships, *Scandinavian Journal of Management*, 21, 1, 2005, pp. 41–60.
- Central Daily News (ed.), *Triangular Debt in China: The Trap for Doing Business in China and Taiwanese Investors*, Jan. 14, 2002, <http://www.epochtimes.com/b5/2/1/14/n163836.htm>, (in Chinese).
- Chang, K./Ding, C., The Influence of Culture on Industrial Buying Selection Criteria in Taiwan and Mainland China, *Industrial Marketing Management*, 24, 4, 1995, pp. 277–284.
- Child, J., Trust and International Strategic Alliances: The Case of Sino-Foreign Joint Ventures, in Lane, C./Bachmann, R. (eds.), *Trust Within and Between Organizations*, Oxford, United Kingdom: Oxford University Press 1998, pp. 241–272.
- Chin, S., *Big Picture: The Rise and Change of Private Firms in China*, Taipei: Linking Bookstore 2002 (in Chinese).
- Chung, S./Singh, H./Lee, K., Complementarity, Status Similarity and Social Capital as Drivers of Alliance Formation, *Strategic Management Journal*, 21, 1, 2000, pp. 1–22.
- Claro, D. P./Hagelaar, G./Omta, O., The Determinants of Relational Governance and Performance: How to Management Business Relationships?, *Industrial Marketing Management*, 32, 8, 2003, pp. 703–716.
- Cohen, A., Comparing Regression Coefficients Across Subsamples: A Study of the Statistical Test, *Sociological Methods & Research*, 12, 1, 1983, pp. 77–94.
- Cook, T. D./Campbell, D. T., *Quasi-Experimentation: Design and Analysis Issues for Field Settings*, Chicago: Rand McNally College Publications 1979.
- David, R. J./Han, S. K., A Systematic Assessment of the Empirical Support for Transaction Cost Economics, *Strategic Management Journal*, 25, 1, 2004, pp. 39–58.
- Doney, P. M./Cannon, J. P., An Examination of the Nature of Trust in Buyer-Seller Relationships, *Journal of Marketing*, 61, 2, 1997, pp. 35–51.
- Doney, P. M./Canon, J. P./Mullen, M. R., Understanding the Influence of National Culture on the Development of Trust, *Academy of Management Review*, 23, 3, 1998, pp. 601–620.
- Dyer, J. H./Chu, W., The Determinants of Trust in Supplier-Automaker Relationships in the U.S., Japan, and Korea, *Journal of International Business Studies*, 31, 2, 2000, pp. 259–285.
- Dyer, J. H./Singh, H., The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage, *Academy of Management Review*, 23, 4, 1998, pp. 660–679.

- Ganesan, S., Determinants of Long-term Orientation in Buyer-Seller Relationships, *Journal of Marketing*, 58, 2, 1994, pp. 1–19.
- Ghani, J. A./Khan, J. H., Network Relationships and Asset Specificity in Pakistan's Automotive Industry, *Journal of the Asian Pacific Economy*, 9, 1, 2004, pp. 85–100.
- Granovetter, M., Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology*, 91, 3, 1985, pp. 481–510.
- Hamilton, R. T./Chow, Y. K., Why Managers Divest: Evidence from New Zealand's Largest Companies, *Strategic Management Journal*, 14, 6, 1993, pp. 479–484.
- Heide, J. B./John, G., Alliance in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships, *Journal of Marketing Research*, 27, 1, 1990, pp. 24–36.
- Holm, D. B./Eriksson, K./Johanson, J., Business Network and Cooperation in International Business Relationships, *Journal of International Business Studies*, Special Issue, 1996, pp. 1033–1053.
- Huff, L./Kelley, L., Levels of Organizational Trust in Individualist Versus Collectivist Societies: A Seven-Nation Study, *Organization Science*, 14, 1, 2003, pp. 81–90.
- Hymer, S., *The International Operations of National Firms: A Study of Direct Foreign Investment*, Ph.D. Dissertation, M.I.T. 1960.
- Investment Commission (ed.), *Survey of Taiwanese Firms Operating in China 2002*, Taipei: Ministry of Economic Affairs, R.O.C. 2003 (in Chinese).
- Joshi, A. W./Stump, R. L., The Contingent Effect of Specific Asset Investments on Joint Action in Manufacturer-Supplier Relationships: An Empirical Test of the Moderating Role of Reciprocal Asset Investments, Uncertainty, and Trust, *Journal of the Academy of Marketing Science*, 27, 3, 1999, pp. 291–305.
- Kim, S. M./Mahoney, J. T., Mutual Commitment to Support Exchange: Relation-specific IT System as a Substitute for Managerial Hierarchy, *Strategic Management Journal*, 27, 5, 2006, pp. 401–423.
- Klein, S./Frazier, G. L./Roth, V. J., A Transaction Cost Analysis Model of Channel Integration in International Markets, *Journal of Marketing Research*, 27, 2, 1990, pp. 196–208.
- Kramer, R. M., Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions, *Annual Review of Psychology*, 50, 1, 1999, pp. 569–598.
- Lee, J. R./Chen, J. S., Internationalization, Local Adaptation, and Subsidiary's Entrepreneurship: An Exploratory Study on Taiwanese Manufacturing Firms in Indonesia and Malaysia, *Asia Pacific Journal of Management*, 20, 1, 2003, pp. 51–72.
- Luo, Y., Transactional Characteristics, Institutional Environment and Joint Venture Contracts, *Journal of International Business Studies*, 36, 2, 2005, pp. 209–230.
- Mezias, J. M., Identifying Liabilities of Foreignness and Strategies to Minimize Their Effects: The Case of Labor Lawsuit Judgments in the United States, *Strategic Management Journal*, 23, 3, 2002, pp. 229–244.
- National Bureau of Statistics of China Web (ed.), *China Statistical Yearbook*, 2004, <http://www.stats.gov.cn/tjsj/ndsj/yb2004-c/indexch.htm>.
- Nooteboom, B./Berger, H./Noorderhaven, N. G., Effects of Trust and Governance on Relational Risk, *Academy of Management Journal*, 40, 2, 1997, pp. 308–338.
- North, D. C., *Institutions, Institutional Change and Economic Performance*, Cambridge, London: Cambridge University Press 1990.
- Parkhe, A., Strategic Alliance Structuring: A Game Theoretic and Transaction Cost Examination of Interfirm Cooperation, *Academy of Management Journal*, 36, 4, 1993, pp. 794–829.
- Petersen, B./Pedersen, T./Benito, G. R. G., The Termination Dilemma of Foreign Intermediaries: Performance, Anti-Shirking Measures and Hold-Up Safeguards, *Advances in International Marketing*, 16, 2006, pp. 317–339.
- Pillai, K. G./Sharma, A., Mature Relationships: Why Does Relational Orientation Turn into Transaction Orientation?, *Industrial Marketing Management*, 32, 8, 2003, pp. 643–651.
- Podsakoff, P. M./Organ, D. W., Self-Reports in Organizational Research: Problems and Prospects, *Journal of Management*, 12, 4, 1986, pp. 531–544.
- Poppo, L./Zenger, T., Do Formal Contracts and Relational Governance Function as Substitutes or Complements?, *Strategic Management Journal*, 23, 8, 2002, pp. 707–725.
- Random House (ed.), *Random House Webster's College Dictionary*, New York: Random House International 2000.
- Rokkan, A. I./Heide, J. B./Wathne, K. H., Specific Investments in Marketing Relationships: Expropriation and Bonding Effects, *Journal of Marketing Research*, 40, 2, 2003, pp. 210–224.
- Suh, T./Kwon, I. W. G., Matter Over Mind: When Specific Asset Investment Affects Calculative Trust in Supply Chain Partnership, *Industrial Marketing Management*, 35, 2, 2006, pp. 191–201.

- Walker, G./Poppo, L., Profit Centers, Single-Source Suppliers, and Transaction Costs, *Administrative Science Quarterly*, 36, 1, 1991, pp. 66–87.
- Wang, X./Ralston, D. A., Strategies for Small and Medium-Sized U.S. Business Investing in China: Lessons from Taiwanese Companies, *Thunderbird International Business Review*, 42, 6, 2000, pp. 677–701.
- Williamson, O. E., *The Economic Institutions of Capitalism*, New York: The Free Press 1985.
- Williamson, O. E., Strategizing, Economizing, and Economic Organization, *Strategic Management Journal*, 12, 8, 1991, pp. 75–94.
- Williamson, O. E., Calculativeness, Trust, and Economic Organization, *Journal of Law and Economics*, 36, 1, Part 2, 1993, pp. 453–486.
- Wong, P. L. K./Ellis, P., Social Ties and Partner Identification in Sino-Hong Kong International Joint Ventures, *Journal of International Business Studies*, 33, 2, 2002, pp. 267–289.
- Yli-Renko, H./Autio, E./Sapienza, H. J., Social Capital, Knowledge Acquisition, and Knowledge Exploitation in Young Technology-Based Firms, *Strategic Management Journal*, 22, 6/7, 2001, pp. 587–613.
- Zaheer, A./Venkatraman, N., Relational Governance as an Interorganizational Strategy: An Empirical Test of the Role of Trust in Economic Exchange, *Strategic Management Journal*, 16, 5, 1995, pp. 373–392.
- Zhang, X., Motivations, Objectives, Locations and Partner Selections of Foreign Invested Enterprises in China, *Journal of the Asia Pacific Economy*, 5, 3, 2000, pp. 190–203.
- Zhang, W., Development in Chinese Corporate Finance and its Implication for Ownership Reform (IV), 2001, <http://www.macrochina.com.cn/english/analysis/outlook/20010807001951.shtm>.