Beyond entry mode choice: Explaining the conversion of joint ventures into wholly owned subsidiaries in the People's Republic of China

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Abstract
While there is a vast amount of research on firms' choice of ownership form when entering a foreign market, little attention has been paid to changes in ownership forms of operation abroad *after* initial entry. Using transaction cost economics and institutional theory we identify a number of factors that may help to explain the likelihood of foreign firms' converting their joint venture with a local firm into a wholly owned subsidiary. We formulate a number of hypotheses and test them against data collected through a questionnaire survey of managers representing foreign subsidiaries in the People's Republic of China (PRC) that are run either as international joint ventures (IJVs) or as wholly owned foreign subsidiaries (WFOEs) that have recently been converted from IJVs into a WFOE. The paper contributes to research by showing that transaction-cost-based thinking is useful for explaining not only the initial choice of ownership mode when entering a new market, but also the potential subsequent changes of this ownership mode. By combining transaction cost theory with arguments from institutional theory, the study identifies a number of factors that contribute to explaining post-entry changes of foreign firms' ownership forms in the PRC, and provides empirical evidence of this phenomenon.
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INTRODUCTION
Over the last two decades, the stock of foreign direct investment (FDI) in the People's Republic of China (PRC) has increased from US$57 billion in 1982 to US$317 billion in 2005. For 2005 the FDI inflows exceeded US$72 billion, making the PRC the largest FDI recipient globally (UNCTAD, 2001, 2006). The consistently high GDP growth rates, in combination with a relatively good infrastructure, political stability, and a liberalization of the trade and investment regime following the WTO entry in 2001, can be seen as the primary contributing factors for this increase in FDI.

The liberalization of government regulations has led to new options with regard to ownership modes being available to foreign firms investing in the PRC. While international joint ventures (IJVs) were the dominant type of ownership chosen by foreign investors until 1997, firms entering after 1997 preferred to establish

wholly foreign-owned enterprises (WFOEs) (Yan & Warner, 2002). The dominance of IJVs in early years of FDI in the PRC can be attributed to the existence of regulations that prevented the establishment of WFOEs in most sectors. Although about 50% of the 510,000 FDI projects in the PRC in 2004 were organized as IJVs and 40% as WFOEs, only 27% of *new* FDI projects in 2004 were IJVs, whereas over 70% were WFOEs (MOFCOM, 2006). Given this trend away from IJVs towards WFOEs, one questions the extent to which foreign firms involved in IJVs will change their IJV into a WFOE, and which factors increase the likelihood of such a conversion (if legally possible as determined by the Chinese Catalogue for Directing Foreign Investment). Examples of firms that have changed the ownership mode of subsidiaries in the PRC include large multinational enterprises (MNEs) such as Mitsubishi, Siemens, and Nestlé, as well as many small and medium-sized firms (see also Buckley, 2007). We suggest that, given these evident changes in the preferences of foreign firms with regard to entry mode into the PRC, the country provides a good setting for analyzing the factors that explain the conversion of IJVs into WFOEs.

While a large body of research has dealt with entry mode choice in general (e.g., Agarwal & Ramaswami, 1992; Anderson & Gatignon, 1986; Tihanyi, Griffith, & Russell, 2005; Woodcock, Beamish, & Makino, 1994; Zhao, Luo, & Suh, 2004), and foreign firms entering the PRC in particular (e.g., Chen & Hu, 2002; Vanhonacker, 1997; Wei, Liu, & Liu, 2005; Zhao & Zhu, 1998), there has been comparatively little interest in the change of an IJV into a WFOE or in factors that lead firms to change their ownership mode in foreign markets. One stream of research that has looked at this important issue is the work on the instability of IJVs (e.g., Gomes-Casseres, 1987; Inkpen & Beamish, 1997; Kogut, 1989). However, instability can refer to a wide range of issues, such as conflicts between the partners or the folding of the IJV, and the conversion of the IJV into a WFOE is seen as only one of several options, which has so far not been analyzed in detail. A second stream of research that is of greater relevance here is studies that are based on the real-options approach (e.g., Buckley, Casson, & Gulamhussen, 2002; Kogut, 1991; Reuer & Tong, 2005). These studies focus explicitly on the idea that firms may use IJVs to provide the option of converting the IJV into a WFOE at a later stage. Yet the focus of this research on IJVs is geared towards explaining why firms choose an IJV, rather than explaining why and under which circumstances firms involved in an IJV exert this option and decide to convert the IJV into a WFOE. Overall, compared with investigations into firms' initial choice of entry modes, there has thus been little conceptual work on post-entry changes of ownership forms. However, given the continuing liberalization of the investment regime in China as well as in many other emerging markets, such as India or Russia, we discern a need for theory-based conceptual as well as empirical research in this field. This study contributes to filling this gap by using transaction cost economics and institutional theory to develop a series of hypotheses and testing them empirically against a sample of foreign firms operating in the PRC.

The remainder of this paper is organized as follows. In the next section, we use transaction cost theory and institutional theory to develop a series of hypotheses about factors that are expected to influence the likelihood of foreign firms' converting their IJV in the PRC into a WFOE. The ensuing section presents our research design and sample. We then test our hypotheses against data gathered from 94 former or actual IJVs located in the PRC, using logistic regression analysis. A discussion of the results and an outline of their implications for theory and practice conclude the paper.

THEORETICAL FRAMEWORK AND HYPOTHESES

Transaction cost theory has frequently been used to analyze ownership choices of firms entering new markets (e.g., Anderson & Gatignon, 1986; Cleeve, 1997; Erramilli & Rao, 1993; Tsang, 2000). Yet, despite its usefulness and its popularity among researchers, transaction cost theory has been criticized for omitting factors that may be relevant when deciding on the most appropriate mode of entry (e.g., Chi & McGuire, 1996; Gomes-Casseres, 1990; Kim & Hwang, 1992; Reuer & Tong, 2005). As a consequence, a number of authors have supplemented transaction-cost-based reasoning with arguments from institutional theory, in order to bridge the perceived gaps of transaction cost theory with regard to explaining international entry mode choice (e.g., Davis, Desai, & Francis, 2000; Lu, 2002). We expect that such a combined approach will also be useful for explaining post-entry changes in the ownership mode of firms operating in a foreign country.

Transaction Cost Theory and Change of Ownership Mode

We suggest that, even though some foreign investors might have preferred to enter the PRC via a WFOE, ownership caps and other legal restrictions have led many of them to enter through setting up "forced JVs" (Buckley, 2007). Thus with the abolishment of many of these ownership restrictions outlined above, firms have to rethink their mode of operation, and may convert their IJV into a WFOE. We suggest that transaction-cost-based factors that may have influenced the decision when entering the PRC are thus becoming important, now that WFOEs are legally possible.

Transaction cost theory argues that firms will choose a governance structure that minimizes transaction costs (Jung, 2004). A firm will internalize activities that it is able to perform at lower cost, and will rely on the market for activities in which other firms have a comparative advantage (Klein, Frazier, & Roth, 1990). Transaction cost theory is widely used to explain the existence and functioning of MNEs (Buckley & Casson, 1976; Rugman, 1981). One particular focus of the economic analysis of MNEs is the choice of foreign market entry mode, that is, the choice between export, FDI, and licensing. According to transaction cost theory, firms take into account the costs and benefits associated with these options in the light of existing market imperfections. Thus the choice of entry mode requires a comparison of the coordination costs associated with the internalization and the transaction costs arising from the search for, negotiation with and control of a market partner (Brouthers, 2002; Erramilli & Rao, 1993). While early work has provided static analyses of this choice (e.g., Hirsch, 1976), subsequent research provided dynamic economic analyses into the timing of a switch between entry modes. However, the focus here was the switch from export to FDI (Buckley & Casson, 1981) or from export to IJV (Pennings & Sleuwaegen, 2004). Moreover, investigations of the conditions leading to a switch from IJV to WFOE are lacking in the literature.

From the perspective of transaction cost economics, IJVs represent a hybrid form of organizing transactions, which lies between using the market and fully internalizing transactions in the form of a WFOE (Holtbrügge, 2004). Hennart (1988) argues that IJVs are preferred over WFOEs when: (1) markets for the intermediate goods held by each party are failing; and (2) acquiring or replicating the assets required to produce those goods is more expensive than obtaining a right to their use through an IJV agreement. Examples of such intermediate goods are industry- or country-specific knowledge, market knowledge, and access to distribution channels and resources or parts and components (Hennart, 1991; Makino & Neupert, 2000). With regard to the PRC, local knowledge is one of the most important intermediate goods that foreign firms are trying to achieve when cooperating with a local partner. Existing studies show that local knowledge is one of the major reasons for the establishment of IJVs in China (Beamish, 1989; Zhao & Zhu, 1998). Local knowledge refers to a combination of knowledge of the market, the regulatory framework, the general economic conditions, the political situation and the business culture (Beamish & Inkpen, 1995; Inkpen & Beamish, 1997). Both anecdotal evidence and empirical studies show that such knowledge is critical for the success of an investment in China (Beamish & Jiang, 2002). Given this importance of knowledge of local conditions, it can be regarded as a central intermediate good required by foreign firms when entering and operating in the PRC. With growing experience in the PRC the foreign partner will acquire local knowledge, and the need to have a local partner to provide this knowledge will diminish. Thus, as Killing (1982: 127) states, the "learning process naturally weakens the desire of companies to keep their joint ventures together." This is also reflected in the results of extant research demonstrating that increased market knowledge of the foreign partner increases the instability of IJVs (Beamish & Inkpen, 1995). We thus formulate the following hypothesis:

> **Hypothesis 1**: The increase of local knowledge by the foreign IJV partner is positively associated with the likelihood of a conversion of an IJV into a WFOE.

While a number of factors have been suggested to influence the choice of entry mode, the level of transaction costs and the optimal choice of governance structure mainly depend on two factors: asset specificity and uncertainty (Williamson, 1975). *Asset specificity* increases with the extent of losses that would be realized if the assets were used outside the specific context for which they were intended. High asset specificity exists when firms own special technological or management knowledge (Brouthers, 2002). Bringing such knowledge into an IJV increases the danger and the negative

consequences of partners' behaving opportunistically and thus the cost of safeguarding these assets. In order to deal with this danger, transaction cost economics suggests internalizing the use of these assets. This prediction has received empirical support in studies that found a highly positive influence of asset specificity on foreign firms' preference for WFOEs (Anderson & Gatignon, 1986; Chen & Hu, 2002; Erramilli & Rao, 1993; Lu, 2002). While other studies could not confirm this impact (Brouthers, 2002; Hennart, 1991; Hennart & Larimo, 1998), we suggest that asset specificity may be particularly salient in the PRC, given the lack of sufficient legislation to protect intellectual property rights and their enforcement (Chen & Hu, 2002).

Even though some investors would have preferred to enter a foreign market via a WFOE, they might have not been able to do so because of legal restrictions. Thus, in line with the role of asset specificity when entering a foreign market, we suggest that, with the absence of these ownership restrictions, firms that have invested in highly specific assets and operate IJVs are more likely to convert their IJV into a WFOE than firms with low levels of asset specificity. We thus formulate the following hypothesis:

Hypothesis 2: The level of asset specificity is positively associated with the likelihood of a conversion of an IJV into a WFOE.

According to transaction cost theory, a further factor that influences changes of ownership mode is *external uncertainty*. External uncertainty refers to risks that firms cannot influence, and involves, for example, political, legal, economic, and social risks (Deng, 2001). There are two main arguments for the assumption that the degree of external uncertainty influences foreign investors' preference for IJVs. First, the local partner possesses country-specific knowledge that may help to reduce these risks. Second, the market commitment of IJVs is lower than that of WFOEs, since partners share resources and risks (Brouthers & Brouthers, 2003; Pan, 1996). Although the findings with regard to the effects of external risks on entry mode choice have been largely inconclusive (Davis et al., 2000), the existence of a positive link has received empirical support in a number of studies (Brouthers, 2002; Brouthers, Brouthers, & Werner, 2003; Kim & Hwang, 1992). For the case of post-entry changes of firms' ownership strategies we

suggest a similar relationship: firms that perceive a high degree of external uncertainty will continue to cooperate with a local partner in an IJV, while firms that perceive a low degree of external uncertainty are more likely to change their IJV into a WFOE.

Hypothesis 3: The perceived external uncertainty is negatively associated with the likelihood of converting an IJV into a WFOE.

Finally, the cultural distance between the foreign partner firms' home country and the host country of the subsidiary has been argued to influence entry mode decisions within the framework of transaction cost theory. In line with Hennart and Larimo (1998) and Chen and Hu (2002) we suggest that the cultural distance between the transaction partners increases both the uncertainty and the costs of a transaction. According to Chen and Hu (2002: 196), cultural distance can be defined as "the difference in … values and beliefs shared between home and host countries". A high cultural distance will increase the uncertainty and thus the transaction costs. According to Erramilli and Rao (1993), IJVs can reduce costs of communication and control resulting from high cultural distance. In addition, Jung (2004: 39) states that in the case of high cultural distance "firms are more likely to have difficulties in managing foreign operations alone" (for similar arguments see Hennart, 1991; Kogut & Singh, 1988; Tatoglu, Glaister, & Erdal, 2003). Some studies have found empirical support for a positive influence of cultural distance on firms' preferences for ownership modes that allow high levels of control, that is, WFOEs (Anand & Delios, 1997; Padmanabhan & Cho, 1996). However, the majority of studies discovered a negative relation between cultural distance and the choice of WFOE as mode of entering a foreign market (e.g., Duarte & García-Canal, 2004; Erramilli, 1991; Hennart & Larimo, 1998; Jung, 2004; Yiu & Makino, 2002). We suggest that the same logic applies to the post-entry choices available to firms – that is, when considering the likelihood of converting an existing IJV into a WFOE. Thus we formulate the following hypothesis.

Hypothesis 4: Cultural distance is negatively associated with the likelihood of converting an IJV into a WFOE.

Institutional Theory and Change of Ownership Mode

While the contribution of transaction cost theory to explaining entry mode choice is not in doubt, many researchers see a need to supplement this approach with insights from other theories in order to explain entry mode decisions more comprehensively (e.g., Hennart, 1991; Madhok, 1998; White & Lui, 2005). In particular, transaction cost theory has been criticized for failing to take into account non-rational entry mode decisions. In order to address this particular shortcoming, and to improve the analysis of entry mode choices, several researchers have suggested combining transaction cost economics with institutional theory. While transaction cost theory focuses explicitly on intentional and rational decisions, institutional theory also takes into account the social construction of organizational behavior, and recognizes the limits imposed by social constraints on a purely economic basis. Thus an integration of these two approaches may enhance the "explanatory strengths of both theories while simultaneously accounting for their weaknesses" (Martinez & Dacin, 1999: 77).[1]

In general, institutional theory highlights the role of the institutional context for organizational decision-making. This context is usually analyzed from a technical, cognitive and sociological perspective (Lu, 2002). Organizations are assumed to face pressures to conform to this institutional context, and may thus take decisions that are not based solely on efficiency criteria as implied by transaction cost theory. From an institutional theory perspective, organizational behavior and decision-making are thus influenced by institutional pressures (Oliver, 1991).

With regard to the choice of organizational form, Martinez and Dacin (1999: 78) suggest that "societal expectations of appropriate organizational form and behavior come to take on a rule-like status in social thought and action." These regulative, normative or cognitive societal expectations are called *isomorphic pressures* or *constraints*, while *isomorphism* is the term given to firms' attempts to act in line with these expectations (Yiu & Makino, 2002). Based on the source of these expectations, Rosenzweig and Singh (1991) distinguish between internal and external isomorphic constraints.

The importance of both internal and external isomorphic pressures for entry mode choice has been highlighted by a number of authors, such as, for example, Davis et al. (2000) and Yiu and Makino (2002). In the context of market entry, internal constraints depend on the nature of the relationship between the subsidiary and the parent company, whereas external constraints originate from outside the organization – for example, from the host country government. Although institutional theory has so far been applied only to explain the choice between IJV and WFOE when entering a new market (e.g., Yiu & Makino, 2002), we suggest that it can also contribute to a more comprehensive explanation of IJV-to-WFOE conversions and supplement the explanations we derived on the basis of transaction cost theory. We therefore analyze how far internal constraints affect the likelihood of IJV-to-WFOE conversion and then discuss the role of external constraints.

One major source of internal isomorphic constraints is the degree of interdependence between the parent firm and the subsidiary, and the level of its influence over the subsidiary. The pressure to replicate the parent firm's organizational principles in the management of the subsidiary increases with the degree to which their activities are interdependent. Increasing internal constraints require the subsidiary to apply similar management practices to those of the parent firm. Moreover, the subsidiary's degree of autonomy and flexibility with regard to accommodating the local partner firm's interests diminishes. Since in an IJV the local partner can block or slow down the adoption of the parent firm's management practices, we suggest that the level of resource interdependency and parent control reduces the tolerance for IJVs and increases the likelihood of a conversion. We thus hypothesize:

> **Hypothesis 5**: The level of internal isomorphic pressures to which the subsidiary is exposed is positively associated with the likelihood of converting an IJV into a WFOE.

With regard to external isomorphic pressures, institutional theory highlights the relevance of government regulations (Gomes-Casseres, 1990). While ownership restrictions were a major factor for the high proportion of IJVs among FDI projects in China until 2001 (Beamish, 1985; Mohr & Puck, 2005, 2006; Teagarden & Von Glinow, 1990), we suggest that, when these restrictions no longer exist, government regulations may still influence the likelihood of an IJV being converted into a WFOE. As stated by Yiu and Makino (2002: 670), "the foremost concern of an MNE when entering a foreign market is to gain market legitimacy: to
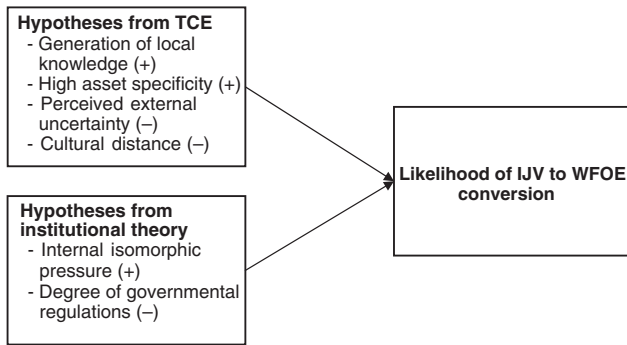
Figure 1   Research model.

establish the right to do business in the new market." This requires a foreign firm to know, and to abide by, the regulations existing in the host country. The more complex these regulations are, the higher the attractiveness of having a local partner to manage them. Several studies have provided empirical support for foreign firms' preference for IJVs in the case of a complex regulatory framework in the host country (e.g., Brouthers, 2002; Yiu & Makino, 2002). Applied to post-entry ownership modes of foreign firms we thus expect that the existence of complex government regulation will prevent foreign firms from changing their IJV into a WFOE, as the local partner is of comparatively greater use than in cases where the regulatory framework is perceived to be simple and easy to manage. Thus we formulate the following hypothesis:

> **Hypothesis 6**: The perceived complexity of governmental regulations for foreign firms is negatively associated with the likelihood of converting an IJV into a WFOE.

Figure 1 shows our conceptual framework.

RESEARCH DESIGN AND METHODOLOGY

Sample
In order to analyze the factors influencing the likelihood of converting an IJV into an WFOE, we carried out a questionnaire survey among foreign companies in the PRC at the beginning of 2006. We focused on foreign firms headquartered in the United States, Japan, and Europe, while deliberately excluding investors from Hong Kong, Taiwan, Macao, Singapore, Malaysia, as well as offshore financial centers such as the Virgin Islands or Western Samoa. These source countries were

excluded in order to eliminate round-tripping investments (Xiao, 2004) and investments from overseas Chinese companies, which owing to their cultural affinity are not readily comparable with investments from other foreign investors.

We contacted the chambers of foreign trade of Japan, the United States, the UK, Germany and the European Union and compiled a comprehensive database of contact addresses. In addition, we analyzed company home pages and articles in newspapers (e.g., *China Business Review*). Overall, we compiled contact details of 1,979 IJVs or wholly owned subsidiaries of foreign companies in the PRC. The original German language questionnaire was translated into four languages (English, Japanese, French, Spanish) by three professional translators using the translate/re-translate method to ensure the equivalency of questions (Brislin, 1970). The questionnaire was distributed via e-mail accompanied by a cover letter explaining the aim of the study. After two weeks, we sent out a reminder to those companies that had not answered by the original deadline. After a second deadline, we had received 195 usable questionnaires (response rate of 9.9%). This relatively low response rate may in part be explained by the questionnaire fatigue reported by many managers of subsidiaries of foreign firms in the PRC (one respondent who declined to participate in the study explained that he would receive more than seven questionnaires per week).

Given our interest in the likelihood that a subsidiary that had been created as an IJV had subsequently been converted into a WFOE, we eliminated from our sample responses from managers of subsidiaries that had been set up as a WFOE from the start. We also eliminated responses from subsidiaries in industries in which ownership restrictions still prevented foreign firms from transforming their IJV into a WFOE. This filtering process left us with responses from 94 companies that could be used to empirically test our hypotheses. Sixty-seven of these companies were still IJVs, and 27 of them had changed their ownership mode into a WFOE.

The subsidiaries in our sample were established by companies headquartered in 13 countries, with the United States accounting for the most of these companies (23), followed by Germany (20), Japan (10), the UK (10), and Italy (10) (see Appendix A). On average, the subsidiaries employed 689 people. The subsidiaries were operating mainly in the chemical, mechanical engineering, computer, electronic

and automotive industries. As can be seen in Appendix B, the percentage of transformed IJVs differs between industries. We conducted analyses of variance (ANOVA) using the IJV-to-WFOE conversion as the dependent variable, and industry (as suggested by Brouthers and Brouthers, 2003; measured by two-digit SI codes), the age of the subsidiary (measured in years), the ownership level of the IJV (measured in per cent of ownership held by the foreign company), and the size of the parent firm (measured by the number of employees) as independent variables (see, e.g., Gardner, 2005, or Van Vianen, De Pater, Kristof-Brown, & Johnson, 2004, for a similar approach). As no significant differences were found (see Appendices B and C), we included all companies in the subsequent analyses.

We tested for non-response bias by using the approach of Armstrong and Overton (1977), and compared early- and late-arriving responses. Non-response bias exists if the "persons who respond differ significantly from those who do not" (Armstrong & Overton, 1977: 396). *t*-test statistics revealed no significant differences for any independent variable. Therefore non-response bias was not considered to be a problem. To reduce common method bias, we employed the strategies suggested by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). In particular, we separated items measuring the same construct in the questionnaire, protected and assured respondent anonymity, and reduced the danger of evaluation apprehension by explaining in the cover letter that there were neither "right" nor "wrong" answers. In addition, common method bias can be assumed to be relatively low, given that our dependent variable is dichotomous, reflecting whether or not the IJV had been transformed into a WFOE, and does not require subjective evaluations on a multi-point scale.

Measures
The dependent variable *IJV to WFOE conversion* was measured using a dichotomous variable, assigned 0 if the IJV had not been converted into a WFOE, that is, the subsidiary was still operated as an IJV, and 1, if the IJV had been converted into a WFOE. In order to ensure correct answers, the questionnaire included two additional questions asking for the ownership mode at the time of establishment and at present.

All independent variables were measured differently for converted and non-converted firms: we asked converted firms to relate their answers to the time just before the conversion, whereas non-converted firms were asked to relate their answers to the time of the survey. Since no conversion in our sample took place before 2002, we do not expect a strong memory bias to influence our results. The level to which the foreign firm had been able to *acquire local knowledge* was measured using five questions in which the respondents were asked to compare the level of particular elements of local knowledge at the time of entering the market with the firm's current level of local knowledge. The different elements of local knowledge were described above (Beamish & Inkpen, 1995; Inkpen & Beamish, 1997). Respondents were asked to rate the China-specific knowledge available in their company as compared with the time of entry with regard to market knowledge, knowledge about the regulatory framework, the economic conditions, the political situation and the Chinese business culture (see Appendix D). Answers to these questions were measured on seven-point Likert-type scales ranging from 1 (the level of knowledge is/was much lower than at the time we entered the market) to 7 (the level of local knowledge is/was much higher than at the time we entered this market). The responses to these questions were combined to form a composite index. The internal reliability of the construct as measured by Cronbach's alpha was high (0.85).

In order to measure the degree of *asset specificity* of the subsidiary, we used three items suggested by Brouthers and Brouthers (2003). We asked managers to assess the level of human asset specificity, the proprietary nature of products/services provided, and the amount of assets that would have been forgone outside this specific transaction (see Appendix D). Again, seven-point Likert-type scales were used to measure the answers. The internal reliability of the construct proved to be satisfactory ($\alpha=0.78$).

In order to measure the *level of external uncertainty* perceived by the firms, we followed the suggestions of Agarwal and Ramaswami (1992), Brouthers (2002) and Brouthers and Brouthers (2003) and asked about the perceived political, economic, and social stability. Following the recommendation of Aulakh and Kotabe (1997), we also included a question about the legal stability. Thus the change in the level of perceived environmental uncertainty was measured by asking for an assessment of the degrees of political, legal, economic and social stability in comparison with the time when the

firm entered the PRC (see Appendix D). Answers were again measured on seven-point Likert-type scales ranging from 1 (the degree of political/legal/economic/social stability in China is/was much lower than when we first entered the PRC) to 7 (the degree of political/legal/economic/social stability in China is/was much higher than when we first entered the PRC). In addition, we included four questions that asked for an assessment of the future developments of the four elements. We suggest that the combination of these two types of question allows for a better measurement of the environmental uncertainty faced by the company. The construct shows a very high level of internal reliability (α 0.91).

Cultural distance between the home and the host country was measured with the index of Kogut and Singh (1988). They suggest employing the results of Hofstede's (1980, 2001) study to calculate a single composite index of cultural distance for each country pair using the following formula:

$$KD_{jk} = \frac{\sum \left[(D_{ij} - D_{ik})^2 \Big/ V_i \right]}{4} \qquad (1)$$

where KD_{jk} reflects the cultural distance between country j and China (k), D_{ij} reflects the value of country j and D_{ik} the value of China on the cultural dimension i, and V_i indicates the variance of the index of the cultural dimension i based on the data of Hofstede (1980, 2001). Hofstede's claim that differences in national culture can be represented in terms of these four dimensions has been subject to criticism. For example, authors have complained that his data were confined to one company, that his questions focused exclusively on work values, and that his research framework was biased towards Western standards (see, e.g., Erez & Early (1993) or Javidan, House, Dorfman, Hanges, & Sully de Luque (2006) for a summary). Despite this criticism, however, his study continues to be the largest empirical study connecting cultural orientation with observable institutional differences between countries within a single framework. In addition, the framework has successfully been used in similar studies before (e.g., Barkema, Shenkar, Vermeulen, & Bell, 1997; Erramilli, 1991; Jung, 2004).

Internal isomorphic pressures were measured, following Davis et al. (2000), using an 11-item construct consisting of two groups of items with seven-point Likert-type scales. The first group of questions asked for the resource interdependence between the parent company and the subsidiary in different activities of the value chain (e.g., research and development, procurement, or marketing). The second group measured the degree of flexibility and autonomy of the subsidiary in different management areas, such as strategic planning, research and development, or distribution (see Appendix D). Again, the construct showed a good internal reliability (0.80).

In line with Brouthers (2002), we measured the *degree of regulation* using a single item asking the participants about the perceived importance of legal restrictions for their business (excluding ownership restrictions).

Four control variables were included. *Diversification* was measured by using a dummy (Chang & Rosenzweig, 2001; Kogut & Singh, 1988) indicating whether the subsidiary's products/services are the same as (0) or different from (1) those of the parent company. According to Hennart (1991) and Makino and Neupert (2000), diversification would lead firms to enter a market using an IJV because of their need to gain access to intermediate products. We included the *international experience of the company*, which has been argued to lead to ownership modes with high levels of control (Anderson & Gatignon, 1986; Cleeve, 1997). Kogut and Singh (1988) differentiate between host-country-specific and general international experience. Since general international experience is difficult to transfer to the Chinese context (Beamish, 1993), we included only the China-specific experience, and measured it, in line with Hennart (1991), as the length of time that had passed since the company first started business activities in the PRC. Beamish (1989) argues that both the configuration and the stability of an IJV depend on the degree of competition in the particular industry. Similarly, the influence of industry concentration and competition on entry mode choice has been researched extensively (Chang & Rosenzweig, 2001; Elango & Sambharya, 2004; Kim & Hwang, 1992; Pan, 1996). We thus included the *intensity of competition in the industry*, and measured it using the four-item construct suggested by Kim and Hwang (1992). We asked managers to evaluate the degree of instability of their market share, the number of existing and potential competitors, the level of fixed costs relative to value added, and the costs facing the buyer when switching suppliers (see Appendix D). Again, seven-point Likert scales were used, and Cronbach's alpha was high (0.89). Finally, we included *subsidiary size*, since studies have suggested an influence of subsidiary size on entry

mode (Pan, 1996; Tatoglu et al., 2003; Zhao & Zhu, 1998). Following Hart and Oulton (1996) and Delios and Beamish (2001), we used the number of employees in the subsidiary as a measure of subsidiary size.

FINDINGS AND DISCUSSION

In order to test our hypotheses, we used logistic regression, as applied in most existing entry mode studies (Brouthers, 2002; Brouthers & Nakos, 2004; Erramilli, 1991; Herrmann & Datta, 2002; Pan, 1996). We ensured that the necessary requirements for using logistic regression were met by conducting a residual analysis and analyzing the standardized residuals. Three cases exceeded the recommended maximum standardized residual value of 1.96 and were excluded from the statistical analysis. In a next step, we ran a correlation analysis to check for possible signs of multicollinearity. As can be seen in Table 1, although there were a number of statistically significant relationships, none of them exceeded 0.35, and concerns about multicollinearity were not warranted (Hair, Anderson, Tatham, & Black, 1995).

The results of the logistic regression are reported in Table 2. The dichotomous variable "IJV-to-WFOE-conversion" was entered as the dependent variable into our logistic regression model, which was statistically significant (χ^2 38.329, $p \leqslant 0.001$). The likelihood ratio test revealed a significance of $p \leqslant 0.001$, and the pseudo-R^2 statistic showed a Nagelkerke R^2 of 0.502. Owing to the asymmetric distribution of the sample, we used the proportional chance criterion to analyze the predictive power of the regression. Tatoglu et al. (2003) suggest that the power of a regression is acceptable if it is able to explain 25% more than the

proportional chance criterion. The predictive power of our regression model (78%) surpasses this reference value (76%) and is thus acceptable.

The results of the logistic regression in Table 2 provide support for a number of our hypotheses. In Hypothesis 1 we suggested that the *acquisition of local knowledge* by the foreign IJV partner increases the likelihood that an IJV will be converted into a WFOE. As can be seen in Table 2, the respective coefficient is positive and statistically significant ($p \leqslant 0.01$), thus lending support for Hypothesis 1. We argued that local knowledge is a central intermediate product required by a foreign investor, and thus is an important reason for setting up

Table 2 Results of logistic regression analysis

	β_j	Exp(B)
Hypotheses based on TCE		
Generation of local knowledge	0.923*	2.517
Asset specificity	0.162	1.176
Reduction of external uncertainty	0.782*	2.186
Cultural distance	−1.160*	0.313
Hypotheses based on IT		
Internal isomorphic pressures	1.309**	3.701
Degree of governmental regulations	−0.388*	0.678
Control variables		
Competition intensity	0.104	1.110
Diversification	0.270	1.310
International experience	−0.016	0.984
Subsidiary size	0.000	1.000
Constant term	−8.036[†]	0.000

χ^2: 38.329***; Nagelkerke R^2: 0.502; percentage correctly classified: 78%.
N=91.
[†]$p<0.1$; *$p<0.05$; **$p<0.01$; ***$p<0.001$.

Table 1 Correlation matrix

No.	Variable	1	2	3	4	5	6	7	8	9	10
1	Generation of local knowledge	1									
2	Asset specificity	−0.20	1								
3	Reduction of external uncertainty	0.35**	−0.30**	1							
4	Cultural distance	0.15	−0.16	0.09	1						
5	Internal isomorphic pressures	0.31**	−0.28**	0.19	0.03	1					
6	Degree of governmental regulations	0.08	−0.14	−0.10	−0.04	0.03	1				
7	Competition intensity	0.03	0.16	−0.11	0.00	0.07	0.01	1			
8	Diversification	−0.24*	0.06	−0.03	0.09	−0.25*	0.04	−0.09	1		
9	International experience	0.13	−0.02	0.08	0.16	0.08	−0.01	0.06	0.21*	1	
10	Subsidiary size	0.20	0.04	0.28*	−0.14	0.05	0.06	0.09	−0.02	0.05	1

N=91.
*$p<0.05$; **$p<0.01$.

an IJV with a local partner. However, acquiring local knowledge from the local IJV partner over time reduces the foreign firm's need for this partner (Beamish and Inkpen, 1995). This line of reasoning receives support from our empirical results. Our findings also support the predictions of transaction cost theory with regard to the importance of intermediate goods. The appropriation of local knowledge increases the chances that foreign firms will change their ownership mode after their initial entry into a foreign market. This also underlines the importance of complementary assets for the existence and survival of IJVs. Generally, with increasing knowledge of FDI in China, this finding contributes to explaining the increasing use of WFOEs by foreign firms when entering and operating in China (see, e.g., Buckley, 2007).

As can be seen in Table 2, the influence of asset specificity on the likelihood that an IJV will be converted into a WFOE (Hypothesis 2) is not supported by our findings. Yet, while not supporting our and other authors' hypotheses, our result is similar to the results of a number of studies that did not find empirical support for the influence of asset specificity on entry mode decisions (Brouthers & Brouthers, 2003; Cleeve, 1997; Hennart, 1991). A first possible explanation for the non-significance of asset specificity in explaining the likelihood of IJV-to-WFOE conversions in China may be the high degree of product piracy in this country, and the still insufficient protection of (intellectual) property rights (e.g., Holtbrügge & Puck, 2008; Zhao, 2006). The foreign firms in our sample could have been reluctant to transfer assets of high specificity to their IJV when first entering China because of the experience of earlier market entrants into China that experienced the dissipation of their firm-specific advantages (FSA) by infringements of intellectual property rights. A second possible explanation may be that foreign investors may have developed safeguards against the unintended dissipation of their FSAs (Hamel, Doz, & Prahalad, 1989). Since the subsidiaries in our sample are relatively large, it can be expected that quite a few expatriates will be present in each. Having many expatriates present may to some extent protect the FSAs of a subsidiary, thus explaining our finding.[2] Third, it may be argued that asset specificity is not significant in our model because firms assume a low risk of dissipation of their FSAs. The assets transferred by the firm to the IJV may consist of specific skills that cannot easily be assimilated and internalized by the local partner. This may be due to the fact that the specific assets are not easily transported, interpreted or absorbed, reducing the risk of dissipation (Hamel et al., 1989).[3] Under such conditions, asset specificity would not have an effect on the likelihood of converting an IJV into a WFOE.

Hypothesis 3 suggested that a reduction in the level of perceived *external uncertainty* increases the likelihood that an IJV will be converted into a WFOE. Our findings support this hypothesis, showing a positive and statistically significant relationship between the perceived level of external uncertainty and the likelihood of conversion ($p \leqslant 0.001$). The argument leading to this hypothesis was that, on the one hand, lower risks reduce the necessity of a foreign partner to deal with country-specific risks. On the other hand, the level of resources committed to the subsidiary and thus exposed to country-specific risks is comparatively lower in IJVs. With a reduction of this uncertainty, foreign firms are willing to increase the level of resource commitment, increasing the likelihood of IJV-to-WFOE conversions. Thus, in line with authors who found empirical support for the relevance of external uncertainty for entry mode decisions (e.g., Brouthers & Brouthers, 2003), our results highlight the importance of external uncertainty for a firm's decision whether to maintain an IJV or to convert it into a WFOE.

With regard to Hypothesis 4, the findings show a statistically significant negative relationship between *cultural distance* and the likelihood that an IJV will be converted into a WFOE. We have argued that high cultural distance increases the costs associated with transactions between the subsidiaries and local buyers, suppliers, governmental bodies, etc. As a consequence, foreign investors prefer IJVs to WFOEs, because a local partner firm can more efficiently deal with local parties and stakeholders, thereby reducing these (external) transaction costs. We have also argued that this cost reduction outweighs the rise in the associated internal costs caused by the need to manage an IJV rather than a WFOE. In line with these arguments, our findings show that IJVs with foreign partners from culturally distant backgrounds are less likely to be changed into WFOEs than IJVs with foreign partners from countries that are culturally closer to China. This finding highlights the continued importance of local IJV partners for foreign firms that invest in countries with high cultural distance. At the same time,

however, this result differs from the research on entry mode choice, which suggests that cultural distance leads firms to prefer entry modes with high levels of control (Anand & Delios, 1997; Padmanabhan & Cho, 1996). Thus foreign firms that – owing to ownership restrictions – have entered a culturally distant country via setting up an IJV would show a high propensity to convert this into a WFOE once such ownership restrictions were eliminated. However, our data do not support this conclusion. When entering a culturally distant market, the internal costs associated with managing a IJV relationship may be higher than the reduction in external costs made possible by having a local partner firm, which leads foreign firms to prefer entry modes with high levels of control (Anand & Delios, 1997; Padmanabhan & Cho, 1996). However, in cases where firms have entered via an IJV, the extent of internal costs of managing the IJV relationship decline over time owing to learning and/or the development of trust. Thus, when considering post-entry changes of ownership modes, the internal costs may no longer exceed the reductions of external transaction costs realized through having a local partner, and a conversion would be less beneficial to the foreign firm.

In line with Hypothesis 5, the results show a positive relationship between the *level of internal isomorphic pressures* and the likelihood that an IJV will be converted into a WFOE. The respective coefficient is positive, is highly significant ($p \leqslant 0.01$), and has a very high logit value (3.701). Thus high interdependence between the subsidiaries and the parent firm's operations increases the likelihood of converting IJVs into WFOEs. This result is in line with the study of Davis et al. (2000), who found similar results in their analysis of entry mode decisions.

With regard to *external isomorphic pressures*, the results shown in Table 2 support Hypothesis 6 suggesting a negative association between the extent of perceived governmental regulations and the likelihood that an IJV will be converted into a WFOE ($p \leqslant 0.01$) . Thus firms involved in IJVs in the PRC, which continue to perceive high levels of governmental regulations affecting their activities, prefer to continue operating an IJV, rather than convert it into a WFOE, in order to keep the protection provided to the operations by the local partner. This result is in line with the arguments and the results of several existing studies on entry mode decisions (e.g., Anderson & Gatignon, 1986;

Brouthers, 2002; Gomes-Casseres, 1990; Yiu & Makino, 2002).[4]

None of the four control variables played a statistically significant role in explaining the likelihood of IJV-to-WFOE conversions. Our choice of control variables was based on existing research on entry mode choice. While Hennart (1991) found a statistically significant influence of *diversification* on the choice of entry mode of Japanese firms in the United States, in our case diversification did not affect the likelihood of post-entry changes of foreign firms' ownership modes in the PRC. This is probably due to the fact that, for firms that did not require access to intermediate goods when entering the PRC, diversification is of little importance in deciding whether or not to convert an IJV.

We also included the *international experience* of foreign investors, a factor that may lead firms to prefer ownership modes with high levels of control when entering a foreign market (Anderson & Gatignon, 1986), although not all studies on entry mode choice could confirm this influence (see, for instance, Brouthers, 2002). There is no statistically significant influence of this variable in our study. One reason may be that international experience is important mainly for new entries, rather than for existing IJVs.

The *intensity of competition* has also been argued to affect entry mode choice, with higher competition expected to lead foreign firms to use an ownership form that allows them to exercise a high level of control (Kim & Hwang, 1992; Pan, 1996). However, our study does not does not support this in the case of IJV-to-WFOE conversions. This result may be attributed to the fact that some foreign firms that have been operating in the PRC for some time have developed ways of dealing with high competition that do not require high levels of control over the subsidiary or require the competencies of their local partner.

As a final control variable, we included the *size* of the subsidiary, as it has been suggested to influence entry strategies (Pan, 1996). For the case of IJV-to-WFOE conversion one would expect that a decline in the size of the IJV over time would increase the likelihood of conversion, given that the foreign firm's exposure to risk in the WFOE may not be much higher than in the original IJV. However, we found that there was no statistically significant influence of the size of the IJV (measured by number of employees) on the likelihood of IJV-to-WFOE conversion in our study.

CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

The conversion of IJVs into WFOEs has become an important option for foreign investors in the PRC, given the recent changes in ownership regulations (see, e.g., Buckley, 2007). While extant conceptual and empirical research on entry mode choice abounds, our study contributes to the understanding of post-entry changes of foreign firms' ownership modes in the PRC. Based on transaction cost theory and institutional theory we derived hypotheses explaining the likelihood with which foreign investors convert IJVs into WFOEs. We found this combination useful, and suggest that a further cross-pollination between transaction cost theory and institutional theory is warranted to provide better explanations for post-entry changes to ownership modes.

The majority of our hypotheses have been supported by empirical data gathered through a questionnaire survey among foreign investors in China. Thus, while contributing to the theoretical development in this field, we suggest that the findings of our study also have a number of practical implications. We have revealed several factors that increase the likelihood of IJV-to-WFOE conversions that can be used by foreign firms involved in IJVs. This may prevent firms from rushing towards a conversion merely because other foreign firms have done so once ownership restrictions in their industry were abolished. The results are also of interest to policymakers, as they point to the potential consequences of the reduction or abolishment of ownership restrictions for foreign firms. IJVs have played and continue to play an important role in the strategies of many developing countries to acquire foreign technology and management know-how. At the same time, ownership restrictions often act as a deterrent for foreign firms when considering FDI in a specific country. The results of our study may indicate ways for host country governments to reduce ownership caps, while simultaneously reaping the benefits of foreign participation in the local economy.

The paper has a number of limitations. First, the theories used to develop our hypotheses have been subject to criticism. Many researchers criticize transaction cost theory as viewing transactions as singular and independent from each other (Chang & Rosenzweig, 2001; Ghoshal & Moran, 1996; Inzerilli, 1990; Kim & Hwang, 1992; Makino & Neupert, 2000; Tsang, 2000). According to these authors, transaction cost theory would ignore the

fact that (1) transactions are interdependent (e.g., it seems plausible that the danger of opportunism decreases with the time of cooperation) and that (2) decisions are not singular (e.g., some activities may not be efficient for themselves but contribute to the overall efficiency of the organization). Building our arguments on transaction cost theory and institutional theory has led us to restrict our investigation to factors that are seen as crucial by these two theories. While these factors have explained a large percentage of IJV conversions in our sample, they should not be regarded as a comprehensive list of all factors that may be of relevance. IJV-to-WFOE conversions may also be motivated by other factors, such as the nature of the relationship between the partner firms. It has also to be considered that foreign firms may create a new competitor by converting an IJV into a WFOE. Firms may thus decide to deliberately prevent the partner firm from competing by keeping it locked in the IJV, and thereby exercise some degree of control over its activities and strategies. These factors have not been integrated into the current study, and thus promise interesting alleys for further research.

A further limitation of this study is the focus on IJV-to-WFOE conversions by the foreign partners. However, local firms may also initiate conversions of IJVs with foreign partners in order to gain full control of the firm and its resources. In these cases, other factors may lead to a conversion of the IJV. Moreover, the mean size of the subsidiaries (689 employees) and the mean size of the parent firms (82,280 employees) in our sample were both relatively large. Given their better resources, large firms may use a wider range of methods for protecting their firms-specific assets and reducing the dissipation risk than small and medium-sized enterprises (SMEs). Thus future studies should test whether or not our results also hold for SMEs.

Another limitation concerns the measurement of constructs, their subjective evaluation by a single firm representative and the resulting common method bias. While we have employed scales that have been suggested in existing research, few of these scales have been validated for use in a cross-cultural research design. This shortcoming can be regarded as one of the main problems of current research in international business (e.g., Sireci, Wang, Harter & Ehrlich, 2006). Therefore the cross-cultural validation of measurement constructs should be considered among the most important issues in current international business research. Although we have taken into account the various precautions

suggested in the literature to minimize common method bias in our research design, this problems remains a danger for the validity of our results, albeit at a relatively low level. Finally, although none of the conversions in our sample took place before 2002, some questions required respondents to provide information about conditions in the past. Thus the results may be influenced to some extent by a memory bias of the respondents (Kim & Hwang, 1992).

NOTES
[1]Some authors have argued that transaction cost theory could adequately handle these issues as well. However, given that some factors that are important for our study are less developed in transaction cost theory than in institutional theory, we believe that the combination of both approaches has the potential to enhance our understanding of IJV-to-WFOE conversions. We would like to thank the Departmental Editor for this useful comment.

[2]We would like to thank one of the anonymous reviewers for this possible explanation.

[3]We would like to thank the Departmental Editor for highlighting this possibility.

[4]We use institutional theory logics to explain our findings for Hypotheses 5 and 6, since our hypotheses are derived from institutional theory thinking, although institutional theory predictions might also be given an explanation based on TCE.

REFERENCES
Agarwal, S., & Ramaswami, S. N. 1992. Choice of foreign market entry mode: Impact of ownership, location and internalization factors. *Journal of International Business Studies*, 23(1): 1–28.

Anand, J., & Delios, A. 1997. Location specificity and the transferability of downstream assets to foreign subsidiaries. *Journal of International Business Studies*, 28(3): 579–603.

Anderson, E., & Gatignon, H. 1986. Modes of foreign entry: A transaction cost analysis and propositions. *Journal of International Business Studies*, 17(3): 1–26.

Armstrong, J. S., & Overton, T. S. 1977. Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3): 396–402.

Aulakh, P. S., & Kotabe, M. 1997. Antecedents and performance implications of channel integration in foreign markets. *Journal of International Business Studies*, 28(1): 145–175.

Barkema, H. G., Shenkar, O., Vermeulen, F. , & Bell, J. H. J. 1997. Working abroad, working with others: How firms learn to operate international joint ventures. *Academy of Management Journal*, 40(2): 426–442.

Beamish, P. W. 1985. The characteristics of joint ventures in developed and developing countries. *Columbia Journal of World Business*, 20(3): 13–19.

Beamish, P. W. 1989. *Multinational joint ventures in developing countries*. London/New York: Routledge.

Beamish, P. W. 1993. The characteristics of joint ventures in the People's Republic of China. *Journal of International Marketing*, 1(2): 29–48.

Beamish, P. W., & Inkpen, A. C. 1995. Keeping international joint ventures stable and profitable. *Long Range Planning*, 28(3): 26–36.

Beamish, P. W., & Jiang, R. 2002. Investing profitably in China: Is it getting harder? *Long Range Planning*, 35(2): 135–151.

Brislin, R. W. 1970. Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, 1(3): 185–216.

Brouthers, K. D. 2002. Institutional, cultural and transaction costs influences on entry mode choice and performance. *Journal of International Business Studies*, 33(2): 203–221.

Brouthers, K. D., & Brouthers, L. E. 2003. Why service and manufacturing entry mode choices differ: The influence of transaction cost factors, risk and trust. *Journal of Management Studies*, 40(5): 1179–1204.

Brouthers, K. D., & Nakos, G. 2004. SME entry mode choice and performance: A transaction cost perspective. *Entrepreneurship Theory & Practice*, 28(3): 229–247.

Brouthers, K. D., Brouthers, L. E., & Werner, S. 2003. Transaction cost-enhanced entry mode choices and firm performance. *Strategic Management Journal*, 24(12): 1239–1248.

Buckley, P. J. 2007. The strategy of multinational enterprises in the light of the rise of China. *Scandinavian Journal of Management*, 23(2): 107–126.

Buckley, P. J., & Casson, M. C. 1976. *The future of the multinational enterprise*. London: Macmillan.

Buckley, P. J., & Casson, M. C. 1981. The optimal timing of a foreign direct investment. *The Economic Journal*, 91(361): 75–87.

Buckley, P. J., Casson, M. C., & Gulamhussen, M. A. 2002. Internationalisation: Real options, knowledge management and the Uppsala approach. In V. Havila, M. Forsgren, & H. Hakansson (Eds) *Critical perspectives on internationalization*: 229–262. Oxford: Elsevier Science.

Chang, S. J., & Rosenzweig, P. M. 2001. The choice of entry mode in sequential foreign direct investment. *Strategic Management Journal*, 22(8): 747–776.

Chen, H., & Hu, M. Y. 2002. An analysis of determinants of entry mode and its impact on performance. *International Business Review*, 11(2): 193–210.

Chi, T., & McGuire, D. J. 1996. Collaborative ventures and value of learning: Integrating the transaction cost and strategic option perspectives on the choice of market entry modes. *Journal of International Business Studies*, 27(2): 285–307.

Cleeve, E. 1997. The motives for joint ventures: A transaction costs analysis of Japanese MNEs in the UK. *Scottish Journal of Political Economy*, 44(1): 31–43.

Davis, P. S., Desai, A. B., & Francis, J. D. 2000. Mode of international entry: An isomorphism perspective. *Journal of International Business Studies*, 31(2): 239–258.

Delios, A., & Beamish, P. W. 2001. Survival and profitability: The roles of experience and intangible assets in foreign subsidiary performance. *Academy of Management Journal*, 44(5): 1028–1038.

Deng, P. 2001. WFOEs: The most popular entry mode into China. *Business Horizons*, 44(4): 63–72.

Duarte, C. L., & García-Canal, E. 2004. The choice between joint ventures and acquisitions in foreign direct investments: The role of partial acquisitions and accrued experience. *Thunderbird International Business Review*, 46(1): 39–58.

Elango, B., & Sambharya, R. B. 2004. The influence of industry structure on the entry mode choice of overseas entrants in manufacturing industries. *Journal of International Management*, 10(1): 104–127.

Erez, M., & Early, C. P. 1993. *Culture, self-identity and work*. New York: Oxford University Press.

Erramilli, M. K. 1991. The experience factor in foreign market entry behavior of service firms. *Journal of International Business Studies*, 22(3): 479–501.

Erramilli, M. K., & Rao, C. P. 1993. Service firms' international entry-mode choice: A modified transaction-cost analysis approach. *Journal of Marketing*, 57(3): 19–38.

Gardner, T. M. 2005. Interfirm competition for human resources: Evidence from the software industry. *Academy of Management Journal*, 48(2): 237–256.

Ghoshal, S., & Moran, P. 1996. Bad for practice: A critique of the transaction cost theory. *Academy of Management Review*, 21(1): 13–47.

Gomes-Casseres, B. 1987. Joint venture instability: Is it a problem? *Columbia Journal of World Business*, 92(2): 97–107.

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

Hair, J. F. Jr, Anderson, R. E., Tatham, R. L., & Black, W. C. 1995. *Multivariate data analysis* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hamel, G., Doz, Y. L., & Prahalad, C. K. 1989. Collaborate with your competitors – and win. *Harvard Business Review*, 67(1): 133–139.

Hart, P. E., & Oulton, N. 1996. Growth and size of firms. *The Economic Journal*, 106(438): 1242–1252.

Hennart, J.-F. 1988. A transaction costs theory of equity joint ventures. *Strategic Management Journal*, 9(4): 361–374.

Hennart, J.-F. 1991. The transaction costs theory of joint ventures: An empirical study of Japanese subsidiaries in the United States. *Management Science*, 37(4): 483–497.

Hennart, J. F., & Larimo, J. 1998. The impact of culture on the strategy of multinational enterprises: Does national origin affect ownership decisions? *Journal of International Business Studies*, 29(3): 515–538.

Herrmann, P., & Datta, D. K. 2002. CEO successor characteristics and the choice of foreign market entry mode: An empirical study. *Journal of International Business Studies*, 33(3): 551–569.

Hirsch, S. 1976. An international trade and investment theory of the firm. *Oxford Economic Papers*, 28(2): 258–270.

Hofstede, G. 1980. *Culture's consequences: International differences in work-related values*. Newbury Park, CA: Sage Publications.

Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Holtbrügge, D. 2004. Management of international strategic business cooperation: Situational conditions, performance criteria and success factors. *Thunderbird International Business Review*, 46(3): 255–274.

Holtbrügge, D., & Puck, J. F. 2008. *Geschäftserfolg in China. Strategien für den größten Markt der Welt*. Berlin: Springer Verlag.

Inkpen, A. C., & Beamish, P. W. 1997. Knowledge, bargaining power and the instability of joint ventures. *Academy of Management Review*, 22(1): 177–202.

Inzerilli, G. 1990. The Italian alternative: Flexible organization and social management. *International Studies of Management and Organization*, 20(4): 6–21.

Javidan, M., House, R. J., Dorfman, P. W., Hanges, P. J., & Sully de Luque, M. 2006. Conceptualizing and measuring cultures and their consequences: A comparative review of GLOBE's and Hofstede's approaches. *Journal of International Business Studies*, 37(6): 897–914.

Jung, J. 2004. Acquisitions or joint ventures: Foreign market entry strategy of US advertising agencies. *The Journal of Media Economics*, 17(1): 35–50.

Killing, J. P. 1982. How to make a global joint venture work. *Harvard Business Review*, 60(1): 120–127.

Kim, W. C., & Hwang, P. 1992. Global strategy and multinationals' entry mode choice. *Journal of International Business Studies*, 23(1): 29–54.

Klein, S., Frazier, G. L., & Roth, V. J. 1990. A transaction cost analysis model of channel integration in international markets. *Journal of Marketing Research*, 27(2): 196–208.

Kogut, B. 1989. The stability of joint ventures: Reciprocity and competitive rivalry. *Journal of Industrial Economics*, 38(2): 183–198.

Kogut, B. 1991. Joint ventures and the option to expand and acquire. *Management Science*, 37(1): 19–34.

Kogut, B., & Singh, H. 1988. The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3): 411–432.

Lu, J. W. 2002. Intra- and inter-organizational imitative behavior: Institutional influences on Japanese firms' entry mode choice. *Journal of International Business Studies*, 33(1): 19–37.

Madhok, A. 1998. The nature of multinational firm boundaries: Transaction costs, firm capabilities and foreign market entry mode. *International Business Review*, 7(3): 259–290.

Makino, S., & Neupert, K. E. 2000. National culture, transaction costs, and the choice between joint venture and wholly owned subsidiary. *Journal of International Business Studies*, 31(4): 705–713.

Martinez, R. J., & Dacin, M. T. 1999. Efficiency motives and normative forces: Combining transactions costs and institutional logic. *Journal of Management*, 25(1): 75–96.

MOFCOM. 2006. *Foreign investment department of the Chinese Ministry of Commerce: Statistics about utilization of foreign investment in 2005 (1–12) of China*. http://www.fdi.gov.cn/pub/FDI_EN/Statistics/FDIStatistics/default.htm. Accessed 13 February 2006.

Mohr, A. T., & Puck, J. F. 2005. Managing functional diversity to improve the performance of international joint ventures. *Long Range Planning*, 38(2): 163–182.

Mohr, A. T., & Puck, J. F. 2006. Local responsiveness of German firms in international joint ventures in the PRC. In S. Soederman (Ed.), *Emerging multiplicity: Integration and responsiveness in Asian business development*: 202–214. New York: Palgrave Macmillan.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16(1): 145–179.

Padmanabhan, P., & Cho, K. R. 1996. Ownership strategy for a foreign affiliate: An empirical investigation of Japanese firms. *Management International Review*, 36(1): 45–65.

Pan, Y. 1996. Influences on foreign equity ownership level in joint ventures in China. *Journal of International Business Studies*, 27(1): 1–26.

Pennings, E., & Sleuwaegen, L. 2004. The choice and timing of foreign direct investment under uncertainty. *Economic Modelling*, 21(6): 1101–1115.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5): 879–903.

Reuer, J. J., & Tong, T. W. 2005. Real options in international joint ventures. *Journal of Management*, 31(3): 403–423.

Rosenzweig, P. M., & Singh, J. V. 1991. Organizational environments and the multinational enterprise. *Academy of Management Review*, 16(2): 340–361.

Rugman, A. M. 1981. *Inside the multinationals*. London: Croom Helm.

Sireci, S. G., Wang, Y., Harter, J., & Ehrlich, E. J. 2006. Evaluating guidelines for test adaptations. *Journal of Cross-Cultural Psychology*, 37(5): 557–567.

Tatoglu, E., Glaister, K. W., & Erdal, F. 2003. Determinants of foreign ownership in Turkish manufacturing. *Eastern Europe Economics*, 41(2): 5–41.

Teagarden, M. B., & Von Glinow, M. A. 1990. Sino-foreign strategic alliance types and operating characteristics. *International Studies of Management and Organization*, 20(1–2): 99–108.

Tihanyi, L., Griffith, D. A., & Russell, C. J. 2005. The effect of cultural distance on entry mode choice, international diversification, and MNE performance: A meta-analysis. *Journal of International Business Studies*, 36(3): 270–283.

Tsang, E. W. K. 2000. Transaction cost and resource-based explanations of joint ventures: A comparison and synthesis. *Organization Studies*, 21(1): 215–242.

UNCTAD. 2001. *World investment report 2001: Promoting linkages*. New York: United Nations Press.

UNCTAD. 2006. *World investment report 2006. FDI from developing and transition economies: Implications for development*. New York: United Nations Press.

Vanhonacker, W. R. 1997. Entering China: An unconventional approach. *Harvard Business Review*, 75(2): 130–137.

Van Vianen, A. E. M., De Pater, I. E., Kristof-Brown, A. L., & Johnson, E. C. 2004. Fitting in: Surface- and deep-level cultural differences and expatriates' adjustment. *Academy of Management Journal*, 47(5): 697–709.

Wei, Y., Liu, B., & Liu, X. 2005. Entry modes of foreign direct investment in China: A multinomial logit approach. *Journal of Business Research*, 58(11): 1495–1505.

White, S., & Lui, S. S.-Y. 2005. Distinguishing costs of cooperation and control in alliances. *Strategic Management Journal*, 26(10): 913–932.

Williamson, O. E. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press.

Woodcock, C. P., Beamish, P. W., & Makino, S. 1994. Ownership-based entry mode strategies and international performance. *Journal of International Business Studies*, 25(2): 153–173.

Xiao, G. 2004. *People's Republic of China's round-tripping FDI: Scale, causes and implications*. Asian Development Bank Institute Discussion Paper No. 7: 1–48. http://www.adbi.org/files/2004.06.dp7.foreign.direct.investment.people.rep.china.implications.pdf. Accessed 5 March 2006.

Yan, D., & Warner, M. 2002. Foreign investors' choices in China: Going it alone or in partnership. *Human Systems Management*, 21(2): 137–150.

Yiu, D., & Makino, S. 2002. The choice between joint venture and wholly owned subsidiary: An institutional perspective. *Organization Science*, 13(6): 667–683.

Zhao, H., & Zhu, G. 1998. Determinants of ownership preference of international joint ventures: New evidence from Chinese manufacturing industries. *International Business Review*, 7(6): 569–589.

Zhao, H., Luo, Y., & Suh, T. 2004. Transaction cost determinants and ownership-based entry mode choice: A meta-analytical review. *Journal of International Business Studies*, 35(6): 524–544.

Zhao, M. 2006. Conducting R&D in countries with weak intellectual property rights protection. *Management Science*, 52(8): 1185–1199.

APPENDIX A

See Table A1.

Table A1   Home countries in the sample

Home country	Number of firms
Czech Republic	2
Denmark	1
Germany	20
France	8
Italy	8
Japan	10
The Netherlands	2
Slovenia	1
Sweden	6
Switzerland	4
United States	22
UK	10

APPENDIX B

See Table B1.

Table B1   Industries in the sample

Industry	Still IJV	Conversion	Overall
Chemical industry	6 (42.9%)	8 (57.1%)	14 (100%)
Machinery and computer	10 (66.7%)	5 (33.3%)	15 (100%)
Electronics (without computer)	7 (63.6%)	4 (36.4%)	11 (100%)
Automotive	20 (95.0%)	1 (4.8%)	21 (100%)
Others	24 (72.7%)	9 (27.3%)	33 (100%)
Overall	67 (71.3%)	27 (28.7%)	94 (100%)

APPENDIX C

See Table C1.

Table C1   ANOVA of ownership level, age of IJV, size of parent firm and industry

	Mean	Still IJV	Conversion	Δ	F
Ownership level (%)	54.8	54.5	55.1	0.6	0.766, n.s.
Age (years)	9.67	11.30	8.97	2.33	0.987, n.s.
Size of parent firm (no. of employees)	82280	90220	78032	12188	1.210, n.s.
Industry (two-digit SIC)	See Appendix B				1.330, n.s.

APPENDIX D

Measures (all on seven-point Likert-type scales)
Generation of local knowledge (α=0.85)

(1) How do/did you assess your company's knowledge about the Chinese market today/shortly before the time of conversion in comparison with the time your company started its business there?
(2) How do/did you assess your company's knowledge regarding the Chinese law today/shortly before the time of conversion in comparison with the time your company started its business there?
(3) How do/did you assess your company's knowledge regarding the Chinese economic situation in your industrial sector today/shortly before the time of conversion in comparison with the time your company started its business there?
(4) How do/did you assess your company's knowledge regarding the Chinese political situation today/shortly before the time of conversion in comparison with the time your company started its business there?
(5) How do/did you assess your company's knowledge regarding behavioral patterns in business relations with Chinese partners today/shortly before the time of conversion in comparison with the time your company started its business there?

Asset specificity (α=0.78)

(1) How do/did you rate the training programs provided by your company (shortly before the time of conversion) in terms of preparing personnel to provide your service or produce your product?
(2) How do/did you rate your firm's potential to create new and creative products or services (shortly before the time of conversion)?
(3) How many technological resources does/did your firm have (shortly before the time of conversion) to handle international expansion?

Internal isomorphic pressures (α=0.80)
How do/did you assess the level of resource sharing between your subsidiary and the parent firm (shortly before the time of conversion)

(1) regarding research and development?
(2) regarding raw materials?
(3) regarding plant and equipment?

(4) regarding advertising and promotional efforts?
(5) regarding personnel?

How do/did you assess the level of autonomy and flexibility given to your subsidiary by the parent firm (shortly before the time of conversion)

(1) regarding strategic decisions?
(2) regarding research and development?
(3) regarding organization of production?
(4) regarding organization of distribution?
(5) regarding budget responsibility?
(6) regarding adjustment to local requirements?

Competition in industry (α=0.89)

(1) How stable is/was the market share of your company (shortly before the time of conversion)?
(2) How many existing or potential competitors do/did you have (shortly before the time of conversion)?
(3) How high is/was the level of fixed costs relative to the value added in your industry (shortly before the time of conversion)?
(4) How high are/were the costs facing the buyer switching from one supplier (competitor) to another (shortly before the time of conversion)?

Changes in external uncertainty (α=0.91)

(1) Do/did you (now) perceive a higher political stability in China shortly before the time of conversion in comparison with the time your company started its business there?
(2) Do/did you (now) perceive a higher legal stability (e.g., legal security, legal protection of rights etc.) in China (shortly before the time of conversion) in comparison with the time your company started its business there?
(3) Do/did you (now) perceive a higher economic stability in China (shortly before the time of conversion) in comparison with the time your company started its business there?
(4) Do/did you (now) perceive a higher social stability in China (shortly before the time of conversion) in comparison with the time your company started its business there?
(5) How do/did you estimate the future situation of your industrial sector in the Chinese market (shortly before the time of conversion)

    (a) regarding political stability?
    (b) regarding legal stability?
    (c) regarding economic stability?
    (d) regarding social stability?

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