

ASSET SPECIFICITY, IJV PERFORMANCE, AND THE MODERATING EFFECT OF TRUST

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ABSTRACT

International joint ventures (IJVs) have become an important device for MNCs to expand beyond their national boundaries, particularly in developing markets. In China, IJVs are still a prevalent mode of operation for foreign firms in spite of the growing number of wholly-owned subsidiaries (WoS). However, the performance of these cooperative ventures often falls short of expectations. Particularly, high levels of asset specificity generate substantial relational risks and governance costs in IJVs due to the risk of partner opportunism. Our study thus investigates how the existence of trust affects the relationship between asset specificity and IJV performance. Applying transaction cost reasoning, we argue that trust positively moderates this relationship. The empirical analysis of 67 IJVs in the People's Republic of China (PRC) supports our hypothesis and confirms the moderating role of trust in the relationship between asset specificity and IJV performance. Our findings have both theoretical and managerial implications.

1. Introduction

International joint ventures (IJVs) have been an important device for MNCs to pursue their international strategies (Geringer & Hebert, 1991; Osland & Cavusgil, 1998). For example, MNCs have used IJVs to bridge cultural differences in distant markets (Gatignon & Anderson, 1988), acquire local complementary assets (Beamish & Banks, 1987) or access assets which are traded on inefficient markets (Hennart, 2009). By pooling the assets of two or more firms, the partners thus try to achieve goals they cannot achieve on their own (Gill & Butler, 2003). Moreover, since foreign firms often face ownership restrictions or high levels of risk in developing countries, IJVs with local partners frequently represent the only possible way to enter these markets (Mohr & Puck, 2005). Even though China has continuously liberalized its ownership regulations and the number of WoS has steadily increased, IJVs still represent a prevalent mode of operation for foreign firms (Ng et al., 2007). Despite their prevalence and popularity, however, scholars have found that IJVs exhibit high failure rates or that the performance of these hybrid modes falls short of expectations (e.g., Geringer & Hebert, 1991; Gill & Butler, 2003).

Since IJVs often struggle with dissatisfying performance, it is not surprising that IJV performance has attracted a lot of attention among international business researchers in the last decade (Geringer & Hebert, 1991). In fact, scholars have extensively analyzed the antecedents of IJV performance, including factors such as the cultural distance between partners (e.g., Barkema & Vermeulen, 1997; Hennart & Zeng, 2002; Park & Ungson, 1997), conflict (e.g., Ding, 1997; Hebert, 1996; Lyles & Baird, 1994), hierarchical control (e.g., Geringer & Hebert, 1991; Delios & Beamish 2004; Mjoen & Tallman, 1997), mutual commitment (e.g., Cullen et al., 1995; Fey & Beamish, 2000), complementarity of firm resources (e.g., Beamish & Banks, 1987), local knowledge (Beamish, 1994), trust (e.g., Dyer, 1996; Gill & Butler, 2003) and so forth. Reus and Rottig (2009) found, however, in their meta-analytical review that only 19 percent of the variance in IJV performance can be attributed to the first four antecedents mentioned above. Therefore, they urge future research to consider new theoretical perspectives in order to explain more of the variance in IJV performance. Given the reported high failure rates and performance issues of IJVs (e.g., Geringer & Hebert, 1991; Gill & Butler, 2003) this appears to be highly warranted also from a practical viewpoint.

International business research early recognized that asset specificity is a prerequisite for internationalizing firms to overcome the liability of foreignness in the host market and compete with indigenous firms, implicitly assuming that asset specificity exclusively entails benefits (Hymer, 1976; Zaheer, 1995). Transaction cost approaches acknowledged that firm-specific assets also entail costs – especially in cooperative modes – by revealing the link between asset specificity and the risk of opportunistic behavior. Consequently, research has contended that asset specificity also exacerbates relational risks and governance costs as firms need to implement costly control mechanisms to reduce opportunistic hazards in cooperative ventures. From a TCE-perspective, both benefits and costs are thus associated with high levels of asset specificity in IJVs (Anderson & Gatignon, 1986; Williamson, 1985). Consequently, from a theoretical point of view, the relationship between asset specificity and IJV performance is not a clear one. From our perspective, it seems reasonable to assume that this, at first sight purely economic relationship, substantially depends on social, non-economic factors.

In our study, we thus contend that the relationship between asset specificity and IJV performance depends on the existence of trust between the partners as the findings of scholars have implied that trust may act as moderator in the relationship between organizational factors and performance (e.g., Fryxell et al., 2002;

Mohr & Puck, 2005; Ng et al., 2007). While scholars have repeatedly stressed the importance of trust for IJV performance (e.g., Beamish, 1993; Currall & Inkpen, 2002; Inkpen & Currall, 2004; Madhok, 2006), Dyer and Chu (2003) and Ng et al. (2007) contend that empirical evidence on trust still remains scarce (Beamish, 1993). Following the suggestions of Fryxell et al. (2002) and Ng et al. (2007), among others, we look beyond the main effects of trust, arguing that trust positively moderates the relationship between asset specificity and IJV performance.

From a TCE-perspective, it seems reasonable to assume that the level of trust established between the partners becomes an important ingredient in the case of high asset specificity as high asset specificity increases the risk of opportunistic behavior. Thus, when the transferred assets in the IJV are highly firm-specific, trust between the partners can mitigate relational risks and governance costs stemming from the risk of opportunism (Dyer, 1997; Dyer & Chu, 2003; Madhok, 2006). For example, Madhok (1995, pp. 120-121) maintains that trust reduces governance costs as “trust lowers the probability of opportunistic behavior.” Likewise, Dyer (1997) argues that trust between transaction entities acts as a cost-reducing factor, which mitigates the hazards stemming from partner opportunism. Therefore, we suggest that trust lowers governance costs and improves IJV performance in cases of high asset specificity in IJVs.

Despite the importance asset specificity and trust received in their respective research streams, they have not yet been integrated in a single TCE-framework. By using TCE-reasoning, we follow the suggestions of Reus and Rottig (2009) and draw on new theoretical perspectives to explain additional variance in IJV performance. Since asset specificity is a core dimension of TCE and performance an indicator of efficiency, the theory fits well in our research framework. Moreover, trust while not a core TCE variable itself has frequently been argued to be a transaction-cost reducing factor (e.g., Dyer, 1997; Dyer & Chu, 2003; Madhok, 1995). Furthermore, most TCE-studies have failed to investigate performance consequences even though TCE-dimensions entail performance implications. The identification of this potential shortcoming goes in line with Morschett et al. (2008) who criticize in their meta-analytical review that most entry mode studies yield descriptive results, but fall short of generating normative implications for decision-makers. Moreover, Rindfleisch and Heide (1997, p. 47) contend that “despite TCA’s explicit normative orientation, there is limited empirical evidence of the performance effects of

following TCA's guidelines." Overall, these scholars urge research to focus more on performance consequences to offer managers practical guidance.

We aim to test our assumptions using a sample of foreign subsidiaries in the People's Republic of China (PRC). Given the substantial amount of assets transferred by foreign firms (UNCTAD World Investment Report, 2009), the special importance of trust and reciprocal relationships in the Chinese culture (Ng et al., 2007), and the often stated performance difficulties of Sino-foreign IJVs (Mohr & Puck, 2005) we believe that the PRC provides a valuable setting for analyzing our research framework.

Overall, our paper contributes to the literature in the following ways. First, we conceptualize trust as a moderator in the relationship between asset specificity and IJV performance, providing important empirical evidence on the role of trust in IJVs. Second, we include asset specificity, trust, and IJV performance in a single research framework and analyze it from a TCE-perspective. By integrating performance as our dependent variable we are able to generate normative implications about TCE-dimensions. To the best of our knowledge, these contributions are unique in international business research.

The remainder of this paper is organized as follows. In the next section, we apply TCE to develop our framework and to derive our hypothesis about the moderating effect of trust on the relationship between asset specificity and IJV performance. The ensuing section presents our sample and measures followed by a discussion of our empirical results. The final section concludes, outlines the limitations of our study, and highlights the theoretical and managerial implications.

2. Theory development and hypotheses

2.1. Asset specificity and IJV performance

Asset specificity is a core dimension of TCE and refers to assets whose productive value substantially diminishes if used outside the intended purpose (Anderson & Gatignon, 1986; Rindfleisch & Heide, 1997). High asset specificity exists, for instance, when firms utilize proprietary technological and managerial knowledge or specialized physical equipment. Zhao et al. (2004, p. 526) define asset

specificity as “a broad scope of resources particularly tailored to a relationship.” Based on the definitions above, these assets only unfold their true potential when used within the specific exchange.

However, owing to their uniqueness firm-specific assets form the basis of competitive advantage and enable firms to differentiate their products or services, and ultimately reap higher profits (Zhao et al., 2004). MNCs are inclined to deploy these “monopolistic advantages” to foreign markets in order to extend their scope and exploit new business opportunities abroad. In fact, scholars have argued that internationalizing firms require asset specificity (i.e. distinctive advantage) in order to overcome the unfamiliarity with the host environment and successfully compete with local rivals who benefit from greater market knowledge (e.g., Hymer, 1976; Zaheer, 1995).

In an IJV context, it seems reasonable to argue that in the absence of potential opportunism IJVs can directly augment their performance when both partners are willing to combine and continuously invest in asset specificity. Since firms establish IJVs to access new, complementary resources which are difficult to transact (Hennart, 2009), they would certainly directly benefit from the mutual combination of highly-specific assets, as investments in such assets are expected to translate into considerable cost savings or efficiency advantages (Williamson, 1985).

However, under the more realistic assumption of opportunism as suggested by TCE, asset specificity also entails costs – particularly in cooperatives ventures – where the possibility to profit from the IJV partner’s firm-specific assets induces firms to distort or conceal information (Williamson, 1985). It is important to note that the assumption of opportunism does not imply that firms behave opportunistically all the time, but “some agents behave in this fashion and it is costly to sort out those who are opportunistic from those who are not” (Williamson & Ouchi, 1981, p. 351).

As long as the specificity of the contributed assets is equally distributed, the risk of opportunistic behaviour is rather negligible as both partners are “mutual hostages” and neither partner could benefit from a change of the status quo. However, once the asset specificity between the partners strongly drifts apart, one partner can use the other partner’s unilateral dependency to pursue his self-interest and change the terms of the formerly stipulated contract (e.g., hold-up or shirking) (Williamson, 1985). In a

developing country such as China, the asset specificity is often unequally distributed in IJVs since the foreign partner usually contributes technological or managerial assets of relatively high specificity to the venture (Inkpen & Beamish, 1997; Lu, 1998). In addition to the hold-up potential, IJV partners can use the dependency stemming from an uneven distribution of asset specificity to gradually absorb firm-specific assets (Lu & Hebert, 2005). Previous studies have found that the appropriation of firm-specific assets over time weakens the IJV's stability, as the asset-absorbing partner no longer derives a benefit from sharing the IJV's profits (e.g., Beamish & Inkpen, 1995). Moreover, besides the appropriation risk, unequal asset specificity may also induce IJV partners to free-ride on these assets (Zhao et al., 2004).

Altogether, the dependency stemming from high levels of asset specificity generates relational risks due to the threat of opportunistic behaviour. To mitigate these risks firms need to implement control mechanisms in order to protect their specific investments from hold-up, appropriation, and free-riding (Anderson & Gatignon, 1986; Lu & Hebert, 2005). Especially in China, high asset specificity poses substantial relational risks as firms cannot fully rely on the enforcement of intellectual property rights to protect their intangible proprietary assets, but rather have to design their own control mechanisms (Zhao, 2006). Williamson and Masten (1999, p. 130) argue that it is an illusion to believe that "the legal system enforces promises in a knowledgeable, sophisticated and low-cost way. (...) this convenient assumption is commonly contradicted by the facts." Consequently, firms are advised to have corporate control mechanisms in place that monitor the behavior and actions of the IJV partner as well as align potential conflicting interests in contract negotiations (Anderson & Gatignon, 1986). Certainly, these control mechanisms tie up substantial managerial resources and thus involve high levels of governance costs (Lu & Hebert, 2005). Therefore, we postulate that from a TCE-perspective high levels of asset specificity entail both benefits and costs in IJVs.

2.2. The moderating effect of trust

Since both benefits and costs are associated with high levels of asset specificity, the purely economic relationship between asset specificity and IJV performance is not a clear one, but one that is expected to be considerably determined by non-economic, social factors. We contend that the existence of trust in the IJV partner positively affects this relationship since trust has the potential to considerably reduce the

relational risks and governance costs associated with high levels of asset specificity. Indeed, scholars have emphasized that the concept of trust is crucial for IJVs that involve high levels of asset specificity as the dependency created by the contribution of firm-specific assets poses great risks that can be opportunistically exploited (e.g., Dyer & Chu, 2003; Parkhe, 1993).

Numerous definitions of trust exist (e.g., Dyer & Chu, 2003; Inkpen & Curall, 2004), but scholars appear to disagree about the proper conceptualization of trust in the context of IJVs. We define trust according to the suggestions of Creed and Miles (1996), Mayer and Davis (1999), and Mohr and Puck (2005), among others, as the reflection of the IJV partner's integrity, benevolence, and competence. We assume that one IJV partner trusts the other if the latter is perceived to: (a) stick to agreements (integrity); (b) be interested in achieving both partners' objectives (benevolence); (c) and have the competences and resources that are needed to do so (competence). Based on our conceptualization of trust, we postulate that trust may lower these relational risks and governance costs stemming from high asset specificity in the following two steps.

In a first step, IJV partners that embody integrity, benevolence, and competence are less likely to behave opportunistically. A partner perceived to behave with integrity can be relied upon on. Agreements and objectives defined at the beginning of the relationship are seen as a guideline for future actions and behavior. Even if certain approaches differ between the partners, an integrative partner will always behave consistent with prior agreements. Furthermore, a benevolent partner behaves in a way that is beneficial to the IJV, taking into account the benefits and drawbacks of its own actions for the other party. Thus, adjustments can be made as choices arise since the partner will be willing to adapt to unforeseen contingencies in a way that is acceptable to the IJV (Parkhe, 1993). Finally, it is difficult to trust a partner if one is not sure about its ability to fulfil the required duties – in other words, whether the partner has the competences and resources to contribute to the IJV's success. Consequently, competence forms an important element for the establishment of trust in IJVs. From a TCE-perspective, trust as the reflection of integrity, benevolence, and competence is thus assumed to reduce the risk of the partner behaving opportunistically (Madhok, 2006).

In a second step, the mitigated risk of opportunism stemming from trust subsequently leads to a reduction of governance costs in dealing with IJV partners. From a TCE-perspective, trust in the actions and behavior of the IJV partner alleviates opportunistic hazards, which in turn reduces the need for costly formal control mechanisms and ultimately translates into lower governance costs. Madhok (1995), Dyer (1997), and Dyer and Chu (2003), among others, all unanimously emphasize that trust may act as a cost-reducing factor as the need to monitor the actions and behavior of the IJV partner is less pertinent. Instead, when trust is present, managers will be more willing to rely on social and noncontractual control mechanisms. Inkpen and Curall (2004, p. 589), for instance, view the concepts of trust and (formal) control as “substitutable” and Gulati (1995) argues that trust can compensate the need for contractual safeguards. With each successful trust-based transaction within the relationship, both partners will feel more inclined to trust each other, thereby reinforcing “trust cycles” and increasing the partners’ propensity to refrain from formal monitoring (Dyer & Chu, 2003; Fryxell et al., 2002). Based on TCE-reasoning, we thus suggest that trust can substitute the costly (formal) control mechanisms and therefore reduces the governance costs associated with the risk of opportunistic behavior. These mitigated governance costs stemming from the existence of trust are finally expected to positively moderate the relationship between asset specificity and IJV performance.

Overall, we contend that high levels of asset specificity increase the threat of opportunistic behavior, against which firms will implement costly control mechanisms, resulting in enhanced governance costs. Trust can act as a substitute for these formal control mechanisms, reducing the overall governance costs in IJVs and thereby acting as a moderator in the relationship between asset specificity and IJV performance. Consequently, we derive the following hypothesis:

H. Trust in the IJV partner positively moderates the relationship between asset specificity and IJV performance. Specifically, asset specificity will have more positive effects on performance in IJVs with high trust in the foreign partner.

Figure 1 summarizes the hypothesis in our research model with asset specificity as the independent variable, IJV performance as the dependent, and trust as our moderator variable.

===== INSERT FIGURE 1 ABOUT HERE =====

3. Research design and methodology

3.1. Data origin and sample

To analyze our hypothesis, we sent out questionnaires to foreign companies located in the PRC. 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 centres such as the Virgin Islands or Western Samoa. These source countries were excluded 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). In order to compile a comprehensive database of contact addresses we contacted the chambers of foreign trade of Japan, the United States, the UK, Germany and the European Union. Furthermore, we analyzed company home pages and articles in newspapers (e.g., China Business Review). In total, we identified contact details of 1,979 IJVs or WoS of foreign companies in the PRC. The original German language questionnaire was translated into English, Japanese, French, and Spanish by three professional translators. Moreover, we employed the translate/re-translate method to ensure the equivalency of the questionnaires (Brislin, 1970). The questionnaire was distributed via e-mail accompanied by an executive summary explaining the objective of the study. Those companies that had not replied by the original deadline received a reminder two weeks later. After a second deadline, we had received 156 usable questionnaires, representing a response rate of 7.9%.

For the purpose of this study, we eliminated all firms operating as WoS which resulted in 67 useable questionnaires of IJVs. The 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). Sampled subsidiaries were established by companies headquartered in 14 countries, with the United States, Germany, Japan and the UK accounting for the majority of investments.

We assessed non-response bias by using the approach of Armstrong and Overton (1977). A comparison of early- and late-arriving responses by means of logistic regression indicated that the likelihood of a non-response bias for our study variables was low (all $ps > 0.20$). Consequently, non-response bias was not considered to be a problem. In order to minimize common method bias we followed the strategies suggested by Podsakoff et al. (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 executive summary that there were neither “right” nor “wrong” answers.

3.2. Operationalization of variables

3.2.1. Dependent variable

Suggestions as to what constitutes the performance of IJVs abound in literature, but so far no consensus has emerged. For the purpose of this study, IJV performance is conceptualised in accordance with Yan (1998), who distinguishes between goal criteria and system criteria. Goal criteria refer to the subjective evaluation of the extent to which the partners’ overall goals pursued with the IJV are achieved. System criteria refer to the evaluation of certain factors such as profitability, growth etc., reflecting the performance of the IJV as (an independent) system. In addition, we split the canon of system criteria into two measurement constructs: a first construct comprises short-term variables (profitability, growth, market share), whereas a second consists of long-term variables (stability, competitiveness, technology transfer). This is in line with the suggestion of Anderson (1990). She considers “marketing measures of performance” such as growth and market share, and “financial measures of performance” such as profitability, as indicators of a short-term perspective. Indicators such as competitiveness, technological level or stability of the relationship, on the other hand, are seen as signalling a long-term perspective. We also included the managers’ assessment of the overall achievement of the partner firms’ goals (Mohr & Puck, 2005). Answers to these questions were measured on seven-point Likert-type scales ranging from 1 (expectations are not at all met) to 7 (expectations are completely met). The responses to these questions were subsequently combined to form a composite index. The construct showed a good internal consistency (Cronbach’s $\alpha = 0.89$).

3.2.2. *Independent variable*

To operationalize the degree of *asset specificity* as our independent variable we used a three-item measure suggested by Brouthers and Brouthers (2003). Managers assessed the level of human asset specificity, the proprietary nature of products/services provided, and the amount of assets that would have been forgone outside the specific transaction. Answers to these questions were again measured on seven-point Likert-type scales ranging from 1 (asset specificity is very low) to 7 (asset specificity is very high). The items were combined into one single index.

3.2.3. *Moderating variable*

Scholars appear to disagree about the proper operationalization of *trust* in the context of IJVs. In our study, we followed the suggestions of Creed and Miles (1996), Mayer and Davis (1999), and Mohr and Puck (2005), among others, and included six items reflecting the IJV partner's integrity, benevolence, and competence (two items each). We assume that one IJV partner trusts the other if the latter is perceived to: (a) stick to agreements (integrity); (b) be interested in achieving both partners' objectives (benevolence); (c) and have the competences and resources that are needed to do so (competence). Answers to these questions were measured on seven-point Likert-type scales ranging from 1 (expectations are not at all met) to 7 (expectations are completely met). The internal consistency proved to be satisfactory (Cronbach's $\alpha = 0.88$).

3.2.4. *Control variables*

We included four control variables on three different levels in our analysis. On the firm level, we integrated resource dependency as a control variable. High resource interdependence between the parent firm and its subsidiary reduces transaction costs since the subsidiary does not have to source the required competences in the local, distant market, but can ultimately draw on the resource pool of the parent firm. These reduced transaction costs are expected to affect the relationship between asset specificity and IJV performance. We followed the suggestions of Davis et al. (2000) and operationalized it with a five-item construct. We asked managers to evaluate the resource dependency between the parent firm and the subsidiary in the following activities of the value chain: research and development, raw materials, plant

and equipment, advertising and promotional efforts and personnel. Answers to these questions were measured on seven-point Likert-type scales ranging from 1 (very low) to 7 (very high). The internal consistency proved to be acceptable (Cronbach's alpha = 0.74). Moreover, we included the total amount of investment as a second firm level control variable. Large amounts of investments might entail the contribution of firm specific assets, which have been argued to save transaction costs (Williamson, 1985). We measured this variable in USD million.

On the industry level, we integrated the level of competitive pressure in the industrial sector. Studies have suggested that the industry concentration and competition increases the level of transaction costs and thus might reduce IJV performance (e.g., Kim & Hwang, 1992; Pan, 1996). We 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. Answers to these questions were measured on seven-point Likert-type scales ranging from 1 (very low) to 7 (very high). Cronbach's alpha was 0.89, thus showing a high internal consistency.

Finally, on the market level, we integrated the China-specific experience of firms. Scholars have repeatedly stressed that market-specific experience is an important determinant in TCE-studies (e.g., Cleeve, 1997; Hennart, 1991) and may enhance IJV performance (e.g., Meschi, 2004). We followed the suggestions of Cleeve (1997) and Hennart (1991) and operationalized it as the time passed since the establishment of the first subsidiary in the PRC.

4. Results and discussion

===== INSERT TABLE 1 ABOUT HERE =====

===== INSERT TABLE 2 ABOUT HERE =====

To test our hypothesis, we employed hierarchical regression analysis. Moreover, we conducted a correlation analysis to check for signs of multicollinearity. Table 1 shows that despite a number of statistically significant correlations concerns about multicollinearity are generally not warranted (Hair et al., 1995). However, in order to further mitigate multicollinearity concerns and to ease the interpretation of

the interaction effect, the predictor and moderator variable were standardized and VIFs were calculated. The average of the VIFs only slightly exceeded 1.0, suggesting that multicollinearity is not considered a problem. Some scholars recommend centring variables and aligning their mean to 0 in order to reduce unwanted effects caused by multicollinearity (e.g., Aiken & West, 1991; Frazier et al., 2004). However, the method chosen for this study was standardization. While having the same effect in terms of multicollinearity as centring, standardized variables offer some other advantages: With a SD equal to 1 and a mean equal to 0, the plotting and the interpretation of the interaction are easier (Frazier et al., 2004). Also, standardization helps to draw comparisons between different models, as non-standardized variables are dependent on their unique unit of measurement.

The results of the hierarchical regression analysis are reported in Table 2. In Model 1, control variables are entered. In Model 2, the main effects of asset specificity and trust are added. In Model 3, we entered the interaction terms of asset specificity and trust as a direct test of our hypothesis. Entering the interaction term improved model fit significantly ($\Delta R^2 = 0.106^{***}$; $p < 0.001$), indicating that the effect of asset specificity on IJV performance is moderated by trust. We proposed that trust positively moderates the relationship between asset specificity and IJV performance, with asset specificity having a more positive effect on IJV performance when trust is high. Table 2 shows that the coefficient for the interaction effect is negative and statistically highly significant (-0.526^{***} ; $p < 0.001$). Since the direct effect of asset specificity on IJV performance is negative, the coefficient for the interaction effect has to be negative in order to confirm a positively moderating role of trust. Given that the coefficient for the interaction effect is both negative and statistically significant our hypothesis is supported by the data. According to our results trust does not entirely turn around the negative effect of high asset specificity, but still alleviates the empirically discovered negative consequences of asset specificity on IJV performance. To further examine this effect, we plotted the interactive effect of asset specificity and trust on IJV performance. To further examine this effect, we plotted the interactive effect of asset specificity and trust on IJV performance. Figure 2 shows that for a given level of asset specificity high levels of trust lead to better IJV performance than low levels of trust, also lending strong support for our hypothesis.

===== INSERT FIGURE 2 ABOUT HERE =====

As another very interesting result Table 2 shows that the direct effect of asset specificity on IJV performance is negative and statistically significant (-0.241^* ; $p < 0.05$), indicating that asset specificity reduces IJV performance. Our results thus indicate that the costs associated with high asset specificity outweigh the benefits in IJVs in the PRC. While this seems to be counterintuitive at the first sight, this empirical result is supported by the findings of existing research. Geringer and Hebert (1989, p. 244), for instance, argue that the governance costs associated with high asset specificity “limit the potential gains from cooperating in an IJV” and Parkhe (1993, p. 802) maintains that “monitoring costs will absorb much of the expected benefit from the alliance.” In addition, this finding is in line with traditional TCE-reasoning, suggesting that WoS represent the cost-efficient governance structure for high degrees of asset specificity, while IJVs are the cost-efficient governance structure for medium degrees of specificity (Williamson, 1985).

The direct effect of trust on IJV performance is positive and also statistically significant (0.723^{***} ; $p < 0.001$). This result is in line with other scholars who have repeatedly stressed that trust is an important antecedent of IJV performance (e.g., Currall & Inkpen, 2002; Inkpen & Currall, 2004; Madhok, 2006). Beamish (1993), for instance, highlights the importance of trust in IJVs in developing countries and Baird et al. (1990) found trust to be ranked as the number one success factor of IJVs in a study of Chinese and U.S. managers. Our study lends support for their findings.

Two of the four control variables entered significantly. On the firm level, we included the resource dependency, postulating that high resource interdependence between the parent firm and its subsidiary reduces transaction costs and thus affects the relationship between asset specificity and IJV performance. The results confirm a significant positive effect of resource dependency on IJV performance. However, the total amount of investment, our second firm level control, did not enter significantly. A first explanation would be that the amount of investment does therefore not per se entail the contribution of firm specific assets, which due to transaction cost savings result in higher IJV performance.

On the industry level, the competitive pressure in the industrial sector has a significant negative effect on IJV performance. This finding is line with prior research that suggests that industry concentration and competition raises transaction costs and thus reduces IJV performance (e.g., Kim & Hwang, 1992; Pan,

1996). Finally, on the market level, the China-specific experience had a positive influence on IJV performance although not on a significant level. It seems reasonable to assume that firms that have been operating in the PRC for some time and thus possess great market-specific knowledge also exhibit higher levels of performance (e.g., Meschi, 2004).

5. Conclusion, limitations, and implications

Despite the prevalence and popularity of IJVs the performance of these cooperative ventures often falls short of expectations (Geringer & Hebert, 1991; Gill & Butler, 2003). While scholars have extensively examined the antecedents of IJV performance, the integration of asset specificity, trust, and IJV performance in a single TCE-framework has been neglected. Based on TCE-reasoning we looked beyond the main effects of trust and analyzed how trust in the IJV partner affects the relationship between asset specificity and IJV performance. We contended in a first step that both costs and benefits are associated with asset specificity in IJVs, with the costs being mainly a result of increased risk of partner opportunism. In a second step, we postulated that trust has the potential to improve IJV performance in cases of high asset specificity as trust may lower the risk of partner opportunism and governance costs. Consequently, we hypothesized that trust positively moderates the relationship between asset specificity and IJV performance, with asset specificity having a more positive effect on IJV performance when trust is high. The empirical results of 67 IJVs in the PRC revealed that asset specificity actually reduces IJV performance, but that trust can alleviate the negative consequences of asset specificity on IJV performance. Overall, the results support our hypothesis about the moderating role of trust in the relationship between asset specificity and IJV performance.

Our study has several limitations. Even though asset specificity, trust, and IJV performance fit well within TCE, the theory has been subject to criticism. Many scholars argue that transaction cost theory views transactions as singular and independent from each other (e.g., Ghosal & Moran, 1996; Kim & Hwang, 1992; Tsang, 2000). According to these researchers, transaction cost theory would ignore the following two facts. (1) Transactions are interdependent. It seems reasonable to argue that trust develops over time (Inkpen & Curall, 2004) and the risk of partner opportunism thus decreases with the length of the relationship. (2) Decisions are not singular. Some activities, such as investments in firm-specific assets in

IJVs, may not be always efficient from a TCE-perspective but contribute to the overall efficiency of the organization.

Furthermore, our sample was limited to foreign subsidiaries in the PRC. The concept of trust is particularly powerful in the PRC as the Chinese culture places more emphasis on personal, reciprocal relationships than on formal contracts (Gill & Butler, 2003). Moreover, Ouchi (1980) states that the propensity to rely on trust may depend on the culture and Gill and Butler (2003) contend that trust can be differently achievable according to nationality. While China obviously provides a valuable setting for analyzing the concept of trust the country's cultural and social particularities with respect to trust may, however, impede to transfer the results of this study to other contexts.

We analyzed the level of trust only from the foreign partner's perspective, applying an MNE-centric approach (Hennart, 2009). However, trust is a reciprocal concept and the local IJV partner may perceive the level of trust differently. Future research should look at both sides of the relationship to get a more complete picture about the existence of trust in IJVs. Moreover, we did not measure trust on multiple levels by distinguishing, for instance, between trust in the managers of the IJV and trust in the firm as a whole as suggested by some scholars who view them as two distinct concepts (Currall & Inkpen, 2002).

A further limitation concerns the measurement of constructs, their subjective evaluation by a single firm representative and the possibility of common method bias. Although we have taken into account the various precautions suggested in the literature to minimize common method bias in our research design, this problem remains a danger for the validity of our results. Finally, while we have employed scales that have been suggested in existing research, few of these scales have been validated for use in cross-cultural research design. Measurement equivalence can be regarded as one of the main problems of current research in international business (e.g., Sireci et al., 2006). Therefore, the cross-cultural validation of measurement constructs should be considered among the most important issues in current international business research.

Despite these limitations the study enhanced our understanding of the consequences of asset specificity for IJV performance and how these consequences can be moderated by the level of trust. Our study provides a

number of implications for theory and practice. On the theoretical side, we looked beyond the main effects of trust and provided important empirical evidence on the moderating role of trust in the relationship between asset specificity and IJV performance. In general, empirical evidence on the importance of trust in IJVs has yet been scarce. Moreover, we found in line with traditional TCE-reasoning that asset specificity generates substantial governance costs and reduces IJV performance, suggesting that cooperative ventures are the most cost-efficient governance mode for medium levels of asset specificity. Furthermore, we showed that asset specificity, trust, and IJV performance can be meaningfully integrated in a single TCE-framework. By using TCE-reasoning we followed the suggestions of Reus and Rottig (2009), among others, and drew on new theoretical perspectives in order to explain additional variance in IJV performance. Finally, as opposed to the majority of prior TCE-studies, we integrated performance as our dependent variable and were able to generate normative implications about TCE-dimensions.

On the practical side, we revealed that firms need to be careful when contributing firm-specific assets to IJVs as the risk of partner opportunism generates substantial governance costs and diminishes IJV performance. However, firms can considerably improve their performance if they manage to trust their local partner given that trust mitigates the risk of partner opportunism and reduces governance costs. This is especially true when high levels of firm-specific assets are deployed in IJVs. Therefore, firms need to be aware of both the benefits and costs stemming from high levels of asset specificity as well as the potential of trust as a cost-reducing factor in IJVs. Overall, managers should carefully evaluate the benefits and costs associated with different governance modes in order to select a mode that offers the highest return on investment.

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Appendix

Tables

Table 1: Correlations of study variables

Variable	1	2	3	4	5	6	7
1. Asset specificity	1						
2. Trust	.110	1					
3. Asset specificity x Trust	.149	-.127	1				
4. Competitive pressure	-.328**	-.166	-.171	1			
5. Resource dependency	.268*	.066	-.073	-.078	1		
6. China-specific experience	.001	.163	-.015	.138	-.022	1	
7. Total amount of investment	.174	.052	.021	.099	.138	.172	1

Notes. N = 67; * p < 0.05; ** p < 0.01.

Table 2: Hierarchical regression analysis

Variable	Step 1	Step 2	Step 3
<i>Controls</i>			
Competitive pressure in industrial sector	-.384 ^{***}	-.266 ^{***}	-.256 ^{***}
Resource dependency	.231 ^{**}	.217 ^{**}	.201 ^{**}
China-specific experience	.185 [†]	.157 [*]	.104 [†]
Total amount of investment	.000	-.004	-.003
<i>Independent Variables</i>			
Asset specificity		-.241 [*]	-.370 ^{**}
Trust		.723 ^{***}	.766 ^{***}
<i>Moderator</i>			
Asset specificity x Trust			-.526 ^{***}
<i>Total R²</i>	.219	.485	.591
ΔR^2		.266 ^{***}	.106 ^{***}
<i>F</i>	4.200 ^{**}	21.008 ^{***}	60.126 ^{***}
Notes. N = 67; [†] p < 0.1; [*] p < 0.05; ^{**} p < 0.01; ^{***} p < 0.001.			

Figures

Figure 1: Research model

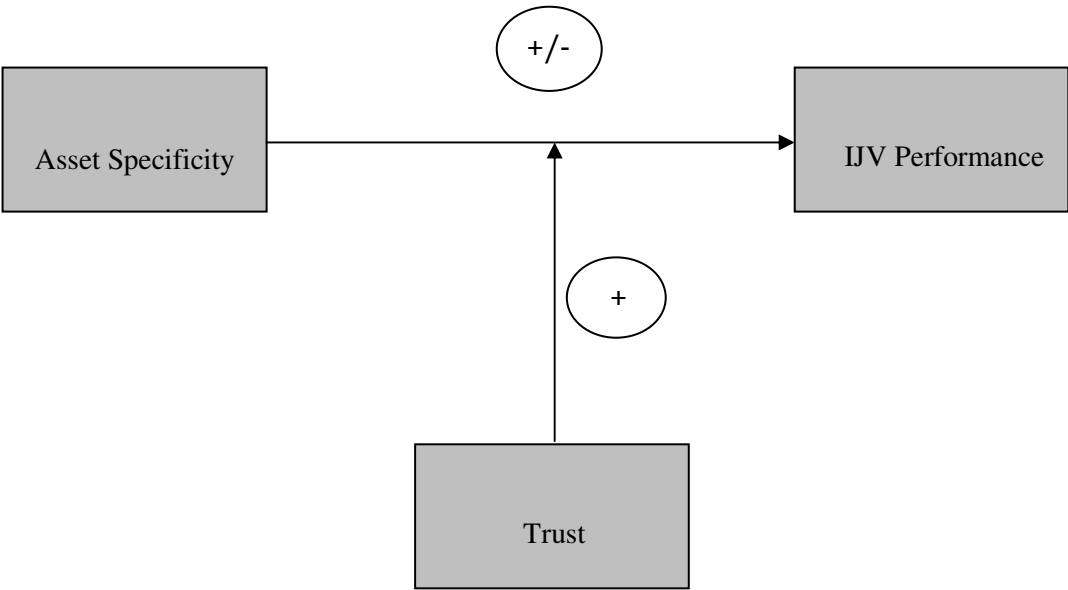


Figure 2: Interactive effect of asset specificity and trust on IJV performance

