# Factors Influencing International Equity Joint Venture Performance: A Meta-analytical Review

Michael Hunoldt
International and Strategic Management
School of Economics and Business Administration
Friedrich Schiller University of Jena
Carl-Zeiss-Strasse 3
07743 Jena
Germany

michael.hunoldt@uni-jena.de
Phone: ++ 49 (3641) 9-43166
Fax: ++ 49 (3641) 9-43162

***Please do not distribute or cite without prior consultation.***

Keywords: international equity joint venture; performance; meta-analysis; cultural distance

# Factors Influencing International Equity Joint Venture Performance: A Meta-analytical Review


## Abstract

*During the last two decades international equity joint ventures (IJVs) have attracted considerable interest among academic researchers and managers. However, the empirical findings on variables influencing IJV performance are inconsistent. To consolidate existing empirical findings and to identify factors those explain conflicting results of different studies. We address the question if and how several variables are related to IJV performance by integrating findings of 54 studies (N=10,575) 58 studies (N=10,882) through the method of meta-analysis. Our results suggest that interpartner trust is a critical factor for IJV performance. Moreover, goal congruity between the IJV partners and relatedness also affect IJV performance positively. Finally, results reveal that organizational cultural distance has a stronger negative effect on IJV performance than national cultural distance.*

## INTRODUCTION

During the last two decades IJVs have attracted considerable interest among both academic researchers and managers. This has predominantly been the case due to two main reasons. On the one hand, co-operation arrangements in principle and IJVs in particular have a vital role in the progressing internationalization process of multinational corporations (Austin, 1990; Lee & Beamish, 1995). On the other hand, several studies indicate that many IJVs are characterized by poor performance (Geringer & Hébert, 1989; Harrigan, 1988; Chowdhury, 1992). Therefore the empirical investigation of factors influencing IJV performance has received much attention within strategic management and international business literature. Numerous authors have researched the influence of a variety of structural, operational and/or environmental variables on IJV performance.

The empirical findings on variables influencing IJV performance are inconsistent. A major reason for this may be the tendency not to include all relevant factors influencing IJV performance. Most studies rather focus on some selected variables only (Robson, Leonidou & Katsikeas, 2002). Moreover, construct operationalizations and research designs differ among empirical studies (Robson et al., 2002).

Given both facts, i.e. the high number of empirical studies examining the factors influencing IJV performance and the inconsistency of findings, comprehensive analysis of past research should result in cumulative knowledge. To date, qualitative literature reviews (e.g., Robson et al., 2002; Reus & Ritchie III, 2004; Nippa, Beechler & Klossek, 2007; Boersma & Ghauri, 1999; Ren, Gray & Kim, 2009) have offered valuable insights and have facilitated theory building on the subject. Given the shortcomings of vote counting methods (Hunter & Schmidt, 1990), a systematic consolidation of research using quantitative methods should be the next logical step. Meta-analysis is used in empirical research to estimate the true empirical relationship among variables based on a large sample and explain conflicting findings. Results of meta-analyses are therefore indispensable for theory building (Hunter & Schmidt, 1990). A first meta-analysis within the research field of IJVs has been undertaken by Reus & Rottig (2009). The authors examined the overall effects of four independent variables, i.e., hierarchical control, partner conflict, cultural distance and mutual commitment, and used the resulting mean true score correlations as input for a structural equation modeling-based path analysis. In our article we also conduct a meta-analysis of empirical studies examining the factors affecting IJV performance and contribute to the IJV literature in two ways. First, in contrast to Reus & Rottig (2009) our meta-analysis includes additional factors, i.e., prior experience, goal congruity, relatedness, and interpartner trust, which influence IJV performance. By doing so our research contributes to a better and more substantiated under-

standing of potential performance drivers. Second, since cultural distance represents one of the most important impact factors on IJV performance (Lu, 2006) and has so far been the most intensively analyzed impact factor, we researched the inconclusive findings in more depth. In order to compare effect sizes we used meta-regression analysis which has so far not applied within previous studies in the field of IJVs. Meta-regression analysis allows for a systematic evaluation of a performance factor (i.e. cultural distance) by simultaneously controlling for other drivers of effect size (e.g., method, publication outlet, theory) and for publication bias. In particular publication biases are expected to alter the results on IJV performance since studies using performance as a dependent variable are often characterized by expressive research traps (March & Sutton, 1997). The aim of this paper is, thus, to facilitate theory building by consolidating existing empirical findings and identifying possible moderating variables, that explain conflicting results of different studies. Additionally, identifying factors critical for IJV performance may provide practitioners with useful insights to establish and operate an IJV effectively.

## OVERVIEW OF THE RESEARCH ON IJV PERFORMANCE

### International Joint Ventures

International equity joint ventures – the focus of this paper – can be defined as ventures with two or more equity holding partners of different nationality (Glaister, 2004; Inkpen & Beamish, 1997). Instead of merely concluding a contract a legally independent and jointly owned subsidiary is created (Boersma & Ghauri, 1999) by two or more legally distinct organizations, which actively participates in the decision-making activities (Shenkar & Zeira, 1987).

Firms form IJVs for a variety of reasons that reach into all areas of business strategy (Larimo, 2004). According to Contractor and Lorange (1988) these are for example (1) risk reduction, (2) economies of scale and/or rationalization, (3) technology exchanges, and (4) facilitating initial international expansion of inexperienced firms. Comprehensively the variety of reasons can be grouped in resource-driven, market-driven and risk-driven objectives (Larimo, 2004). Despite the risk of greater resource commitment IJVs offer various benefits compared to other (market) entry modes, as can be seen on the diverse motivations. However, the intercultural and interorganizational nature of IJVs implicates enormous complexities, and dynamics on management (Parkhe, 1993; Luo, 1997).

**Alternative Theories for Researching IJVs**

Within the IJV literature several major theoretical paradigms are employed to explain the organization, operation, and outcomes of IJVs (Robson et al., 2002). Empirical studies use transaction cost theory, the resource-based view, organizational learning perspective and a variety of other theories to develop hypotheses (Reus & Ritchie III, 2004; Nippa et al., 2007). Since the aim of this paper is to consolidate existing empirical findings by a meta-analytical review, we constrain our discussion to the main rationales behind the most important theoretical paradigms. Transaction cost theory (TCE) is used to verify the economic rational for using the market, hierarchies or hybrid governance structures (Glaister, 2004; Williamson, 1985). Within a the TCE framework IJV research emphasizes, for example, the need for appropriate control and governance structures to successfully founding and managing an IJV (Nippa et al., 2007). The main rational behind the resource-based view (RBV) is the creation of a sustained competitive advantage through the combination of firm-specific tangible and intangible resources (Barney, 1991). Combining complementary partner resources may therefore be a major reason for IJV formation (Nippa et al., 2007) as well as a factor influencing IJV performance. Based on the organizational learning school of thought a firm may form an IJV to use knowledge, skills, and capabilities from the IJV partner or the IJV itself to enhance its own competitive situation (Inkpen, 1995; Robson et al., 2002). This potential objective highlights the importance of structuring knowledge-flows and stimulating learning processes within IJVs.

**Performance Impact Factors**

Robson et al. (2002) and Nippa et al. (2007) offer an integrated organizing framework including both the categorization of different constructs studied in IJV theories and the establishment of relationships between them. According to Robson et al. (2002), the possible factors influencing IJV performance can be categorized in background variables (e.g., intrapartner characteristics), antecedent variables (e.g., venture demographics), core variables (e.g. strategic factors), and external variables (e.g. regulatory environment). Given the high number of variables potentially influencing IJV performance, a meta-analytical review cannot cover all of the variables simultaneously. Furthermore, most of the impact factors have been included in only a small number of studies and a quantitative meta-analytical review for these factors is therefore unreasonable.

In the only existing quantitative meta-analytical-review of IJV success factors Reus & Rottig (2009) examined the overall effects of four independent variables, i.e., hierarchical control, partner conflict, cultural distance and mutual commitment. In contrast to this approach our paper analyzes the impact of four additional variables that have been researched intensively within the field of IJV: prior experience, relatedness, goal congruity and interpartner trust. Since these variables represent other important impact factors of IJV performance and empirical studies have shown inconsistent findings this meta-analysis expedite the consolidation of current finding called for by e.g. Beamish and Killing (1996).

Moreover, we also analyze the influence of cultural distance. This variable has already been included in the meta-analytical review provided by Reus & Rottig (2009). The authors found a small negative but insignificant overall effect and tested separated moderating effects. Since the explanation power of separated effects is rather limited we use meta-regression analysis in order to systematically evaluate the impact of cultural distance on IJV performance by simultaneously controlling for other drivers of effect size (i.e., construct measurements, sample characteristics, and additional study characteristics) and for publication bias. Since cultural distance represents one of the most important impact factors on IJV performance (Lu, 2006) this further examination

Using the meta-analytical approach developed by Hunter and Schmidt (1990, 2004), we compared 207 effect sizes of 54 independent samples representing a total of 10,575 IJVs. Based on the fact that the researched impact factors within this meta-analytical review have not been included in all empirical studies simultaneously the study relies on different sub-samples (sub-sample 1 to sub-sample 5) for a respective impact factor. Within the next section the relationship of all independent variables and moderating effects will be discussed in detail and hypotheses will be derived.

## HYPOTHESES DEVELOPMENT

### Specific Factors Determining IJV Performance

***Prior experience (sub-sample 1).*** Due to the mixed corporate and national cultures within an IJV, additional knowledge and managerial competencies are required, some of which can result from previous experience (Child & Yan, 2003). Organizational learning theory implies that the acquisition and application of new knowledge is largely influenced by the level of previous relevant learning (Cohen & Levinthal, 1990). This absorptive capacity can be

understood as a combination of organizational routines and strategic processes by means of which firms acquire, assimilate, transform and exploit knowledge (Zahra & George, 2002). Based on the collaborative character of an IJV, the experience of both partners should be taken into account (Child & Yan, 2003) and four distinct categories may be especially relevant: host country market experience, international experience, collaborative experience, and industry experience.

A newly formed IJV faces liabilities of foreignness (Hymer, 1976) whose degree is determined by the prior host country experience. This experience comprises knowledge about the target country's environment, market and customers. In accumulating such knowledge in the forefront of IJV incorporation the learning process could be expedited, uncertainties should be reduced and mistakes in various business decisions minimized (Lu & Beamish, 2006). Ultimately, this should result in an increased possibility for better IJV performance.

Aside from parent's specific knowledge about the IJV host country, their international experience may provide support for IJV operations. International experience can sharpen sensitivity toward competitiveness in international markets (Luo, 1997) and result in superior knowledge, skills, and values regarding modern management methods (Kumar, 1995).

Moreover, several authors expect collaborative experience to be a critical resource for IJV success (e.g., Fong, Tseng, Lee & Chung, 2004; Child & Yan, 2003). Prior cooperative relationships with other companies influence a partner's capability for cooperation (Lyles, 1988). Partners with prior cooperative relationships possess knowledge and capabilities in dealing with the uncertainties and complexities of building effective cooperative relationships. Prior joint venture experience, in particular, includes the experience of selecting partners, investing in relation-specific assets, sharing information and knowledge between partners, and the establishment of a mechanism for managing operations and conflict resolutions (Fong et al., 2004).

Altogether, experience has the potential to avoid management mistakes (Child & Yan, 2003) and facilitates the learning process. In addition the gained experience should enhance the efficiency in managing international ventures. Empirical findings largely suggest either a positive or a non-significant impact of experience on IJV performance. For example, Luo (1997) finds local partner's international experience positively related with a variety of objective IJV performance measures. Similarly, Child and Yan (2003) find parent companies combined international experience positively associated with economic system performance of the IJVs in their sample. The same is true for parent companies combined collaborative experience. Their findings also indicate that IJV partners' combined experience

predicts IJV economic system performance more strongly than their separate experiences. Lu and Hébert (2005) find foreign parents' host country experience influences IJV survival negatively.

Although gained experience may not always be relevant and partners do not always use the potential to capitalize on gained experience (Simonin, 1997) overall a favorable effect of experience on IJV performance is expected. Therefore:

*H1: IJV performance is positively related to the prior experience of the parent companies.*

***Goal congruity (sub-sample 2).*** An IJV as an organizational entity that is legally independent from the parents usually has its own mission and strategy (Yan & Gray, 2001). However, parents' goals in establishing IJVs often differ (Yeheskel, Zeira, Shenkar & Newburry, 2001). To realize a comprehensive strategy for an IJV it is therefore especially essential to harmonize the goals set of all IJV partners before it commences operations. Goal congruity – also called strategic fit – will result in a consensus about the way to position the business and to compete in the market (Lasserre, 1997). Taking the long-term orientation of a company strategy into account, goal congruity during both IJV incorporation and operation may have a lasting positive effect on IJV performance. In addition to a sound strategic IJV positioning, goal congruity affects the extent of cooperative or opportunistic behavior in the long run (Hill, 1990; Parkhe, 1991; Luo, 2001). Goal congruity is reflected in harmonized partner expectations and interests and will thus avoid antagonistic pursuit during the IJV operation (Williamson, 1985). Focusing IJV partners on common objectives should, in fact, stimulate the trust between partners. Trying to realize different goals will also be reflected in a lack of congruent performance measures between the partners (Beamish & Delios, 1997). This impedes the management by objectives of an IJV.

Empirical findings predominantly support a positive influence of goal congruity on IJV performance. Zhang (2001), Boateng and Glaister (2002), and Zeira and Parker (1995), for instance, find a significant positive correlation between compatibility of objectives and IJV performance. However, Gong et al. (2005) find no significant correlation between goal incongruence and IJV performance.

Based on the theoretical discussion and the predominantly positive empirical findings we offer the following hypothesis:

*H2: IJV performance is positively related to the extent of goal congruity between the IJV partners.*

***Relatedness (sub-sample 3).*** Two different aspects reflect business relatedness between the parents and the IJV. The first comprises an industry-, product- or technology-overlap, while the second is characterized by a vertical linkage within the value chain.

Harrigan (1985) and Luo (1997) argue that product relatedness between parent firms and the IJV can influence the venture's economies of scale and scope, and efficiency of transaction cost. This relationship may also affect the IJV's ability to develop the market and products in the host country or in international markets because product relatedness between the parent firm and the IJV will determine how much the IJV can utilize existing industrial experience, established distribution channels, production facilities, and skilled labor (Geringer & Hébert, 1989; Luo, 1997). Although a related product link between any parent and the IJV should be beneficial, to utilize all of the advantages especially a business overlap between the local parent and the IJV may be decisive. This link may be helpful in building up the IJV's long term stable relationships with suppliers, buyers, and the local government (Luo, 1997).

In addition, organizational learning theory suggests that an overlap between business operations of the parents and the IJV – reflected in similar organizational processes – should facilitate the transfer of tacit knowledge (Saxton, 1997; Larimo, 2004).

Beside product relatedness, interdependence could also be incorporated in a vertical linkage of the IJV with its parents – either upstream or downstream. Child and Yan (2003) argue that if parent companies absorb a substantial capacity of IJV output, uncertainties due to underdeveloped local markets and distribution systems could be reduced. However, it is to take into consideration that under such circumstances the IJV highly depends on the business development of the parent companies. The constellation that an IJV purchases a substantial capacity of inputs from parent companies allows knowledge transfer to the IJV through the provision of technical designs and other know-how (Child & Yan, 2003).

The empirical findings on IJV-parent-relatedness influencing IJV performance are inconsistent. Pangarkar and Lee (2001) find no support for a relationship between a supplier-buyer-relationship and IJV performance. In contrast, Lu and Xu (2006) find foreign parent-IJV industry relatedness to have a significant positive impact on IJV performance, measured as sales growth and survival rates. Luo (1997) reportes a strong correlation between local parent-

IJV-product relatedness and satisfactory financial return and sales growth. In addition, Child and Yan (2003) report that direct inputs from parents tend to have a stronger positive impact on IJV performance than direct output to them.

All in all – irrespective of the specific embodiment – relatedness between IJV parents and the IJV itself is expected to be beneficial to IJV performance. Therefore, we propose the following hypothesis:

*H3: IJV performance is positively related to the parents-IJV business relatedness.*

***Interpartner Trust (sub-sample 4).*** In recent years, the role of trust has received increased scholarly attention within the research of factors determining IJV performance (Mohr, 2007; Inkpen & Currall, 1997; Parkhe, 1993). There seems to be a widespread agreement that trust is an essential factor for the functioning of social systems in general and long-term IJV relationships in particular (Mohr, 2007). Nonetheless, so far a lack of both a unifying definition and a generalized means of operationalization have to be stated (Inkpen & Currall, 1997). Some consensus exists that trust encompasses at least two essential dimensions: benevolence and integrity (Kemp, 1999). Madhok defines trust as "the perceived likelihood of the other partner not behaving in a self-interested manner" (1995: 120). In this case a partner is expected to refrain from opportunistic behavior (Mohr, 2007). For this first dimension various authors used the notation benevolence (Mohr, 2007; Anderson & Narus, 1990; Kemp, 1999). Trust also reflects that a partner will stick to his declared intentions and will fulfill his obligations (Inkpen & Birkenshaw, 1994). This partner reliability is described with the notation integrity (Mohr, 2007) or credibility (Kemp, 1999).

Both the relationship specific (Inkpen & Currall, 1997) and intertemporal character of trust have to be pointed out. As a current state, trust depends on previous partner interactions and prior behavior (Inkpen & Birkenshaw, 1994). As Yan (1998), for example, states, trust is able to proliferate during the relationship and in a spiral process further develops trust.

In IJVs trust may function as an informal control mechanism reducing the importance of the formal control structure and substituting other potential control mechanisms (Kumar & Khanna, 1999). This may be of particular importance since no contract can cover all variations and conditions that can occur (Dhanaraj, Lyles, Steensma & Tihanyi, 2004). In a trustful relationship the partners may abstain from installing expensive control mechanisms to safeguard against partners opportunism and to ensure that decisions in the IJV are made in accordance to their wishes (Kumar & Khanna, 1999). Thus, trust reduces transaction costs (Gulati, 1995; Yan, 1998).

In addition, trust influences both the extent and the efficiency of information and resource exchange (Zand, 1972; Lane et al., 2001; Inkpen, 1995; Mohr, 2007). Without trust between the IJV partners opportunistic behavior may be expected and, as a consequence, information exchange may be low in accuracy, comprehensiveness and timeliness (Zand, 1972). By increasing the openness in knowledge transfer and by speeding the circulation of knowledge, trust facilitates cooperation and joint problem solving (Mc Evily, Perrone & Zaheer, 2003) and thus increases the opportunities for organizational learning (Iles & Yolles, 2002).

Inkpen and Currall (1997) distinguish two perspectives of IJV trust: interpersonal and interorganizational trust. However, many authors do not account for the differences between these perspectives within their empirical work (Mohr, 2007). In accordance with Mohr (2007), we believe that the interorganizational trust can be inferred from the perceptions of the managers of the partners. Following this argumentation it is reasonable to integrate both perspectives into one variable: interpartner trust.

Ng, Lau, and Nyaw (2007) report that interorganizational trust had a significant positive impact on the achievement of financial and non-financial objectives. In contrast, Inkpen and Currall (1997) and Mohr (2007) find no relationship of interpersonal and interorganizational trust on various performance measures.

Despite the inconsistent empirical findings we expect interpartner trust as one key variable determining IJV performance. Thus, in line with the theoretical literature we offer the following hypothesis:

*H4: IJV performance is positively related to the level of interpartner trust.*

***Cultural distance (sub-sample 5).*** Culture consists of interrelated components such as habits, beliefs, and values that are manifested in practices, behaviors, and various artifacts shared by members of an organization or a nation (Hofstede, 1980; Pothukuchi et al. 2002). Oppositional influences of cultural distance within the IJV literature can primarily be attributed to two theoretical streams: negative arguments derived from the TCE and positive impacts based on the RBV.

A negative impact of cultural differences on IJV performance may, for example, arise from the different mother tongues of the IJV partners. As argued by Root (1994), verbal communication between partners and IJV managers suffers from both perceptual and encoding/decoding gaps. However, an effective communication between IJV partners is crucial to avoid misunderstandings and suspicion (Hennart & Zeng, 2002) and facilitates trust in the long run.

Avoiding misunderstandings reduces transaction costs (Buckley & Casson, 1996) and stimulates information- and knowledge-flows (Salk, 1996). Cultural similarity may also have a positive influence on conflict resolution. As noted by Barkema and Vermeulen (1997), when conflicts arise cultural similarity makes it easier for IJV partners to understand each other and to resolve the differences. Fast problem solving makes an IJV more flexible and therefore positively affects IJV performance.

In contrast to the negative performance impacts resulting from increasing management difficulties, cultural distance may alternatively have a positive impact on IJV performance from the viewpoint of resource-based theory. Pangarkar and Lee (2001) argue that potential learning and synergy effects for partners from culturally distant countries may influence IJV performance positively. Similarly, Beamish and Kachra (2004) argue that the heterogeneity or diversity of the IJV's resource pool increases when partners come from different countries. Combining partners' different kinds of strengths (e.g. process skills, managerial expertise, market knowledge) may ultimately lead to sustainable competitive advantages of the IJV.

Previous empirical findings regarding the impact of cultural distance on IJV performance have been mixed. Luo (2002c), for example, reports a negative impact of cultural distance on IJV performance. Several other studies find no significant influence of cultural distance on IJV performance (e.g. Luo 2002b; Luo & Tan, 2003). Contrary, Park and Ungson (1997) find that larger cultural distance is related to a significant lower dissolution rate. In line with this, Pangarkar and Lee (2001) report a significant positive impact of cultural distance on IJV performance for their sample. In addition, some studies indicate that different dimensions of cultural distance influence IJV performance differently (Barkema & Vermeulen, 1997; Pothukuchi et al. 2002).

Despite the arguments and empirical findings on both sides, we believe cultural dissimilarity increases problems which facilitate misunderstandings and interaction problems. These aspects could affect the trust and cooperation between partners adversely and should ultimately result in a lower IJV performance (Sim & Ali, 2000). Therefore, we hypothesize:

*H5: IJV performance is negatively related to the cultural distance of the parent companies.*

Although we expect an overall negative impact of cultural differences on IJV performance, there are substantial reasons to assume moderating effects on the proposed relationship. Since cultural distance represents one of the most

important impact factors on IJV performance (Lu, 2006) and has so far been the most intensively analyzed impact factor, we decided to analyze possible moderating effects in more depth. These moderators comprise factors regarding the construct measurements, the analyzed sample, and additional study characteristics, which should be discussed below.

**Moderating Factors of the Cultural Distance-Performance Link**

***Analyzed culture level.*** Cultural distance between the parent entities can be defined at the country and corporate levels (Makino & Beamish, 1998). Cultural distance at the country level is defined as the differences between partners' national cultures, i.e. fundamental understandings, values and beliefs (Hofstede et al., 1990), and has usually been evaluated on Hofstede's (1980) cultural dimensions. Cultural distance at the corporate level is defined as the differences between the partners' organizational cultures, that are reflected in different managerial styles (Hennart & Zeng, 2002), and diverse management practices, e.g. the decision making process (Makino & Beamish, 1998).

Although organizational culture is embedded in national culture (Pothukuchi et al., 2002) and both culture levels are interrelated to some extent they cannot be assumed as equivalents. Rather, the ongoing globalization process facilitates the worldwide adaptation of management practices and effective organizational structures. This development results in the fact that organizational cultures within one specific country could differ significantly. Therefore, the specific organizational culture distance between the relevant companies is most crucial within any business collaboration. Empirical findings, e.g. Harrigan (1988), support the assumption that homogeneity of organizational culture among partners is more important to IJV success than symmetry in their national origins.

Furthermore, it seems that both cultural levels differ in kind of their persistency in the way that national culture distance could be overcome faster. Meschi (1997) find organizational culture to be far more durable than national culture in his sample. Differences in organizational culture should therefore affect IJV operation and performance for a longer time period than differences in national culture. In line with Meschi (1997) and Harrigan (1988) we argue that it is more important that IJV partners have similar corporate cultures than similar national cultures. Therefore:

*H5a: The cultural distance–IJV performance relationship will be moderated by the cultural level in such a way that corporate cultural distance will have a significant higher negative impact on IJV performance.*

***Performance Measure.*** The appropriate measure of IJV performance has been an ongoing discussion and until today there has been no consensus regarding the best measure (Pothukuchi, Damanpour, Choi, Chen & Park, 2002). The main problem of measuring IJV performance appropriately is rooted in the diverse objectives under which an IJV is established (Beamish & Delios, 1997; Boateng & Glaister, 2002). These objectives differ between IJVs as well as between IJV partners. Consequently, no single measure can capture the diverse goals of IJVs (Luo, 1997). To measure IJV performance, researchers use a broad variety of performance indicators. These indicators can be classified in objective and subjective ones.

With regards to the group of objective performance indicators, two distinct approaches can be identified in the literature. The first involves all kinds of traditional financial measures, e.g., return on assets, market share or sales. The second category involves studies that assess IJV stability in terms of operational survival, the duration of the IJV and/or stability indicators such as unplanned equity or contractual changes. The group of subjective performance measures consists of perceptual performance measures. This group primarily focuses on the assessment of goal achievement and/or overall IJV effectiveness. Within this group of subjective measures both unidimensional and multidimensional assessments can be found.

In support of perceptual measures Geringer and Hébert (1991) find various subjective measures to correlate significantly with objective indicators. In addition, empirical findings support the expectation, that JV management can provide a fairly reliable data source for each parent's level of satisfaction (Boateng & Glaister, 2002; Gong et al. 2007). Contrary to this evaluation Reus and Rotting (2009) provide evidence that the effect of cultural distance on IJV performance is moderated by the type of performance measure. They found that within the sub-sample of studies researching the impact of national cultural distance objective performance measures show a significant negative relationship whereas subjective performance measures reveal a significant positive relationship. Therefore:

*H5b: The cultural distance–IJV performance relationship will be moderated by the kind of performance measurement in such a way that cultural distance will have a significant higher negative impact on performance.*

***IJV age.*** When discussing cultural distance in an IJV it is important to point out that the intensity of cultural differences is not constant over time. Rather, cultural differences, regardless of their nature or intensity, will ultimately recede (Meschi, 1997). By facing cultural difficulties, organizations learn how to overcome these problems and how

to prevent future problems. Meschi & Riccio (2008) examined the moderating influence of IJV longevity (age) on the impact of national cultural differences on the probability of IJV survival. The authors argue that an IJV develops specific procedures and routines for cross cultural management over time. These routines make the IJV capable to handle and absorb cultural conflicts (Meschi & Riccio, 2008). Therefore:

*H5c: The cultural distance–IJV performance relationship will be moderated by the age of the researched IJVs in such a way that cultural distance will have a significant higher negative impact on IJV performance for younger IJVs.*

***IJV industry.*** IJVs primarily engaged in manufacturing industries differ from those in service industries in specific characteristics. For example, in contrast to service industries manufacturing firms are characterized by the functional area of production within the value chain. This functional area may be especially influenced by differing management styles. In addition IJV within manufacturing industries may be more addicted to R&D outcomes. Especially the outcomes of a R&D department rely on team processes which are affected to a high extent by differing cultures and management styles. Empirical findings affirm that managerial leadership style at the R&D team level has a significant impact on creativity that ultimately affects R&D and overall performance (Thamheim 2003). In addition to the aforementioned aspect Hladik (1988) indicates, that nationalist feelings can hinder the involvement of minority-partners in R&D of IJVs. Therefore:

*H5d: The cultural distance–IJV performance relationship will be moderated by the industry of the researched IJVs in such a way that cultural distance will have a significant higher negative impact on IJV performance for manufacturing IJVs.*

***Multiple respondents.*** Basing the evaluation of the dependent and/or independent variable on the assessment of different respondents from one IJV can be beneficial for two main reasons. First, in general empirical studies which rely on self-reported survey data are exposed to the common methods bias. “Common methods bias refers to the degree to which correlations are altered (inflated) due to a methods effect.” (Meade, Watson & Kroustalis, 2007, p. 1)

Common methods bias can, for example, be reduced by the separate assessment of the dependent and independent variable by different respondents.

Second, taking into account the concept of diversity beliefs (van Knippenberg & Haslam, 2003; van Knippenberg et al., 2007) basing the assessment of perceived cultural differences on multiple respondents may be of particular importance. Following Knippenberg et al. (2007) diversity beliefs, i.e. the personal assessment to what extent diversity may be beneficial for or detrimental to a group's functioning, may be contingent on individual differences, prior experience, as well as stereotypes (van Dick et al., 2008). Comparable findings that the assessment of a relationship depends on perceived similarities and differences can be found in the field of client-counselor relationships (e.g. Vera et al., 1999). The assessment of cultural differences and/or their performance impact by multiple respondents should reveal an unbiased negative impact of cultural distance. Therefore:

*H5e: The cultural distance–IJV performance relationship will be moderated by the number of respondents of an IJV in such a way that studies relying on multiple respondents will show a significant higher negative impact of cultural distance on IJV performance.*

***Cultural distance of authors.*** Hofstedes study on cultural dimensions has been criticized for several reasons. One point of critiques regards the fact that the identified four cultural dimensions have been the outcome of a questionnaire that has been predetermined by the western mindset of the author (Yeh, 1988). In support of this critique in a more recent study by Hofstede (1991) in collaboration with Chinese researches an additional fifth culture dimension has been detected. By carrying this critique over to empirical studies researching the impact of cultural distance a similar problem may occur. The cultural distance of the involved authors itself may influence the research outcome. Author teams that differ in their cultural backgrounds are stronger affected by cultural problems during their own research and may therefore be much more aware of specific cultural aspects. Being exposed to cultural problems within the own research may affect the use of the cultural distance and/or performance measure. In respect to the latter author teams characterized by high cultural distance itself may give higher weighs to performance measures that could be affected by cultural problems. For example, performance measures covering the satisfaction of the parent companies account more for cultural influences than performance measures covering an evaluation to competitors. Regarding the cultural distance measurement it can be assumed that author teams that are more sensibilized for

cultural problems give higher weighs to questions targeted on cultural soft-factors and therefor detect higher cultural differences between the partners. Therefore:

*H5f: The cultural distance–IJV performance relationship will be moderated by the cultural distance of the involved authors in such a way that cultural distance will have a significant higher negative impact on IJV performance in the case of an author team characterized by high cultural distance itself.*

## DATA AND METHODOLOGY

### Sample

The focus of our research required studies to observe international equity joint ventures in order to be included in our analysis. However, we excluded studies that primarily focus on R&D joint ventures, because we expect other variables to be important for the joint venture performance in the case of R&D joint ventures. Furthermore, studies eligible for inclusion have to clearly state and operationalize both determinants and indicators of IJV performance. Moreover, we focused our research on the IJV corporate level as the unit of analysis. Therefore, event-studies measuring performance by abnormal returns on the IJV parent level were excluded (e.g., Merchant, 2005). In this we differ from the meta-analysis conducted by Reus and Rottig (2009). However, we believe that a mixture of performance effects evaluated on the level of the IJV and the level of one partner firm can bias the of the underlying research question.

We used a variety of search techniques to identify the empirical studies relating to IJV performance. Firstly, computer-aided key word searches in the EconLit database, the Web of Science and manual searches of relevant journals (e.g., Journal of International Business Studies, Journal of International Management) were conducted. Secondly, we searched both the reference lists of previously identified studies and of existing qualitative literature reviews (e.g., Robson et al, 2002; Nippa et al, 2007; Boersma & Ghauri, 1999). Based on the analytical requirements only studies were included that report a correlation between an IJV variable and a performance measure or a statistic (e.g. t-test, chi-square) that allows the transformation into a correlation measure. Overall, we were able to identify 54 studies containing 207 effect sizes (N=10,575) for our meta-analysis. Table 1 summarizes sample characteristics.

- - - - - - - - - - - - - - - - - - - - - - - -

Insert Table 1 about here

- - - - - - - - - - - - - - - - - - - - - - - -

**Variable Coding and Measurements**

To provide a comprehensive review of the potential effect of ex-ante and ex-post variables on IJV performance we coded all independent variables that were considered in at least one empirical study. We identified over 90 different independent variables. The benefit of a meta-analysis is to estimate the true empirical relationship among variables based on a large sample. Due to this fact, an integration of independent variables that are considered in only a small number of studies is not reasonable. In this paper we therefore focus on the following independent variables: prior experience, goal congruity, relatedness, interpartner trust, and cultural distance.

To test the moderating effects regarding the impact of cultural distance on IJV performance we further coded additional sample, study or measurement characteristics on both the study and sub-effect level. To evaluate the impact of the analyzed culture level we constructed a dummy variable *organizational culture distance* on the sub-effect level whether the impact of national culture distance (coded as 0) or of organizational culture distance has been researched. Also on the sub-effect level we generated a dummy variable *objective performance* coded 0 if a subjective performance measure has been used as dependent variable and 1 in the case of an objective performance indicator. On the study level we collected data on the conducted design of data collection. We generated a dummy variable *multi-responses* whether the assessment of the dependent and/or independent variable is based on different respondents from one IJV or not. *IJV age* was measured on the study level as the mean IJV age of the observed IJVs. Also on the study level *IJV industry* was measured as the percentage of manufacturing IJVs within the observed sample. Additionally we collected data regarding the nationality of the involved universities within the author team and generated a variable *cultural distance authors*. Culture distance has been measured using the Kogut-Singh index (Kogut & Singh, 1988) based on the nine practical values of the Globe study (House et al., 2004). Researching the cultural distance of the authors we included the *number of authors* as control variable. In addition the *impact factor* of the journal in which the study has been published and an additional dummy variable *IJV in Asia* (coded one for studies researching IJVs headquartered in Asia) has been included as controls. The variables *IJV age* and *IJV industry* could

not be evaluated for all included sub-samples since the necessary information is not stated in all studies. Meta-analyses in general is restricted by the information given in the researched studies.

Regarding hypothesis 1 to 4 the only potential moderators are the experience area (H1) and/or the used performance measure (H1-H4). For these studies we also calculated on the sub-effect level the variable *objective performance* and the variable *experience area* coded (1) if collaborative experience has been measured (2) for the foreign partners host country experience, (3) in the case of international experience and (4) for industry experience.

The relevant study and sub-effect characteristics have been independently coded by two researchers which agreed in 95 percent of the studies. After discussion and in-depth investigation of the questionable four studies, all discrepancies could be eliminated and consequently our meta-analysis is based on reliable data.

**Analytical Approach**

***Meta-analytic calculation.*** We based our analysis on the meta-analytic procedures developed by Hunter and Schmidt (1990) (see for a similar approach the studies by e.g. Sundaramurthy, Rhoades & Rechner, 2005; Geyskens, Steenkamp & Kumar, 2006; Bausch & Krist, 2007). This method weighs each observed correlation by the sample size and calculates a mean weighted correlation across all studies in the analysis. In order to determine the direction and magnitude of the relationship between IJV variable and IJV performance we estimated effect sizes based on the Pearson product-moment correlation or a statistic (e.g. t-test, chi-square) that allowed the transformation into a correlation measure. Since some studies used multiple operations and therefore offered several effect sizes, we calculated the effect sizes both on the study and the sub-sample level.

Allowing the correction of statistical artifacts, the method by Hunter and Schmidt (1990) provides a relatively accurate estimate of the true average strength and variance of a relationship in the population of interest (Geyskens et al., 2006). We corrected dependent and independent variables for measurement reliability. Since only a few studies reported measurement reliabilities, we computed the average reliability to correct the correlations of all studies included in our sample.

To determine whether the effect size estimates differed significantly from zero, a 95% confidence interval around the estimated population correlation was calculated. We further examined homogeneity of all studied effects. In the case of homogeneity the individual correlations on which the average correlations were based were drawn from the same population. Otherwise a moderator analysis is recommended (Hunter & Schmidt, 1990). Homogeneity was

assessed by using the Q test defined by Cochran (1954). The null hypothesis for the Q test is homogeneity. Therefore, a statistically significant Q-value suggests heterogeneity, i.e. that study results differ by more than the sampling error. In case of heterogeneity either a random effects model or the search for moderator effects from a fixed-effects model can be assumed (e.g. Huedo-Medina, Sanchez-Meca, & Marin-Martinez, 2006; Hedges & Olkin, 1985). We decided to use a fixed-effect model within our meta-analysis.

***Moderator analyses.*** Because all potential moderators regarding hypothesis 1-4 are categorical, in these cases we divided the data into subsets based on the moderator in question (*experience area* and/or *objective performance*) and determined the between-groups homogeneity to measure how much variability can be explained by the moderator. The appropriateness of a moderator is signaled by the heterogeneity that occurs between groups. The remaining heterogeneity within groups cannot be explained by the moderator.

In order to compare effect sizes regarding the performance impact of cultural distance (H5a to H5e) we use meta-regression analysis. Meta-regression analysis allows for a systematic evaluation of significant performance factors by simultaneously controlling for other drivers of effect size (e.g., method, publication outlet, theory) and for publication bias. Funnel plots can be used as a first graphical test for disclosing a serious publication bias (Doucouliagos, 2005). They show treatment effects estimated from individual studies against a measure of study size (Stern & Harbord, 2004). In the absence of bias, results from small studies will scatter widely at the bottom of the graph, with the spread narrowing among larger studies (Stern & Harbord, 2004). In addition to the funnel plot an Egger test has been executed.

The dependent variable in our meta-regression is the z-value of the cultural distance-performance link. Significant effects in the meta-regression indicate that a tested moderator significantly influence the standardized cultural distance-performance link. Since multiple sub-level effects from one study cannot be assumed as independent we clustered the OLS results on a study level to obtain unbiased t-values.

## RESULTS

Table 2 presents the results of our meta-analysis.

- - - - - - - - - - - - - - - - - - - - - - - -

Insert Table 2 about here

- - - - - - - - - - - - - - - - - - - - - - - -

Based on the results of the meta-analysis, Hypothesis 1, which proposes a positive overall relationship between prior experience and IJV performance, found support. Since the 95% confidence interval on both the study and sub-groups level does not include zero the results indicate a significant effect in the expected direction. However, the statistically significant Q-value suggests heterogeneity. This indicates that the population is not homogeneous and moderating variables possibly exist. In a first step the category of performance measure has tested on a possible moderating influence. The low and insignificant heterogeneity occurring between groups indicates no significant correlation difference between the two subsets (objective measure versus subjective measure). Hence, the group of performance measure does not moderate the impact of experience on IJV performance. Derived from our theoretical explanations, that four distinct categories of experience can be distinguished, i.e. collaborative experience, host country market experience, international experience, and industry experience, we further examined a possible moderating effect of the area of experience. The high and significant heterogeneity occurring between groups indicates that significant correlation differences between the four categories exist. This result reveals a moderating effect of the area of experience. While foreign parents' host country experience has a significant negative influence on IJV performance, collaboration, international and industry experience affect performance positively.

Hypotheses 2 and 3 make predictions about the influence of goal congruity and relatedness on IJV performance, respectively. For both variables our results confirm a significant effect in the expected direction supporting. These findings suggest that goal congruity and relatedness affect IJV performance positively, supporting H2 and H3. However, for both variables the statistically significant Q-value suggests heterogeneity. Consequently, we tested the performance measure group as a moderator variable for both variables. While for goal congruity the low and insignificant heterogeneity occurring between groups indicates no significant correlation difference between the two subsets (objective measure versus subjective measure for relatedness such a moderating effect can be found.

Our findings empirically validate our expectation that interpartner trust positively influences IJV performance as stated in Hypothesis 4. Since the 95% confidence interval around the estimated population correlation does not include zero a significant effect (different from zero) exists between interpartner trust and IJV performance. Hypothesis 4 is therefore supported. Although, the statistically significant Q-value suggests heterogeneity, we were not able to test for a moderating effect of the used performance measure, since our sub-sample only comprises studies with objective performance measures.

Hypothesis 5, predicting a negative impact of cultural distance on IJV performance, is not supported by our results. Although there is a small negative sample-weighted and reliability-corrected effect, the 95% confidence interval includes zero. Moreover the test of homogeneity indicates that the population is heterogeneous. Our results support the findings by Reus and Rottig (2009). In a first step we searched for possible moderating effects by dividing our sample into sub-groups based on the categorical variables *organizational culture distance* and *objective performance*. In addition we derived two sub-groups (young and old) from the variable *IJV age* using the mean age over all studies under research as cut point. The results presented in Table 2 give first support for our Hypotheses 5a and 5c. By not simultaneously controlling for other drivers of effect size the explanation power of separated effects is rather limited. Consequently we examine the possible moderating effects formulated in Hypotheses 5a-5f using a meta-regression analysis. Preliminary to our meta-regression we checked for a possible publication bias. Figure 1 shows the funnel plot for the researched sample relying on study effects.

- - - - - - - - - - - - - - - - - - - - - - - -

Insert Figure 1 about here

- - - - - - - - - - - - - - - - - - - - - - - -

Since the funnel plot shows symmetric patterns there is no indication of a serious publication bias. In addition, the intercept of the Egger test of -0.13767 (p-Value 0.854) is not significant and the existence of a serious publication bias can thereby be ruled out. The results are consistent using all sub-effects published within the studies as the unit of analysis and the testing for publication bias (i.e. using 1/standard error of the z-value as an additional independent variable) has not been taken into account in meta-regression. Table 3 presents the results of this meta-regression. Model 1 shows the results for all moderating variables that could be evaluated for all studies und sub-effects. Since data of *IJV age* and *IJV industry* could not be collected for all sub-effects Model 2 tests the effect of *IJV age* for all those studies with the necessary information. Respectively in Model 3 the effect of *IJV industry* is tested in a different sub-sample.

- - - - - - - - - - - - - - - - - - - - - - - -

Insert Table 3 about here

- - - - - - - - - - - - - - - - - - - - - - - -

Hypothesis 5a predicts that organizational culture differences will have a stronger negative impact on IJV performance than national culture differences because of their higher relevance on IJV operation and their persistency.

This hypothesis is supported in Model 1-3. The results show that the overall negative effect size increases measuring cultural distance at the organizational level. Hypothesis 5b states that the use of objective performance measures will lead to an increasing negative effect of the cultural distance–IJV performance link. This hypothesis is not supported by the results in Model 1 and 3. Only in model 2 the influence of objective performance measures reach significance at a 10%-level. The use of whether an objective or subjective performance measure does not significantly influence the effect size of cultural distance on IJV performance. In hypothesis 5c it is suggested that the IJV age will positively moderate the relationship between cultural distance and IJV performance since older firms have deployed routines to absorb cultural conflicts. This hypothesis is not supported by the results in Model 2. Rather our results show the opposite effect to the stated hypothesis. Studies relying on an older sample of IJVs report significantly lower effects. In other words in young IJVs the performance is suffering to a minor degree by cultural differences between the IJV partners. Hypothesis 5d states that the cultural distance–IJV performance link is moderated by the industry of the IJVs under research. Our results in Model 3 do not support this hypothesis. The reported study effects do not differ significantly in respect to the percentage of manufacturing firms in the sample. These results indicate that cultural distance unfolds comparable influences in both service and manufacturing IJVs. Hypothesis 5e predicts a negative moderating effect of multiple respondents on the relationship between cultural distance and IJV performance. This hypothesis is only partly supported. Model 1 and 2 show that studies relying on multiple respondents report a higher effect size in the negative direction. However the results in Model 3 do not support the hypothesis. By additionally controlling for the industry of the observed IJVs the impact of multiple respondents is no longer significant. Finally, in hypothesis 5f we assume that the cultural distance within the author team will moderate the cultural distance–IJV performance relationship negatively. The results in Model 1 support this hypothesis. This effect is also supported by Models 2 and 3. In the case of high cultural distance between the involved authors lower effect sizes are continuously deployed.

Overall, it has to be underlined that the effects for all moderating variables that could be evaluated for all studies und sub-effects show quite robust results in all three Models (and respectively sub-samples).

## DISCUSSION AND CONCLUSION

Our major research objectives were to clarify the potential effect of ex-ante and ex-post variables on IJV performance and to identify those factors that are critical for IJV performance. This meta-analysis offers five main contributions to the literature.

First, our findings confirm that interpartner trust is a critical success factor. Given the obtained meta-analytical results interpartner trust with a sample-size weighted mean effect size of $\bar{r}$ =0.353 highly affects IJV performance. Consistent with the theoretical expectation this finding implies that IJV partner should act benevolent and integer to affect IJV performance positively. Trust-building mechanisms such as regular personnel contacts are steps to establish a trustful relationship between the IJV partners and improve IJV performance significantly. Our results highlight the need for further research regarding the antecedents of interpartner trust and context-related moderators and mediators. Some authors make first contributions to this research topic (e.g., Inkpen & Birkenshaw, 1994; Inkpen & Currall, 1997; Ng et al., 2007). For instance, Inkpen and Currall (1997) find support for the argument that trust has an indirect effect on performance mediated by forbearance. However, further research would enhance our understanding of IJV performance differences.

Secondly, we reveal that the category of experience is critical to IJV success. While foreign parents' host country experience has a significant negative influence on IJV performance, collaboration, international and industry experience affect performance positively. Although we expected that gained experience in all four areas will positively affect IJV performance, there are theoretical explanations for significant correlation differences between the experience areas. All included studies in our meta-analysis consider host country experience by measuring exclusively the foreign partner's host country experience. However, knowledge of the target country's environment, market and customers can result from two distinct sources. Firstly, it is possible for the parent companies to acquire local knowledge and develop new organizational capabilities internally through incremental experience accumulation in new markets (Johanson & Vahlne, 1977). Secondly, local knowledge can be acquired by forming the IJV with a local parent and using its local knowledge base. This local knowledge transfer from a local IJV partner to the IJV may be of great importance since some types of local knowledge may be imperfectly transferable in the market interface between firms (Makino & Delios, 1996). Researching the influence of host country experience on IJV performance an additional fact has to be considered: the distinction between existing experience in the forefront of IJV establishment and

accumulated experience during IJV operation. While a partner's prior experience in its host country environment can diminish the IJVs liabilities of foreignness reflected in a better IJV performance (Lu & Beamish, 2006), accumulated experience during IJV operation might reduce the foreign partner's dependency on the IJV and destabilize it (Lu & Hébert, 2005). Since both survival and stability are used as IJV performance measures the influence of host country experience on IJV performance may be mixed. It can be expected that, based on survival, the relation is positive, but based on stability it is negative (Larimo, 2004). Nevertheless, other moderating variables may exist. Some scholars argue that based on significant resource deficiencies and an unfamiliar business environment prior experience should have a more important role for establishing IJVs in developing countries (Beamish, 1988; Child & Yan, 2003). Since only one study examined the relationship of prior experience on IJV performance based on a sample of IJVs in developed countries we could not test for a moderating effect of the IJV host country (developed versus developing).

Thirdly, we find goal congruity and relatedness affecting IJV performance positively. However, our tests of homogeneity suggest the existence of moderating variables. Our results using performance measure as a moderating variable are only significant for relatedness.

Finally, our study also clarifies that the two levels of cultural distance have a differential effect on IJV performance. Our results indicate that organizational cultural distance significantly decreases IJV performance whereas national cultural distance has no impact on IJV performance. The higher importance of partners to have similar corporate cultures than similar national cultures is in line with the findings of Meschi (1997) and Harrigan (1988). It seems reasonable to argue that it is easier to achieve the assimilation to national cultural differences than harmonizing organizational processes and managerial styles. This finding highlights the importance to find an IJV partner that has a similar organizational culture irrespective of the specific national culture.

There are several limitations in this study. First of all, based on the meta-analytical requirements we had to exclude several studies for our statistical evaluation. With improved reporting of research results (e.g., statistical tests or, at a minimum, zero-order correlations), our ability to compare and draw conclusions across studies will increase (Bausch & Krist, 2007). Additionally, the restricted sample description in several primary studies constrained testing possible moderator effects. We had to restrict our statistical evaluation on the performance measure (for H1-H4) and the area of experience (H1). This limitation highlights the need for further examination of possible moderating effects. Finally, given the high number of variables influencing IJV performance we had to focus our examination on selected variables. Additional ex-ante and ex-post variables (e.g., control, IJV size, IJV age) may have significant

effects on IJV performance. Nevertheless, since the included variables represent extensively researched IJV performance factors this meta-analysis clarifies fundamental effects of IJV variables.

## References


Anderson, J. C., & Narus, J. A. 1990. A model of distributor firm and manufacturer firm working partnerships. Journal of Marketing, 54 (1): 42-58.

Austin, J. E. 1990. Managing in developing countries. New York: Free Press.

Barkema, H. G., & Vermeulen, G. A. M. 1997. What differences in the cultural backgrounds of partners are detrimental for international joint ventures? Journal of International Business Studies, 28 (4): 845-864.

Barney, J. 1991. Firm resources and sustained competitive advantage. Academy of Management Journal, 17 (1): 99-120.

Bausch, A., & Krist, M. 2007. The effect of context-related moderators on the internationalization-performance relationship: evidence from meta-analysis. Management International Review, 47 (3): 319-347.

Beamish, P. W. 1988. Multinational joint ventures in developing countries. London: Routledge.

Beamish, P. W., & Delios, A. 1997. Improving joint venture performance through congruent measures of success. In: P. W. Beamish, & J. P. Killing (Eds.), Cooperative strategies: European perspectives: 103-127. San Francisco: New Lexington Press.

Beamish, P. W., & Kachra, A. 2004. Number of partners and JV performance. Journal of World Business, 39 (2): 107-120.

Blodgett, L. L. 1991. Partner contributions as predictors of equity share in international joint ventures. Journal of International Business Studies, 22 (1): 63-78.

Boateng, A., & Glaister, K. W. 2002. Performance of international joint ventures: evidence of West Africa. International Business Review, 11 (5): 523-541.

Boersma, M., & Ghauri, P. 1999. A qualitative meta-analysis of performance measures and factors affecting international joint venture performance. In F. Burton, M. Chapman, & A. Cross (Eds.), International business organization: 176-193. New York: St. Martin's Press, Inc.

Buckley, P., & Casson, M. 1988. A theory of cooperation in international business. In F. J. Contractor, & P. Lorange (Eds.), Cooperative strategies in international business: 31-53. Lexington: Lexington Books.

Buckley, P., & Casson, M. 1996. An economic model of international joint venture strategy. Journal of International Business Studies, 27 (5): 849-876.

Child, J., & Yan, Y. 2003. Predicting the performance of international joint ventures: an investigation in China. Journal of Management Studies, 40 (2): 283-320.

Chowdhury, J. 1992. Performance of international joint ventures and wholly owned foreign subsidiaries: A comparative perspective. Management International Review, 32 (2): 115-133.

Cohen, W. & Levinthal, D. 1990. Absorptive capacity: a new perspective on learning and innovation. Administrative Science Quarterly, 35: 128-152.

Contractor, F. J., & Lorange, P. 1988. Why should firms cooperate? The strategy and economic basis for cooperative ventures. In: F. J. Contractor, & P. Lorange (Eds.), Cooperative strategies in international business: 3-28. Lexington: Lexington Books.

Das, T. K., & Teng, B. 1998. Resource and risk management in the strategic alliance process. Journal of Management, 24 (1): 21-42.

Dhanaraj, C. Lyles, M. Steensma, H. K., & Tihanyi, L. 2004. Managing tacit and explicit knowledge transfer in IJVs: the role of relational embeddedness and the impact on performance. Journal of International Business Studies, 35(5): 428-443.

Doucouliagos C. 2005. Publication Bias in the Economic Freedom and Economic Growth Literature. Journal of Economic Surveys, 19 (3): 367-387.

Fey, C. F., & Beamish, P. W. 2000. Joint venture conflict: the case of Russian international joint ventures. International Business Review, 9 (2): 139-162.

Fong, C.-M., Tseng, C.-H., Lee, C.-S., & Chung, H.-J. 2004. An evolutionary approach to study joint venture business performance: an empirical study of international joint ventures in Taiwan. International Journal of Business Performance Management, 6 (1): 22-42.

Franko, L. G. 1971. Joint venture survival in multinational corporations. New York: Praeger.

Geringer, J. M., & Hébert, L. 1989. Control and performance of international joint ventures. Journal of International Business Studies, 20 (2): 235-254.

Geringer, J. M., & Hébert, L. 1991. Measuring performance of international joint ventures. Journal of International Business Studies, 22 (2): 253-267.

Geyskens, I., Steenkamp, J.-B. E. M., & Kumar, N. 2006. Make, buy, or ally: a transaction cost theory meta-analysis. Academy of Management Journal, 49 (3): 519-543.

Glaister, K. W. 2004. The rationale for international equity joint ventures. European Management Journal, 22 (5): 493-507.

Glaister, K. W., & Buckley, P. J. 1999. Performance relationships in UK international alliances. Management International Review, 39 (2): 123-147.

Gong, Y., Shenkar, O., Luo, Y., & Nyaw, M.-K. 2005. Human resources and international joint venture performance: a system perspective. Journal of International Business Studies, 36 (5): 505-518.

Gong, Y., Shenkar, O., Luo, Y., & Nyaw, M.-K. 2007. Do multiple parents help or hinder international joint venture performance? The mediating roles of contract completeness and partner cooperation. Strategic Management Journal, 28 (10): 1021-1034.

Gulati, R. 1995. Does familiarity breed trust? The implications of repeated ties for contractual choise in alliances. Academy of Management Journal, 38 (1): 85-112.

Hamel, G. 1991. Competition for competence and interpartner learning within international strategic alliances. Strategic Management Journal, 12 (Summer Special Issue): 83-103.

Harrigan, K. R. 1985. Strategies for joint ventures success. Lexington: Lexington Books.

Harrigan, K. R. 1988. Strategic alliances and partner asymmetries. Management International Review, 28 (Special Issue): 53-71.

Hedges, L. V., & Olkin, I. 1985. Statistical methods for meta-analysis. Orlando, FL: Academic Press.

Heide, J., & Miner, A. S. 1992. The shadow of the future. Effects of anticipated interaction and frequency of contract on buyer-seller cooperation. Academy of Management Journal, 35 (2): 265-291.

Hennart, J.-F., & Zeng, M. 2002. Cross-cultural differences and joint venture longevity. Journal of International Business Studies, 33 (4): 699-716.

House, R. J., Hanges, P. J., Javidian, M., Dorfman, P. W., & Gupta, V. 2004. Culture, leadership and organization. Thousand Oaks: Sage publications.

Hill, C. W. L. 1990. Cooperation, opportunism and the invisible hand: implications for transaction cost theory. Academy of Management Review, 15 (3): 500-513.

Hladik, K. J. 1988. R&D and international joint ventures. In F. J. Contractor, & P. Lorange (Eds.), Cooperative strategies in international business: 187-204. Lexington: Lexington Books.

Hofstede, G. 1980. Culture's consequences: international differences in work-related values. Beverly Hills: Sage.

Hofstede, G. (1991) Cultures and Organizations: Software of the Mind. London: McGraw-Hill.

Huedo-Medina, T, Sanchez-Meca, J., Marin-Martinez, F., & Botella, J. 2006. Assessing heterogeneity in meta-analysis: Q statistic or I2 index? CHIP Documents. Paper 19.

Hunter, J. E., & Schmidt, F. L. 1990. Methods of meta-analysis: Correcting error and bias in research findings. Newbury Park, CA: Sage.

Hymer, S. H. 1976. A study of direct foreign investment. Cambridge: MIT Press.

Iles, P. & Yolles, M. 2002. International joint ventures, HRM and viable knowledge migration. International Journal of Human Resource Management, 13 (4): 624-641.

Inkpen, A. C. 1995. Organizational learning and international joint ventures. Journal of International Management, 1 (2): 165-198.

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

Inkpen, A. C., & Birkenshaw, J. 1994. International joint ventures and performance: an interorganizational perspective. International Business Review, 3 (3): 201-217.

Inkpen, A. C., & Currall, S. C. 1997. International joint venture trust: an empirical examination. In P. W. Beamish, & J. P. Killing (Eds.), Cooperative Strategies: North American Perspectives: 308-334. San Francisco, CA: New Lexington Press.

Isobe, T., Makino, S., & Montgomery, D.B. 2000. Resource commitment, entry timing, and market performance of foreign direct investment in emerging economies: the case of Japanese international joint ventures in China. Academy of Management Journal, 43 (3): 468-484.

Johanson, J., & Vahlne, J. E. 1977. The internationalization process of the firm – a model of knowledge development and increasing foreign market commitments. Journal of International Business Studies, 8 (1): 23-32.

Kemp, R. 1999. Cooperation and conflict in international joint venture relationships. Groningen: University of Groningen, Research Institute SOM (Systems, Organisations and Management), Research report n° 99B33.

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.

Kumar, B. N. 1995. Partner-selection-criteria and success of technology transfer: a model based on learning theory applied in the case of indo-german technical collaborations. Management International Review, 35 (Special Issue): 65-78.

Kumar, B. N., & Khanna, M. 1999. Partner relationships, autonomy and performance in international joint ventures – the case of Indo-German joint ventures. In J. Engelhard, & E. Sinz (Eds.), Kooperation im Wettbewerb: 237-267. Wiesbaden: Gabler.

Lane, P. J., Salk, J. E., & Lyles, M. A. 2001. Absorptive capacity, learning and performance in international joint ventures. Strategic Management Journal, 22 (12): 1087-1174.

Larimo, J. 2004. International joint venture performance: empirical evidence from Finnish international joint ventures. In F. McDonald, M. Mayer, & T. Buck (Eds.), The process of internationalization – strategic, cultural and policy perspectives: 21-41. Basingstoke: Palgrave/Macmillan.

Lasserre, P. 1997. A contribution to the study of joint ventures in Asia Pacific. INSEAD, Working paper, 97/14/ABA.

Lee, C., & Beamish, P. W. 1995. The characteristics and performance of Korean joint ventures in LDCs. Journal of International Business Studies, 26 (3): 637-655.

Lin, X., & Germain, R. 1998. Sustaining satisfactory joint venture relationships: the role of conflict resolution strategy. Journal of International Business Studies, 29 (1): 179-196.

Lu, J. W., & Hébert, L. 2005. Equity control and the survival of international joint ventures : a contingency approach. Journal of Business Research, 58 (6): 736-745.

Lu, J. W., & Beamish, P. W. 2006. Partnering strategies and performance of SMEs' international joint ventures. Journal of Business Venturing, 21(4): 461-486.

Lu, J. W., & Xu, D. 2006. Growth and survival of international joint ventures: an external-internal legitimacy perspective. Journal of Management, 32 (3): 426-448.

Luo, Y. 1997. Partner selection and venturing success: the case of joint ventures with firms in People's Republic of China. Organization Science, 8 (6): 648-662.

Luo, Y. 2001. Antecedents and consequences of personal attachment in cross-cultural cooperative ventures. Administrative Science Quarterly, 46 (2): 177-201.

Luo, Y. 2002a. Contract, cooperation and performance in international joint ventures. Strategic Management Journal, 23 (10): 903-919.

Luo, Y. 2002b. Product diversification in international joint ventures: performance implications in an emerging market. Strategic Management Journal, 23 (1): 1-20.

Luo, Y. 2002c. Stimulating exchange in international joint ventures: an attachment-based-view. Journal of International Business Studies, 33 (1): 169-181.

Luo, Y., & Tan, J. 2003. Structuring international joint ventures: How should contractual design be aligned with environmental conditions? Management International Review, 43 (2): 185-211.

Lyles, M. A. 1988. Learning among joint venture sophisticated firms. Management International Review, 28 (Special Issue): 85-98.

Madhok, A. 1995. Revisiting multinational firms' tolerance for joint ventures: a trust-based approach. Journal of International Business Studies, 26 (1): 117-138.

Makino, S., & Delios, A. 1996. Local knowledge transfer and performance: implications for alliance formation in Asia. Journal of International Business Studies, 27 (Special Issue): 905-927.

Makino, S., & Beamish, P. W. 1998. Performance and survival of joint ventures with non-conventional ownership structures. Journal of International Business Studies, 29 (4): 797-818.

Mc Evily, B., Perrone, V., & Zaheer, A. 2003. Trust as an organizing principle. Organization Science, 14 (1): 91-103.

Merchant, H. 2005. The structure-performance relationship in international joint ventures: a comparative analysis. Journal of World Business, 40 (1): 41-56.

Meschi, P.-X. 1997. Longevity and cultural differences of international joint ventures: toward time-based cultural management. Human Relations, 50 (2): 211-228.

Mohr, A. T. 2007. Exploring the relationship between trust and control – an empirical analysis of Sino-German joint ventures. Asian Business and Management, 6 (3): 247-263.

Ng, P. W.-K., Lau, C.-M., & Nyaw, M.-K. 2007. The effect of trust on international joint venture performance in China. Journal of International Management, 13 (4): 430-448.

Nielsen, B. B. 2007. Determining international strategic alliance performance: a multinational approach. International Business Review, 16 (3): 337-361.

Nippa, M., Beechler, S., & Klossek, A. 2007. Success factors for managing international joint ventures: a review and an integrative framework. Management and Organization Review, 3 (2): 227-310.

Pangarkar, N., & Lee, H. 2001 Joint venture strategies and success: an empirical study of Singaporean firms. Journal of Asian Business, 17 (3): 1-13.

Park, S. H., & Ungson, G. 1997. The effect of national culture, organizational complementarity, and economic motivation on joint venture dissolution. Academy of Management Journal, 40 (2): 279-307.

Parkhe, A. 1991. Interfirm diversity, organizational learning and longevity in global strategic alliances. Journal of International Business Studies, 22 (4): 579-602.

Parkhe, A. 1993. Partner nationality and the structure-performance relationships in strategic alliances. Organization Science, 4 (2): 301-314.

Pothukuchi, V., Damanpour, F., Choi, J., Chen, C. C., & Park, S. H. 2002. National and organizational culture differences and international joint venture performance. Journal of International Business Studies, 33 (2): 243-265.

Ren, H., Gray, B., & Kim, K. 2009. Performance of international joint ventures: what factors really make a difference and how? Journal of Management. 35 (3): 805-832.

Reus, T. H., & Ritchie III, W. J. 2004. Interpartner, parent, and environmental factors influencing the operation of international joint ventures: 15 years of research. Management International Review, 44 (4): 369-395.

Reus, T. H., & Rottig, D. 2009. Meta-analyses of international joint venture performance determinants. Management International Review. 49 (5): 607-640.

Robson, M. J., Leonidou, L. C., & Katsikeas, C. S. 2002. Factors influencing international joint venture performance: theoretical perspectives, assessment, and future directions. Management International Review, 42 (2): 385-418.

Root, F. R. 1994. Entry Strategies for International Markets, San Francisco: Jossey-Bass Inc.

Salk, J. E. 1996. Partners and other strangers: cultural boundaries and cross-cultural encounters in international joint venture teams. International Studies of Management and Organizations, 26 (4): 48-72.

Saxton, T. 1997. The effects of partner and relationship characteristics on alliance outcomes. Academy of Management Journal, 40 (2): 443-461.

Shenkar, O., & Zeira, Y. 1987. Human resources management in international joint ventures: directions for research. Academy of Management Review, 12(3): 546-557.

Sim, A. B., & Ali, M. Y. 2000. Determinants of stability in international joint ventures: evidence from a developing country context. Asia Pacific Journal of Management, 17 (3): 373-397.

Simonin, B. L. 1997. The importance of collaborative know-how: an empirical test of the learning organization. Academy of Management Journal, 40 (5): 1150-1174.

Sterne, J. A. C., & Harbord, R. M. 2004. Funnel plots in meta-analysis. The Stata Journal, 4 (2): 127-141.

Sundaramurthy, C., Rhoades, D. L., & Rechner, P. L. 2005. A meta-analysis of the effects of executive and institutional ownership on firm performance. Journal of Managerial Issues, 17 (4): 494-510.

Van Knippenberg, D., Haslam, S.A. & Platow, M.J. 2007. Unity through diversity: Value-indiversity beliefs as moderator of the relationship between work group diversity and group identification. Group Dynamics: Theory, Research, and Practice, 2007 (11):207–22.

Vera, E. M.; Speight, S. L.; Mildner, C.; Carlson, H. 1999. Clients' perceptions and evaluations of similarities to and differences from their counselors. Journal of Counseling Psychology. 46 (2): 277-283.

Williamson, O. E. 1985. The economic institutions of capitalism. New York: Free Press.

Yan, A. 1998. Structural stability and reconfiguration of international joint ventures. Journal of International Business Studies. 29 (4): 773-795.

Yan, A., & Gray, B. 2001. Antecedents and effects of parent control in international joint ventures. Journal of Management Studies, 38 (3): 393-416.

Yeh, R. S. 1988. On Hofstede's Treatment of Chinese and Japanese Values, Asia Pacific Journal of Management. 6 (1): 149-160.

Yeheskel, O., Zeira, Y., Shenkar, O., & Newburry, W. 2001. Parent company dissimilarity and equity international joint venture effectiveness. Journal of International Management, 7 (2): 81-104.

Zand, D. 1972. Trust and managerial problem solving. Administrative Science Quarterly, 17 (2): 229-239.

Zahra, S. A., & George, G. 2002. Absorptive capacity: a review, reconceptualization, and extension. Academy of Management Review, 27(2): 185–203.

Zeira, Y., & Parker, B. 1995. International joint ventures in the United States: an examination of factors related to their effectiveness. The International Executive, 37 (4): 373-393.

Zhang, Z.-Y. 2001. Managing Sino-French joint ventures in the Chinese market: performance implications. In B. Andreosso-O´Callaghan, J.-P. Bassino, & J. Jaussaud (Eds.), The changing economic environment in Asia: firms´strategies in the region: 91-110. Basingstoke: Palgrave.

**Table 1:** Sample characteristics

| Attribute | | Number of studies |
|---|---|---|
| **Source of the included studies** | International Business Review | 10 |
| | Journal of International Business Studies | 8 |
| | Strategic Management Journal | 3 |
| | Management International Review | 3 |
| | Journal of International Management | 5 |
| | Other Journals | 17 |
| | Working Paper | 3 |
| | Book chapter | 4 |
| | Book | 2 |
| **Continent in which the IJVs are located** | Asia | 29 |
| | Europe | 10 |
| | North America | 5 |
| | South America | 1 |
| | Africa | 1 |
| | Australia | 0 |
| | Diverse continents | 7 |
| **Used performance measure** | Objective – Financial measures | 9 |
| | Objective – Stability measures | 6 |
| | Subjective performance measures | 44 |

The list of included studies is available from the authors upon request.

**Table 2:** Results of the Meta-Analysis

| Impact Factor | Sub-groups | K (studies) | r | 95 % confidence interval | Z | Sig. | Q | Sig. | K (sub-groups) | r | 95 % confidence interval | Z | Sig. | Q | Sig. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Prior experience** | **Overall** | 12 | .053 | 0.033 : 0.073 | 5.141 | *** | 113.77 | *** | 37 | .053 | 0.033 : 0.073 | 5.141 | *** | 156.61 | *** |
| | **Performance** | | | | | | | | | | | | | | |
| | Objective | 3 | .076 | 0.039 : 0.113 | 3.991 | *** | 41.31 | *** | 16 | .063 | 0.033 : 0.093 | 4.138 | *** | 89.86 | *** |
| | Subjective | 6 | .040 | 0.008 : 0.073 | 2.420 | ** | 40.03 | *** | 21 | .044 | 0.017 : 0.072 | 3.186 | ** | 65.91 | *** |
| | Ambious studies | 3 | .048 | 0.012 : 0.083 | 2.610 | *** | 30.26 | *** | | | | | | | |
| | Total between | | | | | | 2.17 | | | | | | | 0.36 | |
| | **Experience area** | | | | | | | | | | | | | | |
| | Collaborative | 3 | .063 | 0.019 : 0.107 | 2.785 | ** | 0.875 | | 14 | .083 | 0.042 : 0.124 | 3.957 | *** | 14.972 | |
| | Host Country | 2 | -.026 | -0.058 : 0.007 | -1.528 | | 2.528 | | 4 | -.047 | -0.076 : -0.017 | -3.051 | ** | 11.989 | ** |
| | International | 1 | .010 | -0.103 : 0.122 | 0.166 | | 0.000 | | 11 | .156 | 0.096 : 0.215 | 5.077 | *** | 25.194 | ** |
| | Industry | 0 | | | | | | | 5 | .149 | 0.092 : 0.201 | 5.123 | ** | 8.796 | |
| | Ambious studies | 4 | .100 | 0.064 : 0.136 | 5.407 | *** | 52.335 | *** | | | | | | | |
| | Missing | 2 | .256 | 0.183 : 0.327 | 6.703 | *** | 0.182 | | 3 | .256 | 0.183 : 0.327 | 6.703 | *** | 0.182 | |
| | Total between | | | | | | 57.853 | *** | | | | | | 61.133 | *** |
| **Goal Congruity** | **Overall** | 13 | .128 | 0.095 : 0.160 | 7.697 | *** | 78.088 | *** | 20 | .128 | 0.095 : 0.160 | 7.697 | *** | 81.683 | *** |
| | **Performance** | | | | | | | | | | | | | | |
| | Objective | 2 | .078 | 0.015 : 0.139 | 2.137 | * | 13.915 | *** | 5 | .096 | 0.041 : 0.150 | 3.418 | *** | 16.396 | ** |
| | Subjective | 10 | .141 | 0.098 : 0.183 | 6.444 | *** | 60.468 | *** | 15 | .144 | 0.105 : 0.184 | 7.038 | *** | 63.306 | *** |
| | Ambious studies | 1 | .165 | 0.083 : 0.244 | 3.934 | *** | 0.000 | | | | | | | | |
| | Total between | | | | | | 3.704 | | | | | | | 1.982 | |
| **Relatedness** | **Overall** | 12 | .141 | 0.117 : 0.164 | 11.497 | *** | 74.007 | *** | 28 | .141 | 0.117 : 0.164 | 11.497 | *** | 106.15 | *** |
| | **Performance** | | | | | | | | | | | | | | |
| | Objective | 4 | .216 | 0.182 : 0.249 | 12.127 | *** | 7.741 | | 12 | .159 | 0.130 : 0.189 | 10.386 | *** | 74.138 | *** |
| | Subjective | 7 | .175 | 0.121 : 0.227 | 6.347 | *** | 10.610 | | 16 | .108 | 0.069 : 0.148 | 5.334 | *** | 27.888 | * |
| | Ambious studies | 1 | .015 | -0.027 : 0.056 | 0.708 | | 0.000 | | | | | | | | |
| | Total between | | | | | | 55.656 | *** | | | | | | 4.127 | * |
| **Trust** | **Overall** | 11 | .353 | 0.320 : 0.385 | 19.441 | *** | 30.825 | *** | 23 | .355 | 0.320 : 0.385 | 19.441 | *** | 56.181 | *** |

**Table 2 (continued):** Results of the Meta-Analysis

| Impact Factor | Sub-groups | K (studies) | r | 95 % confidence interval | Z | Sig. | Q | Sig. | K (sub-groups) | r | 95 % confidence interval | Z | Sig. | Q | Sig. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cultural distance** | **Overall** | 30 | -.046 | -0.060 : -0.031 | -6.283 | *** | 164.33 | *** | 99 | -.046 | -0.060 : -0.031 | -6.283 | *** | 390.11 | *** |
| | **Culture level** | | | | | | | | | | | | | | |
| | National culture | 20 | .000 | -0.019 : 0.020 | 0.029 | | 54.98 | *** | 66 | .011 | -0.006 : 0.028 | 1.290 | | 141.90 | *** |
| | Organizational culture | 7 | -.213 | -0.267 : -0.158 | -7.451 | *** | 24.23 | *** | 33 | -.177 | -0.267 : -0.158 | -13.492 | *** | 103.98 | *** |
| | Ambious studies | 3 | -.079 | -0.079 : -0.101 | -6.957 | *** | 20.69 | *** | | | | | | | |
| | Total between | | | | | | 64.43 | *** | | | | | | 144.23 | *** |
| | **Performance** | | | | | | | | | | | | | | |
| | Objective | 5 | -.044 | -0.078 : 0.022 | -2.503 | * | 26.79 | *** | 12 | -.032 | -0.060 : -0.005 | -2.284 | * | 36.56 | *** |
| | Subjective | 21 | -.056 | -0.073 : -0.038 | -6.182 | *** | 123.27 | *** | 87 | -.050 | -0.067 : -0.034 | -5.959 | *** | 352.30 | *** |
| | Ambious studies | 4 | -.011 | -0.044 : -0.010 | -0.640 | | 8.86 | * | | | | | | | |
| | Total between | | | | | | 5.41 | | | | | | | 1.24 | |
| | **IVJ Age** | | | | | | | | | | | | | | |
| | Young | 9 | -.012 | -0.047 : 0.022 | -0.707 | | 23.90 | ** | 23 | -.007 | -0.040 : 0.027 | -0.387 | | 34.36 | * |
| | Old | 10 | -.059 | -0.076 : -0.042 | -6.681 | *** | 58.81 | *** | 60 | -.057 | -0.074 : -0.041 | -6.662 | *** | 263.29 | *** |
| | Ambious studies | 1 | -.001 | -0.065 : 0.067 | 0.029 | | 0.000 | | | | | | | | |
| | Missing studies | 10 | -.033 | -0.075 : 0.009 | -1.562 | | 59.81 | *** | 16 | -.033 | -0.075 : 0.009 | -1.562 | | 84.98 | *** |
| | Total between | | | | | | 8.10 | * | | | | | | 7.48 | * |

Significance levels: ***<.001, **<0.01, *<.05

Notes: K: number of samples (studies or sub-groups), N: sample size, $\bar{r}$ : sample size weighted and reliability corrected effect size, 95% confidence interval: interval around sample size weighted and reliability corrected mean effect size based on observed variance for heterogeneous populations and on sampling error variance for homogeneous populations

**Figure 1: Funnel plot**

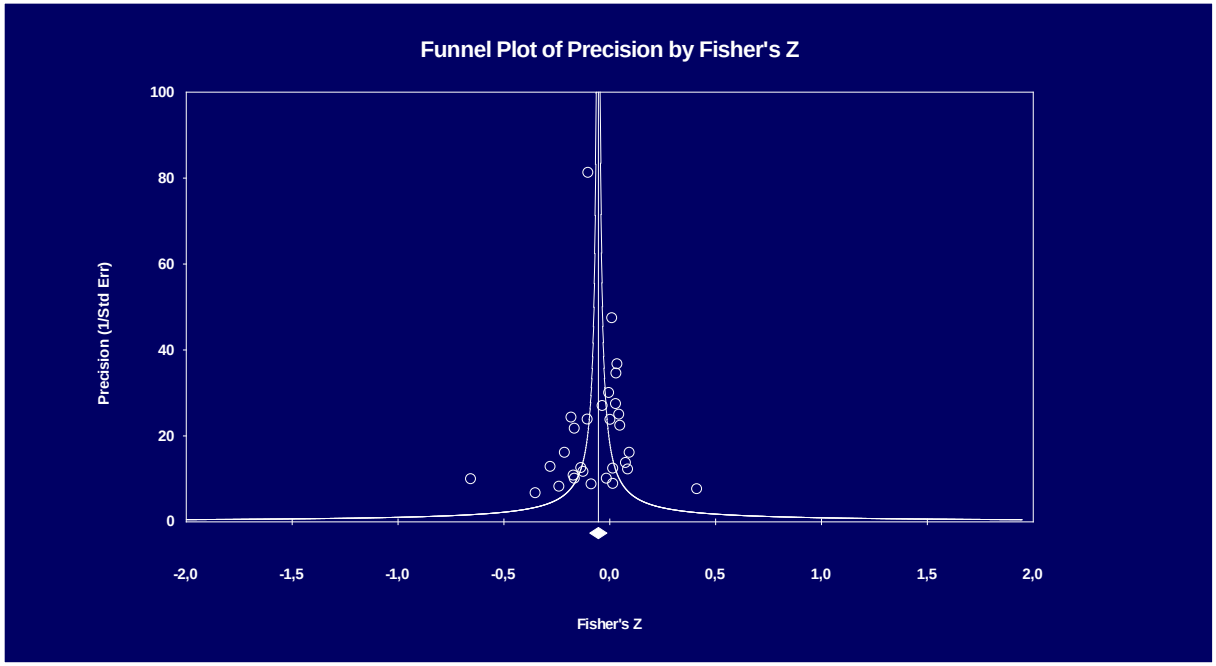

**Table 3:** Results of the Meta-Regression

| VARIABLES | **Model 1** (y: zvalue) Coef. | Std.Err. | t | **Model 2** (y: zvalue) Coef. | Std.Err. | t | **Model 3** (y: zvalue) Coef. | Std.Err. | t |
|---|---|---|---|---|---|---|---|---|---|
| Organizational culture distance | -0.266*** | 0.0397 | -6.70 | -0.197*** | 0.0369 | -5.33 | -0.241** | 0.0912 | -2.65 |
| Objective performance | -0.0112 | 0.0503 | -0.22 | 0.0412* | 0.0228 | 1.81 | 0.117 | 0.0764 | 1.53 |
| Multiple respondents | -0.0703** | 0.0299 | -2.53 | -0.0483* | 0.0257 | -1.88 | -0.0331 | 0.0362 | -0.91 |
| Cultural distance authors | -0.118** | 0.0468 | -2.51 | -0.0953** | 0.0422 | -2.26 | -0.225** | 0.0803 | -2.80 |
| IJV age | | | | -0.0185** | 0.0073 | -2.53 | | | |
| IJV industry | | | | | | | 0.0118 | 0.0918 | 0.13 |
| Impact factor | -0.00761 | 0.0089 | -0.85 | -0.00911 | 0.0056 | -1.62 | 0.00837 | 0.0191 | 0.44 |
| IJV in Asia | 0.0750 | 0.0635 | 1.18 | -0.00296 | 0.0649 | -0.05 | 0.0160 | 0.0562 | 0.28 |
| Number of authors | 0.0625*** | 0.0172 | 3.63 | 0.0632*** | 0.0154 | 4.11 | 0.150*** | 0.0487 | 3.09 |
| samplesize_log | -0.0245 | 0.0353 | -0.69 | 0.0239 | 0.0266 | 0.90 | -0.0578 | 0.0505 | -1.15 |
| Constant | 0.107 | 0.145 | 0.74 | -0.00722 | 0.0932 | -0.08 | 0.00624 | 0.189 | 0.03 |
| Observations | 99 | | | 82 | | | 53 | | |
| Number of clusters | 30 | | | 20 | | | 21 | | |
| F-value | | 13.77*** | | | 23.36*** | | | 3.27** | |
| R-squared | | 0.468 | | | 0.450 | | | 0.472 | |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1