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**THE IMPACT OF PARTNER DIVERSITY  
WITHIN MULTIPARTY INTERNATIONAL JOINT VENTURES**

**ABSTRACT**

Despite the significant role that multiparty international joint ventures (MPIJVs) play within multinational enterprises, we know little about the significant challenges associated with the management of these ventures. Therefore, we combine the Resource-based View of the Firm and Transaction Cost Economics to investigate the effects of the key aspects of partner diversity (i.e., variety, balance, and disparity) on MPIJV dissolution. We test our hypotheses using a dataset of 248 MPIJVs in China. We find empirical support for a U-curve shaped effect of variety and a negative linear effect of balance on MPIJV dissolution.

Keywords: Multiparty International Joint Ventures; diversity; survival; dissolution; resource based view; transaction cost economics.

## 1. INTRODUCTION

Research shows that multiparty international joint ventures (MPIJVs), defined as equity partnerships of three or more firms, have become an increasingly important organizational form for multinational enterprises (MNEs). For example, 55 percent of the 737 international joint ventures (IJVs) established by Japanese firms in Makino and Beamish (1998)'s sample and 49 percent of Garcia-Canal, Valdes-Llaneza, and Arino's (2003) sample of 80 IJVs established by Spanish firms involved three or more partners. Similarly, 30 percent and 25 percent, respectively, of Gong, Shenkar, Luo, and Nyaw (2007) and Griffith, Hu and Chen's (1998) samples of IJVs in China had three or more partners. Although prior research into MPIJVs indicates that such alliances are less stable than dyadic alliances (e.g., Beamish & Kachra, 2004; Chung & Beamish, 2012), our understanding why this is the case is limited (Peng and Shenkar, 2002). In particular, existing research provides little guidance to firms with respect to the effects of partner combinations on the propensity of an MPIJV to dissolve.

In contrast to firms involved in dyadic joint ventures, firms in MPIJVs have to deal with partners from multiple national backgrounds that can differ significantly from their own. Beyond the increase in coordination and governance costs, the involvement of three or more partners can also lead to the formation of sub-groups that increases the risk of discord and, hence, dissolution. For example, in our interview with a former general manager of an MPIJV between a German manufacturer of cleaning equipment and three local Chinese firms, this general manager reported that the Chinese partners "ganged up" on the German side to block important initiatives. According to this manager, the negative effect of a coalition within the MPIJV was an important reason for the German partner's eventual decision to dissolve the MPIJV. Our intention, therefore, is to contribute to the nascent literature on MPIJVs by providing important new insights into the effects of diversity in partner firms' national backgrounds on the dissolution of these ventures.

The emerging research on MPIJVs is characterized by two contrasting views on whether the increasing number and diversity of partners is beneficial or detrimental to alliance success (Beamish, 2010). One approach builds on the Resource-based View of the Firm (RBV) and highlights the positive

effects of heterogeneous resources assembled through an increasing number of diverse partners within international alliances (Beamish & Kachra, 2004; Goerzen, 2007; Goerzen & Beamish, 2005). In contrast, a second stream of research from a Transaction Cost Economics perspective (TCE) considers the transaction costs associated with coordinating multiple parties and expects alliance performance to decrease with a rising number of partners (Hennart & Zeng, 2005). Thus, RBV and TCE lead to contrasting conclusions of the effects of greater diversity within MPIJVs.

To reconcile these differing perspectives, we introduce Stirling's (2007) multifaceted concept of diversity comprising variety, disparity and balance to capture MPIJV diversity in terms of national backgrounds of MPIJV partners and then apply RBV and TCE perspectives to disentangle the survival effect of different facets of partner diversity. Specifically, we address the following research questions: (1) How does variety in partner firms' national backgrounds affect the dissolution of MPIJVs? (2) How does the disparity of partner firms' national backgrounds affect the dissolution of MPIJVs? (1) How does the balance among partner firms' national backgrounds affect the dissolution of MPIJVs?

## **2 CONCEPTUAL DEVELOPMENT**

Our central argument is that diversity, reflected by the pattern of differences in national backgrounds of partner firms, is a unique characteristic of MPIJVs that affects the likelihood of MPIJV dissolution. Unlike the notions of "differences" and "distance" between national backgrounds of partner firms used in past research on dyadic IJVs, the concept of diversity provides information not only on the nature of differences in national backgrounds of partners in MPIJVs and but also on their *pattern*.

Scholars have highlighted the multifaceted nature of diversity and stressed the distribution of members into categories and the degree to which these categories differ (Goerzen & Beamish, 2005; Harrison & Klein, 2007; Stirling, 1999, 2007). According to Stirling (1999: 38), diversity "relates to the nature or degree of apportionment of a quantity to a set of well-defined categories". We suggest that, in the context of MPIJVs, the apportionment of partner firms in terms of their national backgrounds is of particular importance because the routines and repertoires of MPIJV partners have been imprinted by the

environments in their home countries (see, for example, Gong, et al., 2007; Kogut, 2005; Luo, Shenkar, & Nyaw, 2001).

Prior research has explained how firms develop particular characteristics in response to isomorphic pressures resulting from cultural-cognitive, normative, and regulative facets of their context (DiMaggio & Powell, 1983). Due to the home-country imprinting of MNEs and the diffusion of this imprint to their overseas operations (Kostova & Zaheer, 1999), the routines and repertoires of firms that collaborate within MPIJVs vary. This variation in routines and repertoires leads both to benefits as well as costs and, thus, partners' differing incentives to terminate the venture. In the following section, therefore, we examine the concept of diversity to consider how this aspect of alliances affects the dissolution of MPIJVs.

## **2.1 The Concept of Diversity**

Researchers in different fields, including economics (e.g., Stirling, 1999, 2007) scientometrics (e.g., Rafols & Meyer, 2010), and organizational behavior (Harrison & Klein, 2007) agree on the multifaceted nature of diversity. Although there are slight variations in the terminology used for different facets of diversity, Stirling's (1999, 2007) review of research using the concept of diversity shows that, across a wide range of sciences, diversity usually includes the following three key facets: variety, balance and disparity. According to Stirling (2007: 709), "despite the multiple disciplines and divergent context there seems no other obvious candidate for a fourth important general property of diversity beyond these three." At the same time, Stirling (2007) suggests that all three facets are necessary, but individually insufficient, for analyzing the diversity of a given system. Given its ability to capture the key facets of diversity, Stirling's (2007) concept of diversity has, for instance, been used to analyze the role of diversity for alliance networks (e.g., Phelps, 2010) and the success of recombinant innovation (e.g., van den Bergh, 2008). Stirling's (2007) concept of diversity, however, has so far not been applied to the context of MPIJVs despite the fact that it could provide significant new insights.

*Variety*, as the first facet of diversity of Stirling's (2007: 709) concept, refers to "the number of categories into which system elements are apportioned. It is the answer to the question: 'how many types

of thing do we have?'''. Variety has been used in the economics literature to capture the number of distinguishable actors, products, or technologies in an economy (Saviotti, 1996). Research on multi-party constellations such as alliance networks have accounted for variety among firms, frequently using the label heterogeneity. For example, one of Goerzen and Beamish's (2005) measures of alliance network diversity is the number of different industries from which a firms' alliance partners originate. Similarly, in their analysis of innovation Cui and O'Connor (2012) account for the number of nations represented in firms' alliance portfolio. In this study, we use this concept to theorize about the survival effects of an increasing number of different national backgrounds among partner firms within MPJVs.

Stirling's (2007: 709) second facet of diversity, *balance*, reflects the "pattern of apportionment of elements across categories. It is the answer to the question: 'how much of each type of thing do we have?'" In the economics literature the concept of balance is discussed, for example, in terms of the concentration of industries (e.g., Scherer, 1980). Balance plays a central role in studies of diversity in other settings including, in particular, the context of work groups (e.g., Earley & Mosakowski, 2000). We use the term balance to reflect the degree to which members of a unit distribute evenly across different categories. Given our focus on partner firms' national background as a particularly salient attribute of partner firms in MPIJVs, balance relates to the degree to which partner firms in IMPJV distribute evenly across different national backgrounds.

The third facet of diversity in Stirling's (2007: 709) concept, *disparity*, refers "to the manner and degree in which the elements [of a system] may be distinguished [..]. It is the answer to the question: 'how different from each other are the types of thing that we have?'" Disparity relates to the differences among elements of a system. The notion of disparity has been used in evolutionary economics to capture differences in the resource base of firms in an industry (e.g., Woerter, 2009) or to reflect differences among firms in alliance networks (e.g., Phelps, 2010; Rodan & Galunic, 2004). For example, Phelps (2010) investigated the technological differences among the firms belonging to a network, while Rodan and Galunic (2004) analyzed differences among firms' knowledge. Since we consider diversity with regard to partner firms' national backgrounds as one of the most salient characteristic of MPIJVs, we look

at the differences that exist between the regulative, normative, and cultural-cognitive environments in partner firms' home countries.

## **2.2 The Impact of Variety on MPIJV Dissolution**

Although prior research has not investigated the effects of three key facets of diversity simultaneously, the role of differences between (two) partners has traditionally played a central role in explanations of the dissolution of (dyadic) IJVs (e.g., Barkema & Vermeulen, 1997; Park & Ungson, 1997; Steensma & Lyles, 2000; Xia, 2011). One stream of research on the role of inter-firm differences in IJVs has suggested that partner firms' resources and capabilities need to be complementary and synergistic in order for the IJV to be competitive, perform well, meet partner firms' objectives, and reduce the chances that partners decide to terminate the joint venture (Inkpen & Beamish, 1997; Park & Ungson, 1997). This research frequently uses the RBV perspective to explain how these differences between partners can allow IJVs to create sustainable and difficult-to-imitate competitive advantages (e.g., Beamish & Kachra, 2004; Lane, Salk, & Lyles, 2001).

While RBV-based research has highlighted the benefits of synergistic differences between partners, other work has stressed the potentially negative effects of differences, in particular cultural differences between partners, on joint venture longevity (Barkema, Bell, & Pennings, 1996; Park & Ungson, 1997; Parkhe, 1991). Much of this stream of research uses TCE logic and argues that differences between partners increase the costs of coordinating, monitoring, and acculturating partners and thus reduce an IJV's net value. These inter-partner differences are also understood to destabilize the IJV by preventing the development of trust, causing frequent and potentially irreconcilable conflicts among partners, or by making opportunistic behavior more likely (Madhok, 1995; Park & Ungson, 1997). Since both the RBV and TCE have played a significant role in investigating the consequences of differences between partners in dyadic IJVs, we suggest that these approaches can be extended to the analysis of the consequences of diversity in MPIJVs. RBV stresses the importance of resources and capabilities that are valuable, rare, and inimitable (Barney, 1991). In line with this thinking, previous research suggests that a greater number of IJV partners allow the venture access to a larger pool of resources (Gong, et al., 2007)

increasing the net value of the venture to partners thereby making them less likely to terminate the venture. While Gong et al. (2007) highlight the positive effect of pooling partners' resources, their argument pertains to the mere accumulation of partners' resources. In contrast, Beamish and Kachra (2004) stress the positive effects of an increase in the number of partners on the heterogeneity of resources because of the growing variance in national backgrounds of partners involved in the MPIJV (Beamish & Kachra, 2004; Chung & Beamish, 2012). The increased resource heterogeneity would allow an MPIJV to achieve greater returns by raising its potential for synergies (Chung & Beamish, 2012; Luo, 1997) and by fostering innovation (Beamish & Kachra, 2004). In turn, the greater returns of heterogeneous MPIJVs reduce partners' incentives to terminate the venture. The positive effect of resource heterogeneity has also been supported by Garcia-Canal and Sanchez-Lorda (2007) who found that markets react positively to an increase in alliance partners among European telecommunication firms if they have different national backgrounds and negatively if they do not.

Research on groups suggests that variety among group members enhances the information, knowledge, and experience available within the group (Harrison & Klein, 2007; Jehn, 1995). Similarly, research on alliance portfolios suggests that firms with diverse alliance partners have better access to non-redundant information and resources (e.g., Bruyaka & Durand, 2012; Goerzen, 2007). This access to diverse and non-redundant resources in turn increases firms' competitiveness, performance and, thus, reduces the likelihood of dissolution (Silverman & Baum, 2002).

At low levels of variety, an MPIJV's resource pool is likely to be limited reducing the opportunities to achieve synergies. All else equal, an IJV that does not allow partner firms to access to resources that complement their own creates only limited value to partners and is, therefore, more likely to be terminated. As has been argued for alliance portfolios (Koka & Prescott, 2002), we also expect MPIJVs with a greater level of variety in partners' national backgrounds to have access to a larger and more diverse network of external ties. Large and diverse external networks improve the organization's ability to manage external dependence, create new business opportunities, and may insulate an organization from negative interferences (Koka & Prescott, 2002). While these effects have been



analyzed through network theory, firms' connectedness to others has also been conceptualized as an important resource within an extended RBV framework (Lavie, 2002; Wassmer, 2010). Thus, as these effects increase the net value of an MPIJV to the partners, their incentives to terminate an MPIJV decline with increasing external network diversity. MPIJVs with high levels of variety will have access to a larger and more diverse set of external ties than MPIJVs with low levels of variety and, thus, will be less likely to dissolve. Based on these positive effects associated with variety from the RBV perspective, we expect a negative association between variety and the likelihood of MPIJV dissolution.

From a TCE perspective, we expect variety to have a positive effect on IJV dissolution by increasing transaction costs that, at high levels of variety, will offset the benefits of variety thereby reducing the net value of an IJV to the partners, increasing their incentives to terminate the venture. Research employing TCE logic has stressed that an increase in the number of partner firms in IJVs would raise the transaction costs by rendering monitoring and information sharing more difficult (Hennart & Zeng, 2005; Zeng & Chen, 2003). Therefore, the increasing difficulty of monitoring partner firms' behaviors with a growing number of partner firms make free-riding and opportunistic behaviors more likely (Gulati & Singh, 1998; Parkhe, 1993a) as well as making them more difficult to detect (Hennart & Zeng, 2005; Zeng & Chen, 2003). The difficulties and costs associated with monitoring partner firms are greater when partner firms originate in different countries, i.e., at higher levels of variety (Barkema & Vermeulen, 1997). We suggest that a modest increase in variety does not lead to disproportionate cost increase due to the existence of slack resources. Rather, we suggest that the costs associated with increasing variety grow slowly at first, but then grow exponentially at increasingly high levels of variety when existing resources increasingly become stretched with the increasing coordination and integration requirements associated with increasing variety among partners.

Combining our arguments derived from the RBV and TCE perspectives on the role of variety in MPIJVs, we suggest that there will be a U-curve relationship between variety, i.e., the number of different national backgrounds represented by MPIJV partners and alliance dissolution. Increases in variety will allow firms to reap the benefits of variety in line with RBV logic. Given the proposed negligible increase

in costs associated with increasing variety outlined above, we expect the chances of dissolution to decline up to moderate levels of variety. As variety rises, however, the costs of increasing variety start to grow exponentially, reducing the benefits and leading to growing risks of MPIJV dissolution at high levels of variety as per our first hypothesis:

*Hypothesis 1: There is a U-curve relationship between variety and MPIJV dissolution.*

### **2.3 The Impact of Balance on MPIJV Dissolution**

Balance, our second facet of diversity, refers to the degree to which the partner firms in an MPIJV distribute evenly across national backgrounds. We suggest that, based on both RBV and TCE logic, balance negatively affects the dissolution of MPIJVs by avoiding the conflicts and difficulties associated with the emergence of sub-groups which increases partners' incentives to terminate the venture. While the formation of sub-groups has been a central issue in research on groups (see, for example, Hambrick, Li, Xin, & Tsui, 2001; Li & Hambrick, 2005), this aspect of diversity has remained largely unexplored in research on MPIJVs. Exceptions to this are Gong et al. (2007) and Garcia-Canal et al. (2003) who mention the negative effects of the potential formation of sub-groups among partners in their investigation of the effects of an increasing number of partners in IJVs. While previous authors do not discuss the potential bases on which sub-groups are formed, recent research on alliances has highlighted the role of prior relationships between some of the firms in a multiparty alliance for the formation of sub-groups (Heidl, Steensma, & Phelps, 2014).

Previous research on work teams suggested that sub-group formation is more likely in cases where some of the group members share certain characteristics (e.g., Li & Hambrick, 2005). In groups in which all group members are different, sub-group formation is less likely as few or no common bases exist (Harrison & Klein, 2007). Earley and Mosakowski (2000), for example, suggest that the formation of sub-groups is unlikely within groups where all members have the same nationality or in which all members have different nationalities; in contrast, if several members share a national background, they would have a strong tendency to form sub-groups based on their relative similarity to each other. Thus,

we suggest that the likelihood of sub-group formation is greater in MPIJVs with unbalanced proportions of partners' national backgrounds.

From an RBV perspective, we expect that sub-group formation will restrict the full exploitation and integration of partner firms' resources in unbalanced MPIJVs making partners more likely to terminate such MPIJVs. In contrast, sub-group formation and its effects are less likely to occur in balanced MPIJVs making partners comparatively less likely to terminate these partnerships. Research has found that lower levels of interaction, information exchange, and perceived equality are associated with sub-group formation as their members tend to favor information from within the subgroup over information from without (e.g., Harrison & Klein, 2007; Homan, Van Knippenberg, Van Kleef, & De Dreu, 2007; Jehn, Northcraft, & Neale, 1999).

The existence of sub-groups thus increases the risk that flows of information and resources among sub-group members will displace flows between firms within and outside the sub-group, increasing outsider firms' incentives to terminate an MPIJV. Firms outside the sub-group may become reluctant to share information and resources, while firms within the sub-group may perceive little need to share information/resources with outsiders. Additionally, since the integration of partners' diverse resources and capabilities in an effort to create complex and difficult-to-imitate advantages is a key aspect of MPIJVs from the RBV perspective, any limitations to the integration of partners' resources due to the formation of sub-groups would reduce the development of such advantages. RBV logic would thus suggest that, given the lower likelihood of sub-group formation, balanced MPIJVs are less likely to dissolve than unbalanced MPIJVs.

Similarly, from a TCE perspective, we expect that a balanced MPIJV is less likely than an unbalanced one to dissolve owing to the latter's reduced coordination costs, conflicts, and opportunistic behavior given their comparatively lesser scope for sub-group formation. Prior research has shown that high levels of in-group favoritism, out-group stereotyping, and conflicts in groups are common consequences of sub-group formation (e.g., Homan, et al., 2007; Jehn, et al., 1999). Sub-group formation thus implies increased coordination costs and governance costs owing to a greater risk of opportunistic

behavior of partner firms. Both types of costs reduce the net value of the IJV to the partners and thus increase the risk of MPIJV dissolution.

Further, sub-groups of partners in unbalanced MPIJVs are more likely to strive for outcomes that are beneficial to the sub-group members but not necessarily advantageous for the remaining partner firms or for the MPIJV as a whole (Shenkar & Yan, 2002). This organizational dysfunction may lead to an effort to impose particular policies, practices, or procedures onto the management of the MPIJV. Such attempts to dominate an MPIJV are likely to be underpinned by the greater bargaining power resulting from the pooling of sub-group members' resources and voting rights (Makino & Beamish, 1998; Yan & Gray, 1994). While this effort to dominate the MPIJVs is likely to increase the occurrence of conflicts and the associated costs of coordination, the combined and thus greater power-base of the sub-group members may also lead the sub-group to expect to "get away with" certain behaviors, thus increasing opportunistic behavior and the dissolution risk in unbalanced MPIJVs.

Finally, sub-group formation may lead to actual or perceived inequality of those members that are not part of the sub-group, resulting in their withdrawal, resentful deviance, opportunistic behavior, and more frequent conflict with sub-group members (Gong, et al., 2007; Lau & Murnighan, 1998). Coordination and governance costs as well as the frequency of conflicts thus increase further owing to potential reactions of firms outside a particular sub-group to the formation of the sub-group, resulting in greater dissolution risk. Overall, we thus suggest that from both the RBV and TCE perspective, balance will negatively affect MPIJV dissolution as per our next hypothesis:

*Hypothesis 2: There is a negative relationship between the level of balance and the likelihood of MPIJV dissolution.*

#### **2.4 The Impact of Disparity on MPIJV Dissolution**

Whereas the first facet of diversity (i.e., variety) referred to the mere existence of differences among the members of a unit, our third facet of diversity—disparity—refers to the relative amount by which partner firms' national backgrounds differ from each other. For example, while an MPIJV with partners from the US, Canada, and the UK would have the same level of variety as an MPIJV with

partners from the US, China, and Egypt, the latter has a much greater disparity between partners' national backgrounds. As above, we explore the effects of these differences from both RBV and TCE perspectives.

Adopting the RBV logic, we suggest that increasing differences in partners' national backgrounds negatively affects MPIJV dissolution as these differences reduce the likelihood that partner firms' resources and capabilities are redundant (Goerzen, 2007). Non-redundant resources and capabilities are more likely to lead to the creation of valuable, rare, and non-inimitable advantages than are overlapping or redundant resources and capabilities which increases a IJV's competitiveness and value to partners making them less likely to terminate the a IJV. In their study of the survival of overseas subsidiaries, Gaur and Lu (2007: 88) argue that the differences between the resources and capabilities of foreign investors and those available in a host country increase with the differences between a foreign investor's home country and the host country, allowing for "institutional arbitrage".

Similarly, Beamish and Kachra (2004) argue that cultural differences between partners is positively related to resource heterogeneity, empirically showing that there is no relationship between the number of partners and performance in IJVs when all partners come from the same home country. These authors argued that, because there are no cultural differences in these cases, resources would be more similar and, thus, IJVs would not benefit from the resource heterogeneity necessary for sustainable competitive advantage that would make partners reluctant to terminate an IJV. The positive effects of differences in the national backgrounds of partners and the associated resource heterogeneity on IJV survival may also explain the findings of Park and Russo (1996) and Park and Ungson (1997) who expected a positive effect of cultural differences on IJV dissolution in their study but, instead, found a negative one.

Finally, increasing differences between partners also raise the scope for the creation of relational rents that depend on the "idiosyncratic contributions of the specific alliance partners" (Dyer & Singh, 1998: 662) that cannot be (re-)created by partner firms outside the focal alliance (Dyer & Singh, 1998; Madhok & Tallman, 1998). The existence of such relational rents thus reduces the substitutability of partners in an MPIJV, decreasing firms' incentives to terminate the IJV (Xia, 2011). Following the RBV

logic, we thus suggest that the disparity between partner firms' national background negatively affects the dissolution of MPIJVs.

From a TCE perspective, however, in contrast to the RBV lens, increasing differences among partners' national backgrounds increase the propensity of dissolution. This is because the choices and attendant costs of safeguards employed in a transaction depend not only on the characteristics of the transaction but also on the identity of the party one is dealing with (Dyer, 1997). More specifically, Dyer (1997) argues that safeguarding costs, e.g., those associated with monitoring contracts, are negatively related to the knowledge of, and trust in, the transacting party. Similarly, Parkhe (1993b) suggests that knowledge about partner firms' past behaviors and their reputation affects the perceived probability that they act opportunistically. The greater the differences between partners, the less partners know about each other and the more difficult it is to assess partner firms' past behaviors and reputation resulting in lower mutual trust. We suggest, therefore, that disparity among partners reduces firms' inclinations to lower their safeguards against opportunistic behavior, keeping partner firms' perceived risks and costs high. Taken together, the net effect is that the value to partners of the IJV is reduced, increasing their incentives to terminate it.

Cultural differences, in particular, have been highlighted as an important source of uncertainty, miscommunication, and conflicts in IJVs (Makino, Chan, Isobe, & Beamish, 2007). Increasing differences among partners thus raise and keep at a high level the uncertainty that exists with regard to the partner firms' inclination to behave opportunistically. Therefore, the transaction costs associated with an increase in uncertainty associated with the cultural differences between partners, diminishes the value of the venture to the partners, increasing the risk of MPIJV dissolution.

To reduce the occurrence of opportunistic behavior, research has stressed the importance of developing a macroculture, i.e., a set of shared assumptions, values, and beliefs (Jones, Hesterly, & Borgatti, 1997). However, as growing differences in partner firms' national backgrounds are associated with increasing differences in partners' assumptions, values, and beliefs, the development of such a macroculture is more difficult with rising levels of differences and reduced trust among partner firms

from different national backgrounds (Davis, Schoorman, Mayer, & Tan, 2000; Gulati & Sytch, 2008; Park & Ungson, 2001). Since prior research regards trust as an important aspect of IJV survival, its absence keeps the IJV at a comparatively greater risk of dissolution. Even if it were possible, however, the development of trust requires close monitoring and interpretation of partners' behaviors over time, a process that is not without costs (Dyer, 1997; Parkhe, 1993b), which would rise with the level of differences (and thus growing behavioral opacity) between partner firms.

Finally, disparity between partner firms will also raise the coordination costs and the risk of conflicts among partners, making partner firms more likely to terminate a MPIJV. Das and Teng (2002) suggest that the absence of common beliefs among alliance partners not only increases the need for coordination, but also makes coordination more difficult and costly. Disparity among group members also raises the risk of conflict (see, for example, Pelled, Eisenhardt, & Xin, 1999) which, in turn, has been found to be negatively related to decision-making and group outcomes such as member satisfaction and group cohesion (e.g. Jehn, 1995). Disparity among group members increases the risk of conflicts and coordination costs owing to partners' diverging experiences, approaches to problem solving and cultural backgrounds (e.g., Garcia-Canal, et al., 2003). Based on TCE logic, we thus expect disparity among partners to have a positive effect on MPIJV dissolution because of the associated increase in coordination and transaction costs and the associated reduction in the IJV's net value to partners making them more likely to terminate an IJV.

As was the case with the cost effects of increasing variety, however, we do not expect modest increases in disparity to lead to a significant raise in costs. Small differences among partners do not require major adjustments of partner firms' routines and practices; however, new, shared scripts and monitoring mechanisms become necessary when there is a high level of disparity among partner firms (Goerzen & Beamish, 2005). Moreover, as suggested by Prahalad and Bettis (1986) a firm's 'dominant logic' is useful in managing low to moderate diversity in its alliances, but this logic might become a liability with increasing diversity. We thus suggest that the costs associated with increasing disparity grow slowly at first, but then grow exponentially at higher levels of variety.

Combining our arguments derived from RBV and TCE on the effects of the disparity among partner firms on the dissolution of a MPIJV, we suggest that there will be a U-curve shaped relationship between disparity and MPIJV dissolution. Increases in disparity will reduce the likelihood that partner firms' resources are redundant making IJV dissolution less likely in line with the conventional RBV logic. Given an insignificant increase in costs associated with low to moderate levels of disparity as outlined above, dissolution risk is thus likely to decline up to moderate levels of disparity. At higher levels of disparity, however, the costs will rise exponentially and will attenuate the benefits of increasing disparity as summarized in our next hypothesis:

*Hypothesis 3: There is a U-curve association between the disparity among partner firms' national backgrounds and the likelihood of MPIJV dissolution.*

### **3 METHODS**

#### **3.1 Research Context**

Our sample consists of MPIJVs located in the People's Republic of China (PRC). The PRC is an appropriate research setting for investigating our hypotheses for a number of reasons. First, the complexity of the environment in the PRC often means that firms co-opt multiple firms that have specific resources, information, or ties that reduce the risks associated with dealing with different facets of this complex and dynamic environment. IJVs thus continue to be a prevalent mode of entry and MPIJVs are important for foreign investors in the PRC. In addition, recent anecdotal evidence indicates a pause (if not a reversal) of many liberalization policies in the PRC, potentially leading to an even greater emphasis on IJVs as entry modes for foreign firms. Further, there are significant differences in the national backgrounds of partners participating in MPIJVs in the PRC, given its high level of attractiveness for foreign investors from the developed economies creating an ideal research setting given our research questions. Thus, we expected our sample to contain cases of high diversity leading to a less restricted range of diversity, which Harrison and Klein (2007) suggest is necessary to study diversity.



### 3.2 Sample and Data

We created our data set by extracting all IJVs in the PRC established between 1985 and 2009 from SDC Platinum. The cut-off year was set at two years prior to the start of our analysis to avoid survivor bias, resulting in 6,641 IJVs. Since SDC platinum does not provide information about the termination of IJVs, we had to confirm the survival or termination of each IJV using online information such as news services and company websites. We decided, therefore, to randomly select 1,500 of which 57 had pre-determined expiry dates and were thus excluded given that the termination of such IJVs is less likely to be considered as a failure (e.g., Inkpen & Beamish, 1997; Makino, et al., 2007; Polidoro, Ahuja, & Mitchell, 2011; Yan & Zeng, 1999). From among the remaining 1,443 IJVs, we were able to confirm termination or continued existence for 693 IJVs. Out of these 693 IJVs, 248 IJVs had more than two partner firms and, thus, were classified as MPIJVs. These 248 MPIJVs were established by 840 parent firms with an average number of 3.4 partners per firm. A total of 188 MPIJVs operated in the manufacturing sector, 45 in the services sector, and 17 in the primary sector. A total of 36 of the 248 MPIJVs had been terminated and nine of the MPIJVs were converted into dyadic IJVs and were treated as censored cases. The remaining 203 MPIJVs continued to operate. The average termination age of terminated MPIJVs in our database was 7.3 years.

### 3.3 Measures

In line with past empirical analyses of the dissolution of IJVs (e.g., Dhanaraj & Beamish, 2004; Xia, 2011), we use a Cox proportional hazard model to test our hypotheses. Accordingly, our dependent variable is the hazard rate of an IJV, which reflects the intensity with which terminations occur. This variable comprises two parts: a dichotomous variable reflecting the status of each MPIJV (i.e., 0 = surviving, 1 = terminated) and the age of the MPIJV from the announcement of its establishment either to the termination date or, for surviving MPIJVs, up to our cut-off date.

We measured our independent variables as follows. We measured *variety* of national backgrounds within MPIJVs, by counting the number of different national backgrounds among MPIJV

partners. To measure *balance* in the distribution of different national backgrounds among MPIJV partners, i.e., our second independent variable, we calculated Blau's index as per the equation below:

$$\text{Blau's index: } 1 - \sum p_k^2$$

where Blau's index can range from zero to  $(K-1)/K$ , with  $K$  being the number of categories (national backgrounds) and  $p_k$  as the share of the  $k^{\text{th}}$  category in a system (i.e., and MPIJV in our study). At its maximum, the categories of interest ( $k$ ) – in our case national backgrounds—are spread evenly. In this basic form, Blau's indices are not directly comparable when the number of categories is not the same across systems, as the theoretical maximum number of categories varies with the number of elements (partner firms) across systems (i.e., MPIJVs). For example, the maximum value for the index for a MPIJV with three partners, i.e., where the three partners all have three different national backgrounds, would be 0.67. In contrast, for a MPIJV with nine partners from nine different national backgrounds the maximum for Blau's index would be 0.89. To allow for comparability, researchers have suggested to standardize Blau's index by dividing the index by its theoretical maximum (Harrison & Klein, 2007) and so we followed this approach.

To measure the level of disparity, i.e., the *degree of differences in the national backgrounds* among partners in MPIJVs, we adopted Scott's (1995) concept of institutions and calculated regulative, normative, and cognitive-cultural differences among MPIJV partners' national backgrounds. Unlike previous authors who focused on differences between two countries (e.g., He, Brouthers, & Filatotchev, 2013), we summed up the difference scores for each of the  $n(n-1)/2$  dyadic relationships in each individual MPIJV ( $n$  being the number of partners). Following He et al. (2013), we measure the *regulatory differences* among partner firms' backgrounds using the Economic Freedom Index published by the Heritage Foundation which consists of ten items reflecting the degree to which an environment supports or hinders economic activity in a country. To measure *normative differences* we also followed the approach taken by He et al. (2013) by taking the following items from the Global Competitiveness Report (Sala-i-Martin & Artadi, 2004): efficacy of corporate boards, pay and productivity, capacity and

innovation, degree of customer orientation, extent of staff training, reliance on professional management, and willingness to delegate authority. To measure *cognitive-cultural differences* among partner firms' national backgrounds, we follow He et al. (2013) by using data on national cultures from Hofstede (2001).

To control for environmental uncertainty, which has been argued to affect firms' preference for IJVs (see, for example, Anderson & Gatignon, 1986; Brouthers, Brouthers, & Werner, 2003), we included the NERI marketization-index (Fan & Wang, 2001) of the Chinese province in which the IJV is located. We also controlled for foreign partners' host country experience based on research that has highlighted the role of such experience for IJVs (e.g., Delios & Beamish, 1999; Pangarkar, 2003) through an index that reflects the sum of the number of all IJV operations of the respective foreign partner(s) in our entire database up to the dissolution of the MPIJV or our cut-off date. Accounting for research that highlights the importance of equity distribution for the dissolution of IJVs (Beamish, 1985; Dhanaraj & Beamish, 2004), we also include the distribution of equity in the IJVs using a dummy variable taking on values of 1 for IJVs in which equity shares were distributed equally and 0 for unequal equity distributions. Given the role that state-owned actors play in the PRC as partners for foreign investors (e.g., Sun, Mellahi, & Thun, 2010), we controlled for government participation by using a dummy that takes on the value of "0" for no government/SOE, and "1" for government/SOE participation in the MPIJV. Further, as government policy towards foreign investors changed as a result of the PRC's entry into the WTO in 2001 (Lu & Ma, 2008), we included a dummy variable (Post 2001) taking on the value of "0" if a IJV was set up before or in 2001 and "1" for IJVs established after 2001. We also controlled for partner firms that operate in the same industry, as IJVs between competitors have been shown to be less likely to survive (Park & Russo, 1996). Finally, we control for the industry of the IJV based on studies that have argued for varying IJV survival rates across industries due to differences such as growth rates and concentration (Kogut, 1989). Table 1 reports our descriptive statistics.

\*\*\*Insert Table 1 about here\*\*\*

## 4 RESULTS

Table 2 shows the correlation matrix of our variables. Our three key facets of diversity are not correlated with each other and, thus, provide orthogonal perspectives on the diversity phenomenon in MPIJVs.

\*\*\*Insert Table 2 about here\*\*\*

Similar to other survival studies, we employ Cox's proportional hazards model using STATA 11 to test our hypotheses. This approach treats one subject's hazard as a multiplicative replica of the other subjects' hazard and therefore permits a flexible hazard function after conditioning on explanatory factors other than age. A key assumption of this approach is that the covariates multiplicatively shift the baseline hazard function. We checked this assumption using Schoenfeld's global test and found a violation of this assumption. We thus used a stratified model allowing baseline hazards to be different for each industry. Schoenfeld's global test for this stratified model indicates no violation of the proportional hazards assumption<sup>1</sup>.

\*\*\*Insert Table 3 about here\*\*\*

Model 1 in Table 3 is the standard Cox's proportional hazards model and Model 2 is the stratified model. The results for both models are similar but we base our discussion on Model 2, as the proportional hazards assumption was violated in Model 1. The Wald chi-square statistic of 28.36 indicates the model is statistically significant and the Harrell's C of 0.7251 indicates the predictive accuracy of the model is acceptable.

In our first hypothesis, we expected a U-curve shaped influence of variety on the dissolution chances of MPIJVs. In line with this hypothesis, the findings in Model 2 in Table 3 show a negative effect ( $p < 0.10$ ) of variety and positive effect of variety squared ( $p < 0.01$ ) on dissolution, supporting the U-curve shaped association between variety and survival we proposed in Hypothesis 1.

In our second hypothesis, we proposed a negative effect of balance between the national backgrounds represented by partners in MPIJVs on MPIJV dissolution. As the results for Model 2 in

Table 3 show, this second hypothesis also is supported by our findings. The results confirm that balance has a negative influence on the dissolution of MPIJVs ( $p < 0.01$ ).

Our third hypothesis suggested a U-curve shaped effect of the level of differences in partner firms' national backgrounds on the dissolution of MPIJVs. We find no empirical support for any effects on MPIJV dissolution of the normative or cognitive-cultural differences and the respective coefficients are not statistically significant. With regard to the effect of the regulative differences among partner firms, our results indicate—in contrast to our hypothesis—the existence an inverted U-curve shaped relationship between regulative differences and survival. From among the control variables included in Model 2 uncertainty, foreign firms' host country experience, the distribution of equity between partner firms and intra-IJV are statistically significant. While the industry effect cannot be retrieved for the stratified Cox Proportional Hazard model since this model allows the baseline hazards differ by group, the industry effect can be captured by industry dummies in the standard Cox Proportional Hazard model albeit less precisely.

To test the robustness of our results, we performed additional estimations using two parametric proportional hazard methods, an exponential model (Model 3 in Table 3), and a Weibull model (Model 4 in Table 3). These two models are less flexible as they fix the baseline hazard but are more efficient than the Cox Proportional Hazard model. The results from those two models are very similar to the Model 2 results.

## **5 DISCUSSION**

Our study of the survival of MPIJVs in the PRC was motivated by the growing importance of MPIJVs across both developed and emerging economies combined with suggestions in research that such MPIJVs are less stable than dyadic IJVs. We investigated the role of partner diversity as a central construct used in arguments for both the negative as well as the positive effects of an increasing number of partners in IJVs. By treating RBV and TCE as complementary, rather than competing, explanations of the effects of partner diversity on the dissolution MPIJVs, we aimed to reconcile the conflicting views in

the literature with regard to the effect of diversity on MPIJV dissolution. We conceptualize diversity in MPIJVs as a multi-faceted concept comprising variety, balance, and disparity among partner firms. Based on this concept, we combine the RBV and TCE perspectives to derive hypotheses that account for both the positive and the negative effects of increasing partner diversity on the survival of MPIJVs in the PRC.

We argued for a U-curve shaped effect of variety in partner firms' national backgrounds on MPIJV dissolution and this effect was supported by our empirical results. We argued that the negative effect on dissolution of increasing variety highlighted from a RBV-perspective would be attenuated and eventually outweighed by increasing costs associated with coordinating and integrating increasingly heterogeneous routines and repertoires; this, in turn, would reduce the venture's value to partners, making them more likely to terminate it (Goerzen, 2007). The applicability of RBV or TCE logic thus depends on the level of variety existing in a MPIJV, highlighting the boundaries of each of these perspectives in the particular context of MPIJVs.

We expected the balance among partner firms' national backgrounds to have a negative effect on MPIJV dissolution; this hypothesis was supported. We suggest that this negative effect of balance on MPIJV dissolution results from the reduced likelihood of sub-group formation which we assumed to make dissolution more likely on the basis of research into the effects of sub-group formation in multiparty alliances and groups (e.g., Heidl, et al., 2014; Homan, et al., 2007). Our findings support the argument that imbalance in terms of national background in MPIJVs increases the chances of sub-group formation, which in turn raises the risk of dissolution. Heidl et al. (2014) stress that sub-groups may form in multiparty alliances because of the prior relationships between some of the firms involved in such alliances. Since there were no cases of firms in our sample that were also collaborating outside the respective MPIJV, we were not able to investigate if prior relationships moderate the effect of balance on MPIJV dissolution. A further robustness test that we explored was that sub-group formation might be a result of some of the partner firms sharing the same language<sup>2</sup>. We thus calculated our measure of balance based on shared language rather than shared nationality. The results of this additional analysis show that

balance among partners in terms of language does not have a statistically significant effect on MPIJV dissolution.

In addition, while Garcia-Canal et al. (2003) argue that compared to dyadic JVs, MPIJVs are likely to rely to a lower extent on trust and would thus benefit more from dominant control, our findings indicate that dominant control exerted by sub-groups formed based on shared national backgrounds increases the risk of dissolution. At the same time, however, the findings for our control variable that reflected unequal equity shares confirms Garcia-Canal et al.'s (2003) arguments. Our findings, thus, provide further detail on the likely contingencies of the effects of dominant control in MPIJVs.

In our third hypothesis, we proposed a U-curve relationship between the disparity among partner firms' background and the risk that MPIJVs in the PRC dissolve; yet, our findings do not support this hypothesis. The coefficients for normative and cognitive-cultural differences are not statistically significant. Cognitive-cultural and normative differences among partner firms' home countries may only be blunt proxies for the idiosyncratic and complementary resources that the partner firms are able to bring into a MPIJV. Similar, although the prior research into the survival of dyadic IJVs suggests negative effects of cultural distance (see, for example, Hennart & Zeng, 2002), cultural differences among partners may not have the same effect on the survival on IJVs and on MPIJVs. Firms' decisions to enter an MPIJV may indicate a greater willingness to adjust to other partners' cognitive-cultural characteristics and practices and, thus, are likely to attenuate any potential negative effects of cultural differences. In their study of the performance of MPIJVs, Gong et al. (2007) even found a (weakly significant) positive effect of cultural distance on the performance of multi-party IJVs.

Our findings thus suggest that recent calls for a more balanced view of the role of culture and an exploration of the potential benefits of cultural distance (see, for example, Stahl & Tung, 2013; Stahl & Tung, 2015) may be particularly important in the context of MPIJVs. Further, our results may indicate that rather than the absolute levels of cognitive-cultural and normative disparity among the partner firms in an MPIJV, it may be the compatibility of partner firms' cognitive-cultural and normative backgrounds that matters (e.g., Sarkar, Raj, Cavusgil, & Preet, 2001). In other words, small absolute disparity between

partners may have significant effects if there is incompatibility between the respective backgrounds, whereas large levels of absolute disparity may have little effect if there is compatibility of cultural values and normative imprinting of the partner firms.

In contrast to our expectation of a U-curve shaped relationship between regulative disparity among partner firms' background and dissolution, our results indicate an inverted U-curve shaped relationship. Our findings show that the risk of dissolution increases with growing regulative disparity, but that this effect becomes weaker and eventually negative at higher levels of regulative disparity. This finding might be explained by the fact that from low to moderate levels of regulative disparity partners' regulative background and their associated imprinting is similar (e.g., their approach to dealing with requests for bribes or to prevent the infringements of their property rights). Thus, the combination of partners' abilities to deal with comparatively similar regulative environments may not be particularly beneficial from an RBV perspective. At the same time, partner firms' experience with similar regulative environments may increase their desire to contribute to managing the MPIJV's interaction with its regulative environment leading to conflicts among partners and additional coordination costs in line with the TCE perspective. At a higher level of regulative disparity, the differences among the regulative environments of partner firms' home countries may be too far apart to allow for much discussion and one (e.g., the local partner) will use its ability to deal with regulative environment in the host country avoiding conflicts and coordination costs. This explanation is in line with the empirical findings of a study by Xu, Pan and Beamish (2004) in which they found that, when faced with high regulative distance, Japanese overseas investors use fewer expatriate managers and take lower equity stakes, indicating a comparatively greater role given to local partners and their managers.

A final explanation for the lack of empirical support for the expected effect of disparity on the dissolution may lie in the existence of contingencies. It may be that factors, such as the host country environment, will affect the existence and shape of the relationship between disparity and IJV dissolution<sup>3</sup>. We thus tested a potential moderating effect of the uncertainty of an MPIJV's environment, based on the assumption that greater levels of disparity and the associated greater level of information



processing ability of an MPIJV may be particularly useful in highly uncertain environments. The results of this additional post hoc analysis indicates that uncertainty—while having a direct negative effect on MPIJV dissolution (as discussed below)—does not moderate the effect that disparity has on MPIJV dissolution. We suggest that future research further explores the effects of different dimensions of disparity among partner firms' national backgrounds on the dissolution of MPIJVs, by reconceptualizing disparity and/or accounting for additional factors that may moderate the effects of disparity on MPIJV dissolution.

Our results with regard to the control variables are broadly in line with the expectations presented in previous research. The effect of environmental uncertainty on MPIJV dissolution indicates that MPIJVs are more likely to dissolve in uncertain environments, a finding in line with prior research (Blodgett, 1992). The negative role of host country experience for the dissolution of MPIJVs is consistent with existing research that has argued that such experience allows firms to learn how to cooperate with local firms and is thus conducive to the survival of IJVs (Barkema & Vermeulen, 1997). The positive effect of an equal equity distribution on the dissolution of MPIJVs is in line with prior research on dyadic IJVs highlighting the increased management conflicts often associated with equal equity distribution (e.g., Killing, 1983).

Similar to the findings of previous research (e.g., Park & Russo, 1996), we find that MPIJVs set up by firms operating in the same industry are more likely to dissolve. The results for our industry dummies indicate that MPIJVs in the services and manufacturing sector are more likely to dissolve than MPIJVs in the primary sector that we used as the baseline sector. Our results are consistent with prior findings that dissolution rates of IJVs vary across industries (Dhanaraj & Beamish, 2004; Steensma & Lyles, 2000). This may be because MPIJVs in primary sectors are established mainly by foreign firms seeking access to natural resources that are controlled by one or more local partners. Given that the access of foreign firms to many natural resources in emerging economies, such as the PRC, remains restricted (Luo, 1998) alternative ways of accessing those resources are likely to be limited and the likelihood of MPIJV dissolution in these sectors is thus likely to be lower than elsewhere.

Our study contributes to the literature on international joint ventures in general and to the nascent literature on MPIJVs in particular. First, our study extends research on IJVs by enhancing our understanding of the factors that affect the dissolution of MPIJVs that are a largely neglected type of joint venture. Our findings complement existing research on the IJV dissolution by introducing Stirling's (2007) concept of diversity as a multifaceted construct into the IJV literature. By applying this concept of diversity to the context of MPIJVs, we can theorize about the effects of different facets of diversity (i.e., variety, balance, disparity) on MPIJV dissolution. This provides a more nuanced analysis of the effects of diversity on the survival of such ventures. With regard to variety, which has so far mainly been analyzed in the context of alliance portfolios (Cui & O'Connor, 2012), but not in the context of MPIJVs, we find evidence for the effect of variety of partner firms' national backgrounds on MPIJV dissolution. By introducing the concept of balance to the analysis of MPIJVs and discussing the potential negative effects associated with unbalanced MPIJVs, we enhance our understanding of the factors that determine IJV dissolution. Similarly, using the concept of disparity as reflecting the degree to which partner firms' national backgrounds differ along various dimensions allows us to extend the commonly investigated dyadic differences to the multiparty case. Overall, we suggest that Stirling's (2007) framework of diversity may serve as one of the analytical frameworks called for by Peng and Shenkar (2002) to improve our understanding of complex alliances, such as, the MPIJVs investigated in our study.

Second, our investigation of diversity in MPIJVs allows us to extend and clarify previous findings on MPIJVs and help provide a more complex answer to Gong et al.'s (2007) question as to whether multiple partners help or hinder joint venture performance. While some studies have argued for a negative impact (Garcia-Canal, et al., 2003; Gong, et al., 2007; Hennart & Zeng, 2002) and others have argued for a positive impact (Beamish & Kachra, 2004), empirical evidence on this question remains inconclusive (Beamish & Kachra, 2004; Hennart & Zeng, 2002; Park & Russo, 1996). By combining of RBV and TCE arguments to investigate the effects of qualitative differences between MPIJVs, we reconcile these conflicting findings on the nature of the association between the number of partners and IJV outcomes.

Although some studies have stressed the importance of accounting for the qualitative differences among partners when investigating the effects of an increase in the number of partners (Beamish & Kachra, 2004; Garcia-Canal, et al., 2003) our study extends their analyses. It does so by focusing on diversity as a qualitative characteristic of MPIJVs and theorizing about the effects that the different facets of this diversity have on the dissolution of such ventures. Our findings thus imply that specifically accounting for diversity that sets MPIJVs apart from dyadic joint ventures is necessary when studying the effects of an increase in the number of IJV partners. This is because an increase in the number of partners is not in itself detrimental/conducive to IJV performance but can have positive or negative effects depending on the changes in the variety, balance, and disparity among partner firms' national backgrounds associated with an increase in the number of partners.

Third, our study contributes to the development of TCE and RBV by clarifying their boundaries in the context of IJVs. While prior research has shown that transaction costs in joint ventures are associated with the number of partners (Gong, et al., 2007), transaction cost theory does not explain how the key facets of diversity among transacting partners' national backgrounds affect these costs. By showing that increasing variety in national backgrounds of MPIJV partners as well as increasing differences among these national backgrounds affect transaction costs, our study contributes to the transaction cost theory of joint ventures. We also find that increasing diversity in MPIJVs may affect the transaction costs in MPIJVs through the possible creation of sub-groups. With regard to the RBV perspective, which has been used to emphasize the positive effects of partner diversity in alliances based on the combination of non-redundant partner resources (Beamish & Kachra, 2004; Goerzen, 2007; Goerzen & Beamish, 2005), our study highlights the boundaries of this logic by showing how such positive effects might be offset by the rising costs of coordinating and managing increasingly diverse alliance partners.

There are a number of limitations to our study. First, we chose to collect our sample from firms operating in the PRC as an appropriate research context, given the important role that IJVs play for the activities of foreign activities in the PRC as well as the frequent occurrence of MPIJVs in that context.

However, with the exception of the uncertainty of the environment there were no specific indications that the host country environment may affect the issues addressed in this study. Further, owing to the particular research context, all MPIJVs in our sample involved at least one Chinese firm, which may affect the generalizability of our findings if one assumes that MPIJVs with Chinese involvement are inherently more/less likely to survive than MPIJVs without Chinese participation. We have no data to test this proposition and this would be an area worthy of future research. We therefore believe that our arguments and findings are generalizable beyond the specific case of MPIJVs in the People's Republic of China. Nevertheless, we encourage future research to replicate our study by investigating MPIJVs without Chinese participation and/or MPIJVs located in other developing or developed economies.

Finally, we used secondary data on MPIJVs in order to avoid biases associated with questionnaire surveys, including survival and common method bias. Consequently, our model did not include characteristics of MPIJVs that require the collection of primary data. For instance, primary data would have allowed us to capture individual partner firms' prior experience of collaborating with firms from the same backgrounds as those presented in a focal MPIJV. Given the role of the difficulties associated with dealing with the variety and disparity of national backgrounds, such country-specific experience may potentially play an important moderating role.<sup>4</sup> Future research using primary data would potentially allow for more in-depth analyses of these issues.

## **6 CONCLUSION**

Our study provides managerial implications and our findings offer some practical guidance for firms considering establishing or entering an existing multiparty alliance. The factors identified in our analysis can be used to assess the viability of proposed multiparty organizations in general, and MPIJVs in particular, complementing existing findings on partner selection criteria for IJVs. Specifically, the importance of variety of national backgrounds present in an MPIJV and the balance across these national backgrounds are a new addition to the range of partner selection criteria offered in prior research on partner selection in (dyadic) IJVs (e.g., Roy & Oliver, 2009).

Our findings are useful also when considering the effects of firms entering or leaving a multi-party organization. These changes may lead to shifts in the variety, balance, and nature of existing differences among the partners, which our findings show to affect the risk of dissolution. For example, the exit of a partner from an MPIJV may lead to the creation of sub-groups within the MPIJV by changing the balance of national backgrounds represented in the venture.

**ENDNOTES**

<sup>1</sup> Results are available from the authors.

<sup>2</sup> We would like to thank one of the anonymous reviewers for highlighting the role of shared language in MPIJVs.

<sup>3</sup> We would like to thank one of the anonymous reviewers for stressing the importance of accounting for the potential effect of the host country environment.

<sup>4</sup> We would like to thank one of the anonymous reviewers for highlighting the potential role of partner firms' country-specific prior experience.

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**Table 1**  
**Sample Descriptive Statistics**

		No.	Obs	Mean	Std. Dev.	Min	Max.
1	Termination	248	0.14	0.35	0.00	1.00	1.00
2	Variety	248	2.31	0.54	2.00	4.00	4.00
3	Variety SQ	248	5.63	2.93	4.00	16.00	16.00
4	Balance	248	0.90	0.09	0.33	1.00	1.00
5	Cog. dist.	248	2.58	1.23	0.19	10.97	10.97
6	Cog. dist. SQ	248	8.15	9.91	0.04	120.25	120.25
7	Norm. dist.	248	1.04	0.25	0.01	2.11	2.11
8	Norm. dist. SQ	248	1.15	0.55	0.00	4.43	4.43
9	Reg. dist.	248	1.55	0.60	0.40	5.20	5.20
10	Reg. dist. SQ	248	2.77	2.73	0.16	27.04	27.04
11	Uncertainty	248	7.00	1.05	4.15	8.41	8.41
12	Experience	248	18.93	23.50	1.00	135.00	135.00
13	Equity distr.	248	0.15	0.36	0.00	1.00	1.00
14	Gov't part.	248	0.40	0.49	0.00	1.00	1.00
15	Post2001	248	0.22	0.41	0.00	1.00	1.00
16	Intra-IJV	248	0.49	0.50	0.00	1.00	1.00

**Table 2**  
**Correlation Matrix**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Termination	1														
2 Variety	-0.14*	1													
3 Variety SQ	-0.12*	0.99**	1												
4 Balance	-0.05	0.16	0.14	1											
5 Cog. dist.	-0.05	0.46**	0.47**	-0.09	1										
6 Cog. dist. SQ	-0.00	0.44**	0.46**	-0.18	0.92**	1									
7 Norm. dist.	-0.05	0.27**	0.27**	0.12	0.48**	0.42**	1								
8 Norm. dist. SQ	-0.00	0.27**	0.28**	0.10	0.53**	0.48**	0.96**	1							
9 Reg. dist.	-0.01	0.66**	0.67**	0.09	0.49**	0.49**	0.55**	0.60**	1						
10 Reg. dist. SQ	0.01	0.60**	0.62**	0.03	0.46**	0.50**	0.49**	0.55**	0.96**	1					
11 Uncertainty	0.04	0.03	0.02	0.14	-0.05	-0.08	-0.15	-0.14	0.00	-0.03	1				
12 Experience	0.12	-0.13*	-0.12*	-0.05	-0.12	-0.12	0.09	0.06	-0.11	-0.08	-0.06	1			
13 Equity distr.	-0.18**	0.14*	0.12*	0.06*	0.27*	0.24*	0.02	0.03	0.14	0.12	-0.07	-0.18**	1		
14 Gov't part.	-0.05	0.01	0.03	-0.01	0.20**	0.19*	0.12*	0.17**	0.14*	0.15	-0.08	-0.06	0.06	1	
15 Post2001	0.05	-0.01	-0.03	0.08	-0.02	-0.03	-0.09	-0.09	-0.08	-0.09	0.00	-0.04	-0.06	-0.19**	1
16 Intra-IJV	-0.06	-0.05	-0.07	0.00	-0.18**	-0.17	-0.18**	-0.21**	-0.20**	-0.19	0.06	0.07	0.11	-0.67**	0.17**

\* $p < 0.05$ ; \*\*  $p < 0.01$ ;  $n = 248$



**Table 3**  
**Cox Regression Results**

	(1) Cox Proportional Hazard Model	(2) Stratified Cox Proportional Hazard Model	(3) Exponential Regression Model	(4) Weibull Regression Model
Variety	-2.031* [1.063]	-1.765* [1.196]	-1.948* [1.502]	-2.149* [1.130]
Variety SQ.	0.496*** [0.138]	0.448*** [0.160]	0.473** [0.205]	0.520*** [0.144]
Balance	-1.692*** [0.563]	-1.869*** [0.606]	-1.555*** [0.543]	-1.645*** [0.592]
Disparity				
Cognitive-cultural Differences	-0.191 [0.160]	-0.176 [0.156]	-0.144 [0.142]	-0.177 [0.178]
Cognitive-cultural Differences SQ	0.0245 [0.0397]	0.0181 [0.0335]	0.0202 [0.0351]	0.0237 [0.0408]
Normative Differences	-0.0128 [1.856]	-0.400 [1.731]	0.116 [1.522]	-0.0346 [1.643]
Normative Differences SQ	-0.487 [1.143]	-0.301 [1.069]	-0.543 [1.023]	-0.493 [1.098]
Regulative Differences	2.061*** [0.463]	1.938*** [0.392]	1.987*** [0.746]	2.124*** [0.446]
Regulative Differences SQ	-0.411** [0.183]	-0.374** [0.148]	-0.389*** [0.0896]	-0.423** [0.185]
Uncertainty	-0.325* [0.193]	-0.312* [0.175]	-0.298 [0.195]	-0.325 [0.208]
Experience	-0.0139*** [0.00535]	-0.0148*** [0.00428]	-0.0136*** [0.00462]	-0.0140*** [0.00474]
Equity Distribution	0.665*** [0.243]	0.688*** [0.212]	0.652*** [0.238]	0.657*** [0.246]
Government Participation	0.760 [0.565]	0.788 [0.546]	0.764 [0.559]	0.800 [0.612]
Post2001	0.600 [1.321]	0.556 [1.228]	0.489 [1.389]	0.706 [1.461]
Intra-IJV	1.088** [0.423]	1.169*** [0.445]	1.046*** [0.384]	1.113*** [0.423]
Service Sector	2.467** [1.012]		2.381*** [0.911]	2.503** [1.037]
Manufacturing	1.943* [1.079]		1.850* [0.966]	1.949* [1.078]
Log likelihood	-171.09	-146.22	-120.63	-119.78
LR Chi-square	31.13**	28.36**	30.56**	32.14**
Harrell's C	0.7409	0.7251		
Schoenfeld residuals	0.0023***	0.2340		

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ;  $n = 248$