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BOARD INVOLVEMENT IN INTERNATIONAL JOINT VENTURES

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The last two decades have witnessed substantial scholarly interest in corporate boards, yet little research has been devoted to boards of international joint ventures (IJVs). We combine the corporate governance and alliance governance literatures in order to study this important ex post governance mechanism for IJVs. We identify a fundamental tension inherent in IJVs, which arises from the unique features of this organizational form and influences the level of involvement by their boards. International joint ventures are hybrid organizational forms that can require administrative control to facilitate monitoring and coordinated adaptation in the presence of exchange hazards. At the same time, the fact that IJVs operate in different host countries can make it efficient to delegate authority to local management for certain collaborations. In investigating the determinants of IJV board involvement, we therefore examine characteristics of IJVs that reflect this underlying tension. We conclude that board involvement reflects efficiency considerations in individual ventures, and the administrative control provided by boards is an important dimension of IJV governance.

INTRODUCTION

Over the last four decades, boards of directors have regularly been mentioned as a facet of the governance of international joint ventures (IJVs). The IJV board represents a key formal governance mechanism available during joint venture implementation as it provides administrative control to facilitate monitoring and coordination of an IJV for parent firms (e.g., Oxley, 1997; Pisano, 1989; Williamson, 1991). The IJV board sits at the apex of an organization owned by two or more partners, and it can help ensure that the joint venture's strategies and actions fit with the parent firm's and can address performance problems or conflicts that might arise (e.g., Ariño and de la Torre, 1998; Björkman, 1995; García-Canal, Valdés-Llaneza, and Ariño, 2003; Geringer and Hebert, 1989; Leksell and Lindgren, 1982; Ravasi and Zattoni, 2006; Schaan, 1983). At the same time, efficiency considerations would suggest that not all IJV boards should be heavily engaged as there might be gains to delegating more authority to local management for certain international collaborations.

While the importance of IJV boards has been noted over the years, and practitioners have recently identified opportunities for more effective governance practices for joint ventures (e.g., Bamford and Ernst, 2005; Bamford, Ernst, and Fubini, 2004; Gibson Dunn, 2012; Hewitt, 2005), little theoretical or systematic empirical research

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has been devoted to IJV boards. In the literature on collaborative strategy, recent studies of formal governance in alliances have instead focused on the safeguards and other provisions that firms build into contracts (e.g., Hagedoorn and Hesen, 2007; Li, Poppo, and Zhou, 2010; Luo, 2002; Reuer and Ariño, 2007; Ryall and Sampson, 2009). However, given the intangible resources exchanged and developed in alliances, and given the imperfect information partners have about each other's private interests and how a collaboration will evolve, such contracts will be incomplete (e.g., Elfenbein and Lerner, 2003). Faced with this problem, parties can turn to ex post governance mechanisms such as boards to address gaps in formal agreements. In the joint venture literature in particular, Kumar and Seth (1998) used structural contingency theory to suggest that involvement by boards should be greater when a joint venture and a parent firm are strategically interdependent, and Ravasi and Zattoni's (2006) inductive research involving cases of mixed-ownership institutions suggested that joint venture boards might help reconcile parent firms' divergent interests. More commonly, however, empirical research on joint ventures has used very broad indicators of governance (e.g., ownership stakes, equity vs. nonequity choices, etc.) that are associated with incentives, commitments, and other factors besides involvement by board members (e.g., Chung and Beamish, 2010; Li, Zhou, and Zajac, 2009; Mjoen and Tallman, 1997). We therefore wish to build upon alliance research by explicating boards as a specific ex post governance mechanism for IJVs and by investigating the actual level of involvement by IJV boards.

We develop the argument that there is a fundamental tension inherent in IJVs, which also influences the extent of involvement by their boards. Specifically, this tension arises from two defining features of IJVs that together are unique to this organizational form. First, by definition IJVs are joint ventures, or organizations owned by two or more independent firms working together under an incomplete contract (e.g., Chi, 1994; Hennart, 1988). It follows that IJVs can be especially subject to exchange hazards in certain collaborations, so involvement by the board can be valuable in controlling and coordinating IJV activities for parent firms (e.g., Oxley, 1997; Pisano, 1989). Second, the international aspect of IJVs indicates that the joint venture operates in a different host country and joins parent firms from different nations. As a consequence, for some international collaborations it can be difficult for board members to monitor IJV performance and its causes, as well as to make appropriate policy, staffing, or other changes on a timely basis, so it can be efficient to delegate authority to local management (e.g., Boone *et al.*, 2007; Demsetz and Lehn, 1985; Gatignon and Anderson, 1988). IJV boards therefore face a fundamental tension between the need for administrative control to monitor and coordinate the venture's activities for parent firms versus the value of delegating authority to local management.

We expect the strength of these two theoretical mechanisms underlying board involvement to vary across collaborations. On the one hand, the need for administrative control to facilitate monitoring and coordinated adaptation is greater when an IJV involves partners that compete outside of the collaborative agreement and the collaborative agreement is therefore prone to opportunism and conflict. For similar reasons, greater administrative control can be beneficial when the partners are engaged in collaborative research and development (R&D) activities that tend to be subject to contractual incompleteness as well as knowledge appropriation concerns (e.g., Gulati and Singh, 1998; Oxley, 1997; Oxley and Sampson, 2004; Pisano, 1989). We therefore argue that involvement by the IJV board will be greater under these conditions. On the other hand, the value of delegating authority to local management, which arises from the international aspect of IJVs, is greater when significant national cultural differences or environmental uncertainty in the host country make it less efficient for board members to monitor performance, make performance attributions, and adapt international collaborations as required by local conditions. We therefore argue that the IJV board tends to be less involved under these circumstances.

In addition to joining the corporate governance and international joint venture literatures, our study also offers several more specific contributions to these literatures. For the alliance governance literature, we extend recent research on contracting and formal governance mechanisms in interfirm agreements (e.g., Hagedoorn and Hesen, 2007; Hoetker and Mellewigt, 2009; Li *et al.*, 2010; Luo, 2002; Mesquita and Brush, 2008; Ryall and Sampson, 2009) by investigating the IJV board as a structural mechanism available to partners to fill in gaps in contracts. Recent IJV research has also

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investigated the different types of control (e.g., output, process, social, etc.) that parent firms might employ in their international collaborations (e.g., Chen, Paik, and Park, 2010), and we complement this research by examining the board as an important locus of administrative control in joint ventures. Finally, our study also advances the literature on the discrete governance arrangements partners use for their collaborative agreements, including equity and nonequity alliances (e.g., Oxley, 1997; Pisano, 1989). Administrative control and incentives are the two primary dimensions of governance (Williamson, 1991), so it is valuable for advancing theory to investigate boards as a specific instrument of hybrid governance that is associated with administrative control.

For the literature on corporate governance, our study suggests that the core theoretical insights from corporate governance can be extended to the IJV domain, yet it is also the case that existing theory needs to be adapted in important ways in the IJV setting. For instance, a core idea in prior corporate governance research is that board involvement will be endogenous to the need for oversight as well as its anticipated costs (e.g., Boone *et al.*, 2007; Carpenter and Westphal, 2001; Linck, Netter, and Yang, 2008; Westphal and Zajac, 1997), and our study suggests that this core idea can be extended to the IJV setting. At the same time, however, our findings for the specific determinants of board involvement indicate some important differences with existing corporate governance theory. Specifically, some determinants of board involvement for corporations have opposite effects in the IJV context or are unique to this organizational form. As one example, previous corporate governance research suggests that boards will be less involved in R&D-intensive firms owing to directors' verification costs (e.g., Burkart, Gromb, and Panunzi, 1997; Coles, Daniel, and Naveen, 2008; Raheja, 2005), yet we argue and find that IJV boards are more involved for international collaborations with R&D activities given the exchange hazards such joint ventures entail for partners. As another illustration, IJVs operate in a different host country than one or more parents, and the findings suggest that the IJV board's involvement tends to be lower when cultural differences and environmental uncertainty are significant given the value of granting authority to local management under these conditions. Finally, for corporate governance research in general, our study contributes empirically by studying the actual involvement of boards of directors using primary data, rather than relying on indirect proxies such as the size and composition of boards (e.g., Boone *et al.*, 2007; Coles *et al.*, 2008; Hermalin and Weisbach, 1988; Linck *et al.*, 2008; Raheja, 2005).

THEORY AND HYPOTHESES

Background theory on IJV boards

An IJV's board of directors represents an important aspect of governance for this hybrid organization. Boards in general engage in organization-wide decisions that can have long-term performance implications for organizations (Judge and Zeithaml, 1992). Moreover, in the joint venture context, parent firms are exposed to certain exchange hazards and potential conflicts that might arise because two or more independent firms are collaborating under an incomplete contract. Under such circumstances, the board serves as an ex post governance mechanism that enables partners to monitor the collaboration's performance, engage in private ordering by addressing conflicts that arise, and adapt the actions of the venture (e.g., Geringer and Hebert, 1989; Kumar and Seth, 1998; Ravasi and Zattoni, 2006; Schaan, 1983).

While board involvement has been discussed extensively in corporate governance research investigating public corporations (e.g., Carpenter and Westphal, 2001; Judge and Zeithaml, 1992; Westphal, 1999), for our purposes we define IJV board involvement as the extent to which the board is engaged in controlling and coordinating an international joint venture's activities on behalf of the parent firms. Control entails the appraisal of an organization's performance and guarding the organization against harmful actions by its members (e.g., Adams and Ferreira, 2007; Forbes and Milliken, 1999; Kriger, 1988; Raheja, 2005). This role matters for boards of all organizations, including international joint ventures (Hambrick *et al.*, 2001; Kumar and Seth, 1998), and the foregoing discussion suggests that IJV boards provide administrative controls that can help mitigate different types of opportunism that can harm a collaborative agreement (e.g., Geringer and Hebert, 1989; Mjoen and Tallman, 1997; Oxley, 1997; Oxley and Sampson, 2004; Parkhe, 1993; Pisano, 1989; Williamson, 1991). Moreover, just as corporate boards are involved in rendering service and advice to their organizations (Adams, Hermalin, and Weisbach, 2010; Carpenter and Westphal, 2001; Forbes and Milliken, 1999; Hillman and Dalziel, 2003), joint venture boards fulfill a related role in coordinating partner and venture actions, facilitating strategic plans, and helping the venture reconcile the different needs of the partners in its operations (Kumar and Seth, 1998; Ravasi and Zattoni, 2006). These roles are closely intertwined in practice (Adams *et al.*, 2010), and evidence that joint venture boards tend to meet frequently, averaging 5.1 times per year (García-Canal *et al.*, 2003), suggests that IJV boards are generally involved within joint ventures.

A number of other similarities and differences exist between corporate and IJV boards, and these are evident in the composition and structure of joint venture boards. For instance, just as in corporate boards, directors of IJV boards are involved in overseeing senior management, who are primarily responsible for operational issues such as achieving sales targets, executing distribution and pricing policies, allocating profits and resources across activities and markets, and so forth (Hambrick *et al.*, 2001; Yan and Gray, 1994). In the IJV setting, however, the partners appoint board members as their representatives (Bamford and Ernst, 2005), and while board appointments often mirror the partners' equity stakes (Hewitt, 2005), this need not be the case given the other mechanisms of control that are available to parent firms (e.g., staffing of key managerial positions, incentives, etc.) and the different capabilities that partners bring to a venture (Bamford *et al.*, 2004; Yan and Gray, 1994). Senior management within the joint venture might serve on the IJV board, yet executives working at a parent firm but not the joint venture itself represent a second type of insider appointed to these boards. Perhaps because of the unique characteristics of joint ventures and their boards, outside directors are less common on joint venture boards compared to corporate boards (Bamford and Ernst, 2005).

Research hypotheses

In developing research hypotheses on the antecedents of IJV board involvement, we identify several attributes of international joint ventures that, on the one hand, determine the need for administrative control to monitor and coordinate the venture's activities for parent firms and, on the other, shape the value of delegating more authority to local management. As the foregoing discussion suggests, this fundamental tension grows out of two unique characteristics of IJVs as an organizational form. First, they involve two or more independent firms working together under an incomplete contract. While this is true of all IJVs, it takes on greater importance for collaborations that present a heightened risk of opportunism to parent firms and a need for coordinated adaptation (Williamson, 1991). In the hypotheses developed below, we focus on two important types of IJVs that previous alliance research has long emphasized are prone to conflict and coordination challenges for parent firms: (1) alliances between partners that compete in common end markets outside of the collaborative agreement (e.g., Oxley and Sampson, 2004; Park and Russo, 1996) and (2) alliances that involve R&D activities. Second, the fact that IJVs operate in a different host country from at least one parent firm and join partners from different nations can increase the costs of involvement by the board, partly because directors have information disadvantages compared to local management. In the hypotheses developed below, we use corporate governance and IJV research to argue that such inefficiencies magnify in the presence of significant national cultural differences and environmental uncertainty in the host country. Under such circumstances, it can be preferable to delegate authority to local management given the difficulties directors can have in monitoring IJV performance in noisy operating environments and making decisions on appropriate policy, staffing, or other changes on a timely basis as local conditions dictate.

Partner competition

Prior research on alliances suggests that competition in common product and geographic markets can be an important source of goal conflict between partners and can make it difficult to coordinate activities (e.g., Doz and Hamel, 1998; Kogut, 1989; Park and Russo, 1996). For instance, partners can come to view the collaboration in zero-sum terms since profits made by one firm can be used to compete outside of the collaborative agreement (Park and Russo, 1996). As a result, firms might engage in actions such as acquiring knowledge related to a customer base or marketing techniques in another country (Khanna *et al.*, 1998) as well as distorting transfer prices or reducing efforts in activities that benefit a partner (Kogut, 1989). Case study evidence suggests that when partners compete in the same markets, they can have conflicting objectives that must be reconciled and activities that must be aligned on an on-going basis (Doz and Hamel, 1998), and consequently such ventures can experience a greater risk of failure (Kogut, 1989; Park and Russo, 1996).

While the above studies examine the impact of partner competition on joint venture success or failure, we expect that competition between parent firms will also influence IJV governance. The conflicts that can arise from partner competition will lead to a greater need for a board to address the shareholder's interests and monitor the venture's performance (Janger, 1980). The board can also be involved in making plans for the IJV to ensure that it aligns with the parent's strategic goals and that its actions are compatible in the market (Kumar and Seth, 1998; Ravasi and Zattoni, 2006). Of course, firms can attempt to contract on these issues, but the difficulty they face ex ante in identifying relevant contingencies, understanding each other's private interests, and specifying suitable responses to changing market conditions suggests an important ex post governance role for the board (e.g., Parkhe, 1993).

These arguments suggest that the IJV board of directors will be more involved when the parent firms have conflicting interests and the need to coordinate the venture's actions due to overlap in partners' markets served. In fact, there are a few studies in the literature on alliance governance that offer related predictions, showing that partners that are direct competitors tend to implement more hierarchical governance structures (e.g., joint ventures rather than contractual agreements) (Oxley, 1997; Oxley and Sampson, 2004). Although this research has addressed the totality of administrative controls and incentives, as captured by the equity versus nonequity choice, we wish to focus in particular on the board as a specific instrument of ex post governance. Just as joint ventures facilitate coordinated adaptation and entail extensive governance through the administrative controls and incentives they provide compared to nonequity alliances, the extent to which the board is engaged in controlling and coordinating joint venture activities on behalf of the parent firms can vary considerably. We therefore posit:

Hypothesis 1: IJV board involvement will be greater when there is a higher degree of overlap in the end markets of parent firms.

R&D activities

The extent to which the parent firms need to institute administrative controls to monitor and coordinate an IJV may also depend upon the nature of the activities performed by the IJV itself. Prior alliance governance research has established that the presence of an R&D component in a collaborative agreement plays a key role in this regard, as it is considered to affect the need for administrative controls and coordinated adaptation at the contract implementation stage (Pisano, 1989; Williamson, 1991). When an alliance involves the exchange and creation of intangible assets such as R&D, it can be especially difficult to delineate partners' rights and obligations ex ante. Parent firms find it difficult to codify and circumscribe the knowledge to be used in the alliance, partly because firms may not be willing to reveal certain information about their contributions of knowledge that is proprietary (Arrow, 1962). During the implementation of R&D collaborations, partners also might experience the appropriation of rents and challenges associated with the coordination of transfers of tacit know-how across organizations (e.g., Gulati and Singh, 1998).

The above problems suggest an important role for ex post governance mechanisms such as boards that enhance the control and coordination of an IJV's activities. Indeed, previous research on alliances has examined how the presence of an R&D component influences the governance structure of collaborations, showing that alliances involving R&D activities require more hierarchical governance (Gulati and Singh, 1998; Oxley, 1997; Pisano, 1989). Although this research has examined the choice between equity-based governance structures (e.g., joint ventures) versus nonequity arrangements (e.g., contractual agreements), we expect that the problems associated with R&D will also influence the ex post governance employed within a joint venture. As discussed above, the IJV board is an ex post governance mechanism through which parent firms can exert their respective interests, monitor the collaboration's performance, and coordinate actions with other parent firms (Janger, 1980; Kumar and Seth, 1998).

Hypothesis 2: IJV board involvement will be greater for joint ventures involving R&D activities than for joint ventures that do not involve such activities.

Cultural differences

While the need for administrative control in IJVs arises from the fact that two or more independent firms are working together under an incomplete contract, the international dimension of IJVs indicates that boards can encounter inefficiencies because such collaborations span nations and directors tend to have information disadvantages compared to local management. Just as the need for administrative control is greater for certain collaborations than others, the inefficiencies arising from the international dimension of IJVs may also vary across collaborations. Below we use research on alliance governance and corporate governance to argue that the latter problems are exacerbated by national cultural differences and environmental uncertainty in the host country, making it more efficient for IJV boards to be less involved within the joint venture.

Administrative and organizational practices and systems vary widely across countries (Kogut and Singh, 1988), and the leadership styles of managers and the ways in which they respond to strategic issues are influenced by their cultures (Schneider and De Meyer, 1991). This implies that board members will not be familiar with some of the routines and functional policies that are required for joint venture implementation and adaptation of the collaborative agreement when cultural differences exist (Kogut and Singh, 1988), and they might disagree with operational practices in the host country. Under these conditions, ex post governance to control and coordinate a foreign operation can slow decision making, lead to errors, and be costly (Gatignon and Anderson, 1988). It can therefore be preferable to grant greater authority and decision-making responsibilities to local management, which has better information about the business' implementation requirements in various functional areas and about changes to the collaboration that local conditions warrant.

By contrast, IJV board involvement will likely be greater when fewer cultural differences exist between partners. Under these circumstances, directors have a better understanding of managers and the business needs of the collaboration, and it is easier to transfer information back and forth between the board and managers in the joint venture. This in turn reduces the cost of a board being actively engaged within the IJV (e.g., Boone *et al.*, 2007; Carpenter and Westphal, 2001; Fama and Jensen, 1983; Linck *et al.*, 2008). Thus, extension of corporate and alliance governance research to IJV boards suggests that the level of IJV board involvement will be lower when partners' cultural differences are substantial, as delegation of authority will contribute to efficiency gains under these conditions.

Hypothesis 3: IJV board involvement will be lower when there are greater national cultural differences between parent firms.

Environmental uncertainty

The governance of IJVs, and in particular the involvement of joint ventures' boards, can also vary across host countries depending upon environmental uncertainty for related reasons. International joint ventures often are situated in unpredictable host markets that are characterized by changes in host government policies and regulations, customer demand, local supply conditions, and so forth. These conditions require decisions to change policies and redeploy assets, and such responses to changing environmental conditions must be carried out in a timely fashion. The unpredictability of these changes makes it difficult for boards to control and coordinate the venture because board members possess imperfect information concerning local conditions and obtaining this information can be costly (Demsetz and Lehn, 1985).

In order to understand how environmental uncertainty in the host country affects involvement by the IJV board, it is useful to consider the literature on corporate governance that has examined the effects of uncertainty on board involvement in public corporations. Corporate governance research has long emphasized that there are non-trivial costs related to board involvement under conditions of high environmental uncertainty, and these costs are shaped by the difficulties a board experiences in ascertaining the performance of an organization, making performance attributions, and deciding upon appropriate adjustments (e.g., in budgets, operations, personnel, etc.). For instance, prior research in this area has argued and shown that it is more difficult for boards to monitor their firms' operations when uncertainty is substantial. Under these conditions accounting returns become poor indicators of performance since it is difficult for directors to disentangle the effects of managerial behavior from external changes beyond their control (Demsetz and Lehn, 1985; Smith and Watts, 1992). Prior corporate governance research has therefore suggested that boards will engage in less oversight in such noisy operating environments (e.g., Boone *et al.*, 2007). While the above research has not focused on IJVs in particular, we expect that these difficulties arising from environmental uncertainty will be exacerbated in the IJV setting due to the fact that the joint venture is located in a different host country. Board involvement can become inefficient under conditions of environmental uncertainty due to the need for timely decisions regarding the redeployment of assets, follow-on investments, personnel changes, etc. (Boone *et al.*, 2007), so efforts by the board to control or coordinate the venture's activities can hamper its adaptation to changing local conditions. Moreover, IJV managers possess specific information that can be unknown to board members, so managers involved in day-to-day operations in the host country are in a better position to make informed decisions in a timely manner (e.g., Ellstrand, Tihanyi, and Johnson, 2002; Fama and Jensen, 1983). We therefore posit:

Hypothesis 4: IJV board involvement will be lower where there is greater environmental uncertainty in the joint venture's host country.

METHODS

Sample and data collection

We collected primary data in order to examine IJV board involvement and its determinants. Management scholars have often called for in-depth investigation into the involvement by boards of directors (e.g., Forbes and Milliken, 1999), and primary data are especially useful for this purpose. Research in finance and management has instead often relied upon broad proxies for the functioning of boards that are available in secondary data (e.g., board size, inside and outside directors, etc.), and it has been suggested that the use of such indirect proxies is one possible reason for inconclusive evidence in the corporate governance literature (e.g., Dalton *et al.*, 1998).

In order to construct an initial list of potential respondents, we used two data sources: Thomson Financial's Security Data Corporation (SDC) database as well as the alumni database of a European business school. Prior international alliance research has relied on these two different sources for carrying out survey research (e.g., Ariño, 2003). First, we utilized the SDC database to identify Dutch firms engaging in joint ventures. We targeted Dutch firms participating in IJVs because one of the authors resides in the Netherlands, and this facilitated the administration of the survey. Second, we relied on the business school's alumni database and contacted executives with at least 10 years of work experience. We enquired into their ability to participate in a survey on joint venture governance. If they were unable to participate, we asked whether they could refer us to a senior executive in their firm who was directly involved in these deals. In addition, when no alumni were identifiable for these companies, or when alumni were not in a position to provide us with an appropriate contact, we contacted the executives recorded in the SDC database and followed the same process. Using key informants provided the most appropriate way to obtain data on IJV board involvement given the lack of such data in secondary sources and the confidential nature of this information. Moreover, obtaining responses from multiple respondents is also difficult in alliance research more generally given staff turnover and the small size of many collaborations (e.g., Kumar, Stern, and Anderson, 1993), so survey research on collaborative agreements very often uses single key informants (e.g., Krishnan, Martin, and Noorderhaven, 2006; White and Lui, 2005). We also assessed the appropriateness of respondents and found that 95 percent had managed or evaluated the IJV or had directly taken part in its negotiation.

To ensure face validity of the survey instrument, we performed pretests with senior executives as well as academics. In particular, we performed three semi-structured interviews with senior executives who were responsible for establishing international joint ventures or who served as a director on one or more IJV boards. In addition, we also carried out four interviews with alliance scholars to ensure face validity, and we made

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minor modifications to the survey instrument based on these sets of interviews.

After distributing a total of 664 surveys, 175 responses were returned (26.4%) from 134 different firms and 116 of these observations are related to IJVs, the remainder being joint ventures between Dutch partners. After accounting for responses with missing data and outlying observations, the final sample consisted of 101 IJVs. Because we received multiple responses from some organizations, we took two steps to consider whether potential nonindependence of observations affected our interpretations. First, in the regression models presented in the next section, we estimated robust standard errors by clustering residuals by firm. Second, we randomly selected a single observation per firm for inclusion in the sample and tested whether the results were similar to those presented below, and we found this to be the case.

In order to investigate the quality of the data, we also performed a number of additional analyses. An assessment of potential nonresponse bias was carried out by examining possible differences between early and late respondents under the assumption that late respondents are more similar to nonrespondents than early respondents are to nonrespondents (Armstrong and Overton, 1977). Chi-square tests for independence showed no differences in the sectoral or temporal distributions of early and late respondents' IJVs (i.e., $\chi^2 = 3.22$, n.s. and $\chi^2 = 0.01$, n.s., respectively). We also examined whether there were any differences across early and late respondents for all of the variables in our models, and none of these tests provided evidence that the data are subject to nonresponse bias. Data collected by means of self-administered surveys can also be subject to common method bias. While many of our variables are quasi-objective, we also sought to address the possibility of common methods bias in three different ways. First, we changed the order of predictor and outcome variables so that the board involvement scale appeared later in the survey than its determinants (Podsakoff *et al.*, 2003). We also performed Harman's (1967) one-factor test in order to identify whether a significant amount of common variance exists in the data. Specifically, exploratory factor analysis revealed seven separate factors using the eigenvalue-greater-than-one criterion, and only 12 percent of the variance in the variables used in the study can be explained by a single factor. Third, we tested for common method bias with a general factor covariate technique by adding the first unrotated factor as a control in the multiple regression models (Podsakoff *et al.*, 2003). The addition of this factor also indicated that our findings cannot be attributed to common methods bias.

Variables and measurement

IJV board involvement

Prior research suggests that joint venture boards provide administrative controls to monitor and coordinate the joint venture's activities for parent firms (e.g., Geringer and Hebert, 1989; Hambrick *et al.*, 2001; Hewitt, 2005; Oxley, 1997; Pisano, 1989; Ravasi and Zattoni, 2006). In constructing our dependent variable, *IJV Board Involvement*, we used an established four-item scale to capture the extent to which the firm was involved within the IJV in drawing up strategic plans, approving budgets and plans, monitoring the joint venture, and coordinating joint venture and parent actions (Kumar and Seth, 1998). Details on this measurement scale and others appear in Appendix 1. Consistent with the control and other roles of directors being intertwined (e.g., Adams *et al.*, 2010), factor analysis revealed that all four indicators loaded on a single factor that explained 54.3 percent of the variance in the data (Cronbach alpha = 0.74). Convergent validity is also indicated by the significant loadings for all of the individual items (all loaded higher than 0.70).

Independent variables

The first hypothesis considers whether partners' potential conflicts and opportunistic behavior arising from partner competition outside of the alliance increases board involvement. To measure the degree to which partner firms' markets overlap, we multiplied three Likert-type items measuring the degree to which the firms operate in similar (1) product markets, (2) geographic markets, and (3) customer segments (i.e., *Market overlap*). The multiplicative measure reflects the idea that competition might be less relevant if firms that operate in the same country do not also compete in the same product markets (and vice-versa), or if they target different customer segments within a given industry. In robustness analyses, we also examined an alternative, additive measure of market overlap as well as the individual dimensions of market overlap and found the same interpretations as the ones presented below.

Our second hypothesis suggested that IJV boards can facilitate monitoring and coordinated adaptation to address gaps in contracts and potential appropriation of knowledge that arise in R&D collaborations. Specifically, we follow previous research showing that collaborations involving R&D activities tend to require more hierarchical governance (e.g., Gulati and Singh, 1998; Oxley, 1997; Pisano, 1989) and investigate whether the board is more involved within the joint venture for such collaborations. We asked respondents to indicate which functional activities were within the scope of their collaborations to determine whether or not the IJV had an R&D component, so *Research and Development* is a 0-1 indicator variable.

Our third hypothesis argued that cultural differences can make it efficient for parent firms to delegate greater authority and responsibilities to local management to set policies and make changes to the collaboration rather than having IJV board directors exercise heavy oversight. Given that some of the sampled joint ventures involve three or more partners, we measured the average distance between the parent firms' home countries. We measured national cultural distance by using the GLOBE practice scores (see House *et al.*, 2004 for measurement details). We used the practice scores rather than the values scores, because the former are more directly relevant to the activities that IJV boards of directors undertake. More specifically, we used Sarala and Vaara's (2010) composite index, which represents the aggregate national cultural distance based on nine dimensions:

$$\text{Cultural distance} = \sum\nolimits_{j,k} \frac{\left\{ \sum\nolimits_{i=1}^{9} \left\{ \left(I_{ij} - I_{ik} \right)^2 / V_i \right\} /9 \right\}}{\binom{n}{2}} \quad (1)$$

where n is the number of partners; I_{ij} and I_{ij} denote the index for the ith cultural dimension for partner j and k's home countries, and V_i is the variance of the index for the ith dimension (i.e., *Cultural distance*). In addition, we calculated the aggregate national cultural distance using Kogut and Singh's (1988) composite index based on Hofstede's data in order to test the robustness of the findings. This alternative measure of cultural distance led to the same interpretations as those presented below (results available upon request). We also estimated all of the models for a subsample of two-partner joint ventures and reached the same conclusions for this hypothesis and the others we tested.

The fourth hypothesis suggested that environmental uncertainty in the host country will necessitate more authority to be provided to local management given the heightened costs of oversight in these circumstances. For our measure of environmental uncertainty, we asked respondents to indicate the degree to which five external factors were predictable: (1) government policies and regulations, (2) customer demand, (3) supply of raw materials and equipment, (4) competitive climate, and (5) technological trends (Kumar and Seth, 1998). In order to develop individual items for environmental uncertainty, these Likert-type scores were reverse coded (i.e., u_i, $i = 1-5$). In addition, since certain aspects of the external environment might matter more or less for specific IJVs, we weighted these items by asking participants to allocate 100 points among these five factors based on their importance in determining the ultimate success of the joint venture (i.e., w_i, $i = 1-5$). The measure of *Environmental uncertainty* in the host country was then calculated by combining the weights and individual uncertainty scores as follows:

$$\text{Environmental uncertainty} = \frac{1}{100} \sum_{i=1}^{5} w_i u_i \quad (2)$$

Control variables

We incorporated several controls in the models in order to account for other factors that might be related to IJV board involvement or the aforementioned independent variables. First, we included two variables used in corporate governance research that potentially influence board involvement. The first variable is the number of directors on the board (i.e., *IJV board size*). Corporate governance research suggests that larger boards tend to be more involved in monitoring and other activities (Boone *et al.*, 2007; Coles *et al.*, 2008; Judge and Zeithaml, 1992; Raheja, 2005). We also included a control for the size of the venture (i.e., *IJV size*) since larger organizations generally require greater involvement by the board owing to their operational complexity (Linck *et al.*, 2008). Respondents were asked to indicate the number of employees in the IJV, and a logarithmic transformation was used due to the significant positive skewness that was evident for this measure.

We also included two variables to capture characteristics of joint ventures that can potentially affect their governance. First, we controlled for the number of partners in the joint venture and its square term because potential conflicts and coordination needs will rise as the number of partners increase, yet divergence in interests and free-riding can also increase the costs of board involvement for multiparty collaborations (Gong *et al.*, 2007; Gulati and Singh, 1998; Li *et al.*, 2012; Parkhe, 1993) (i.e., *Number of partners*). In addition, we included a variable indicating whether the IJV is a Greenfield versus an acquisitive joint venture (i.e., *Greenfield IJV*). Greenfield ventures might require more board involvement because they are new organizations, so partners need to bring in resources and establish various operating policies and routines, whereas acquisitive joint ventures involve one partner taking an equity stake in a preexisting business of another firm (e.g., Chen, 2008; Harzing, 2002). Similarly, the governance needs of joint ventures and other organizations can vary with their stage of development (e.g., Baker and Gompers, 2003; Certo, 2003; Steensma *et al.*, 2008), so we included a set of fixed effects for joint venture's formation years.

We incorporated two variables to accommodate alternative means by which firms govern their IJVs (e.g., Hoetker and Mellewigt, 2009; Mesquita and Brush, 2008; Poppo and Zenger, 2002; Vanneste and Puranam, 2010). We controlled for contractual safeguards that partners put into their collaborative agreements (i.e., *Contractual complexity*), using Parkhe's (1993) measure of contractual complexity. Specifically, we asked respondents to indicate whether or not each of eight types of contractual provisions detailed in Appendix 1 appear in the formal agreement. These eight contractual provisions are arrayed in order of stringency to calculate a weighted measure of contractual complexity:

$$Contractual\ complexity = \frac{1}{36}\sum_{i}^{8} D_i, \qquad (3)$$

where D_i equals i if the ith provision was employed, and zero otherwise. We also incorporated a variable that captured the partners' prior collaborations with each other (i.e., *Prior ties*) since relational governance can potentially influence the need for employing formal governance mechanisms such as the board of directors. Specifically, we followed Gulati (1995) and asked the respondents to report the number of prior collaborations formed with their partners, and a log transformation of one plus the number of prior collaborations was used given significant positive skewness for this variable.

Finally, we also controlled for firm and industry effects since they might have an effect on IJV board involvement. At the firm level, we controlled for the experience the firm had prior to forming the focal IJV (i.e., *IJV experience*) since accumulated experience with international joint ventures might shape the need for board oversight as well as the efficiency with which boards operate (e.g., Hoang and Rothaermel, 2005). We used the SDC database to construct our measure of IJV experience, and we counted the number of IJVs formed by the respondent's firm in the five years prior to the formation of the focal IJV, again using a log transformation. In supplemental analyses, we also tested measures of the firm's domestic joint ventures and constructed measures for different time intervals (e.g., 3, 7, and 10 years) and obtained comparable results. Finally, to address potential differences in IJV attributes and governance across industries, we incorporated sector fixed effects into the specifications.

RESULTS

Table 1 provides descriptive statistics as well as a correlation matrix for the variables in the regression models. Table 2 offers the results of multiple regression analyses for the determinants of IJV board involvement. Model I is a baseline model that consists of the control variables; models II–V add each hypothesized variable separately; and model VI is the full model testing all variables simultaneously. All models are statistically significant ($p < 0.001$), and models III–VI exhibit significantly improved explanatory power compared to the baseline specification ($p < 0.001$).

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Table 1. Descriptive statistics and correlation matrix[a]

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. IJV board involvement	14.60	3.15	1.00											
2. Market overlap	21.44	24.33	−0.04	1.00										
3. Research & development	0.87	0.34	−0.19*	0.13	1.00									
4. Cultural distance	0.22	0.24	−0.23*	−0.20*	−0.05	1.00								
5. Environmental uncertainty	2.87	1.11	−0.22*	−0.21*	−0.02	0.09	1.00							
6. IJV board size	5.86	2.63	−0.11	0.07	0.01	0.15	−0.14	1.00						
7. IJV size	3.93	2.29	−0.06	0.10	−0.06	0.31**	−0.17†	0.37***	1.00					
8. Number of partners	2.44	1.04	−0.10	0.11	0.10	0.05	−0.08	0.12	0.12	1.00				
9. Greenfield IJV	0.76	0.43	0.12	−0.05	0.13	−0.10	0.10	−0.01	−0.01	0.12	1.00			
10. Contractual complexity	0.76	0.26	0.08	−0.04	−0.06	0.18†	−0.08	0.07	0.08	0.05	−0.01	1.00		
11. Prior ties	0.26	0.48	0.26**	0.16†	0.02	0.31**	−0.17†	0.13	0.14	0.17†	0.08	−0.07	1.00	
12. IJV experience	0.23	0.61	−0.24*	0.06	−0.01	0.19*	−0.20*	0.31***	0.36***	−0.31***	−0.09	0.25**	−0.10	1.00

[a] N = 101.
† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Our first two hypotheses consider sources of opportunism and conflict that can lead to greater board involvement in IJVs to facilitate monitoring and coordination for parent firms. We see that the partners' market overlap does not increase the board's involvement in the IJV, so H1 is not supported. We also examined an additive measure of market overlap and investigated the three constituent variables of overlap in product markets, geographic markets, and customer segments, but these supplemental analyses also did not yield evidence that this source of opportunism and potential conflict leads to greater involvement by the board. This suggests that firms might turn to alternative governance mechanisms and alliance design choices to address such exchange hazards in international collaborations (e.g., Oxley and Sampson, 2004). The positive and significant coefficient estimate for research and development in models III and VI ($p < 0.05$ and $p < 0.01$, respectively) is consistent with our second hypothesis, suggesting that boards are more engaged to deal with appropriation hazards and facilitate monitoring and coordinated adaptation in agreements involving research and development activities.

Our final two hypotheses suggested that boards will tend to be less involved within IJVs and instead delegate greater authority and responsibilities to local management for joint ventures presenting significant cultural differences or those subject to high environmental uncertainty in host countries. The empirical estimates show strong support for both hypotheses. In particular, the estimated coefficient for cultural distance is negative and significant in models IV and VI (both $p < 0.01$), and the coefficient estimate for environmental uncertainty is negative and significant in models V and VI ($p < 0.01$). These findings are consistent with the expectation that boards will be less involved in IJVs subject to greater oversight costs and requiring more autonomy and adaptation at the level of local management.

Finally, results for several of the control variables are worth noting. To begin with, the findings demonstrate that Greenfield IJVs entail greater board involvement compared to acquisitive ventures ($p < 0.05$). Given that parent firms are setting up a new business together in the case of Greenfield IJVs, this implies that resources from both partners need to be brought in, employees and management need to be recruited from the firms or outside, and new routines and policies must be

Table 2. Determinants of IJV board involvement[a]

	I	II	III	IV	V	VI
Intercept	6.73	5.98†	6.52†	5.48	8.94**	7.80*
	[3.18]	[3.27]	[3.30]	[3.31]	[3.28]	[3.16]
Time-fixed effects	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
Sector-fixed effects	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
IJV experience	−0.89	−0.74	−0.89	−0.95	−1.15*	−1.03†
	[0.59]	[0.59]	[0.60]	[0.63]	[0.57]	[0.57]
Prior ties	1.20*	1.22*	1.16*	0.95†	1.04†	1.00†
	[0.53]	[0.52]	[0.55]	[0.50]	[0.54]	[0.52]
Contractual complexity	1.98	1.93	2.00	2.54†	1.90	2.26†
	[1.42]	[1.34]	[1.43]	[1.47]	[1.34]	[1.31]
Greenfield IJV	1.23*	1.18*	1.25*	1.13*	1.43**	1.22*
	[0.52]	[0.51]	[0.53]	[0.51]	[0.53]	[0.52]
Number of partners	3.45*	3.06*	3.44*	3.84**	3.55*	3.52**
	[1.34]	[1.35]	[1.34]	[1.41]	[1.25]	[1.35]
Number of partners^2	−0.45**	−0.41*	−0.45**	−0.49**	−0.46**	−0.46**
	[0.16]	[0.16]	[0.16]	[0.17]	[0.15]	[0.16]
IJV size	0.24	0.25	0.23	0.31†	0.21	0.30†
	[0.17]	[0.16]	[0.17]	[0.18]	[0.15]	[0.15]
IJV board size	−0.18	−0.20	−0.18	−0.15	−0.18	−0.19
	[0.13]	[0.13]	[0.13]	[0.13]	[0.14]	[0.13]
Market overlap	—	0.00	—	—	—	−0.01
	—	[0.01]	—	—	—	[0.01]
Research and Development	—	—	1.84*	—	—	1.84**
	—	—	[0.85]	—	—	[0.61]
Cultural distance	—	—	—	−2.81**	—	−2.35**
	—	—	—	[1.02]	—	[0.92]
Environmental uncertainty	—	—	—	—	−0.82**	−0.81**
	—	—	—	—	[0.29]	[0.25]
F value	12.32***	10.68***	11.75***	29.52***	13.28***	20.93***
R^2	0.32	0.35	0.32	0.36	0.39	0.45

[a] N = 101. Huber/white/sandwich robust standard errors appear in parentheses.
† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

developed in the joint business, all of which might require the board to be more involved in controlling and coordinating the IJV (e.g., Chen, 2008; Harzing, 2002). In supplemental analyses, we also explored if board involvement varies based upon the age of IJVs, but we did not find this to be the case. The results also show that the level of board involvement first increases and then declines with the number of partners in the collaborative agreement. The board of directors is an ex post governance instrument that can help parents overcome difficulties with the ex ante specification of multiple partners' rights and obligations under different circumstances. At the same time, oversight costs might also be substantial for collaborations with many partners because it is difficult to align the different objectives and capabilities of the multiple partners and reach common conclusions on the performance of the collaboration (e.g. Gong *et al.*, 2007; Gulati and Singh, 1998; Parkhe, 1993).

DISCUSSION

Contributions and implications

Despite the fact that boards of directors have long been mentioned as an important aspect of governance in the IJV literature, limited systematic theoretical or empirical research attention has been devoted to IJV boards. In seeking to advance research on IJV governance by studying involvement by their boards, we have extended and adapted corporate governance research suggesting that board involvement is endogenous to the need for oversight and its anticipated costs (e.g., Boone *et al.*, 2007; Carpenter and Westphal, 2001; Coles *et al.*, 2008; Linck *et al.*, 2008; Westphal and Zajac, 1997). While this core insight applies to boards of various types of organizations, we argue that unique features of IJVs as an organizational form determine the needs and costs of board

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involvement in monitoring and coordinating activities. First, the fact that IJVs are joint ventures, or organizations owned by two or more independent firms working together under an incomplete contract (e.g., Chi, 1994; Hennart, 1988) suggests that IJVs can be especially subject to exchange hazards in certain collaborations, so involvement by the board can be valuable in controlling and coordinating IJV activities for parent firms. Second, the international aspect of IJVs indicates that the joint venture operates in a different host country and joins parent firms from different nations, and thus for some international collaborations it can be difficult for board members to monitor IJV performance and its causes, as well as to adapt to changing local conditions on a timely basis, so it can be efficient to delegate greater authority to local management. Therefore, we emphasize that the hybrid and international characteristics of IJVs as an organizational form create a fundamental tension between the need for administrative control to monitor and coordinate the venture's activities for parent firms versus the value of delegating authority to local management. The primary theoretical contribution of our paper is to identify these two theoretical mechanisms underlying IJV board involvement and to tie them to specific attributes of IJVs that reflect the unique characteristics of this organizational form.

In bringing together the literatures on alliance governance and corporate governance, our study offers several more specific contributions to each of these literatures. For the alliance governance literature, we extend recent research on contracting and formal governance mechanisms in interfirm agreements (e.g., Hagedoorn and Hesen, 2007; Hoetker and Mellewigt, 2009; Li *et al.*, 2010; Luo, 2002; Mesquita and Brush, 2008; Ryall and Sampson, 2009) by investigating the IJV board as a structural mechanism available to partners to fill in gaps in contracts and by showing that unique characteristics of IJVs have a bearing on this specific governance mechanism. Specifically, the fact that IJVs are joint ventures, or organizations owned by two or more independent firms, creates the need for administrative control and thus board involvement when there are significant exchange hazards. For instance, we argued and found that involvement by the IJV board can be beneficial when the partners are engaged in collaborative R&D activities that tend to be subject to contractual incompleteness as well as opportunism in the form of knowledge misappropriation (e.g., Gulati and Singh, 1998; Oxley, 1997; Oxley and Sampson, 2004; Pisano, 1989). Prior alliance research examining how R&D activities influence alliance governance has examined this issue for discrete governance arrangements, such as equity versus nonequity alliances (Gulati and Singh, 1998; Oxley, 1997; Pisano, 1989). We therefore extend this research by showing that R&D activities also have a bearing on finer-grained governance decisions, such as board involvement within IJVs, or the extent to which this specific ex post governance instrument is employed. For similar reasons, we also argued that an IJV might benefit from such ex post governance when it involves partners that compete outside of the collaborative agreement and is therefore prone to opportunism and conflict. However, our results for partner competition did not lend support to such arguments. It might, therefore, be that firms turn to alternative governance mechanisms and alliance design choices to address the exchange hazards arising from partner competition (e.g., Oxley and Sampson, 2004). Finally, international joint ventures present unique governance challenges not only because they involve two or more independent organizations, but also due to the fact that they are situated in a different host country. We adapted prior corporate governance theory by arguing that national cultural differences as well as environmental uncertainty in the host country are sources of monitoring and coordination costs for joint venture boards, leading them to be less involved and provide more authority to local IJV management. Many prior studies have investigated how firms select between IJVs, acquisitions, and other entry modes in response to cultural differences or environmental uncertainty (e.g., Tihanyi, Griffith, and Russell, 2005; Yin and Shanley, 2008), and one of the specific contributions of this paper is to show that these factors also influence more detailed governance decisions, such as board involvement within IJVs.

The above findings also have more specific implications for the discrete governance arrangements partners use for their collaborative agreements, including equity and nonequity alliances (e.g., Oxley, 1997; Pisano, 1989). Administrative controls and incentives are the two primary dimensions of governance (Williamson, 1991), yet they go together in discrete governance choices since both tend to be greater in the case of equity collaborations compared to nonequity alliances. In extant empirical research this makes it difficult to disentangle the determinants and implications of these underlying dimensions of governance. Thus, by investigating boards as a specific instrument of ex post governance and source of administrative control, it is possible to investigate administrative control and other safeguards against exchange hazards and opportunistic behavior in collaborative agreements. For instance, previous studies show that partners that are direct competitors tend to implement more hierarchical governance structures (e.g., joint ventures rather than contractual agreements) in their collaborations (Oxley, 1997; Oxley and Sampson, 2004). However, this research has addressed the totality of administrative controls and incentives as captured by the equity versus nonequity choice, and our study suggests that partner competition may not have a similar influence on involvement by the board as a specific instrument of ex post governance. It might therefore be that firms employ incentives rather than involvement by the board to address such challenges in international collaborations, and future research might delve into the particular types of administrative controls (e.g., Chen *et al.*, 2010), safeguards, and incentives firms use in order to disentangle further the mechanisms of hybrid governance.

While our study's focus is largely on extending corporate governance research to the IJV domain, our work also makes specific contributions to the broader corporate governance literature. Our paper demonstrates that some of the theoretical insights from corporate governance can be extended to the IJV domain, yet it is also the case that existing theory needs to be adapted in important ways in the joint venture setting. As one illustration, prior corporate governance research has considered the reduced ability of corporate boards to make performance attributions and adjustments under conditions of uncertainty (e.g., Boone *et al.*, 2007; Demsetz and Lehn, 1985). We therefore extend this argument to the IJV context by arguing that environmental uncertainty surrounding a joint venture in a particular host country reduces IJV board involvement, so a firm's joint ventures in different countries are expected to have different levels of involvement. At the same time, however, previous corporate governance research suggests that boards will be less involved in R&D-intensive firms owing to directors' verification costs (e.g., Burkart *et al.*, 1997; Coles *et al.*, 2008; Raheja, 2005); yet we see that joint venture boards are more, rather than less, involved in R&D collaborations, given the unique exchange hazards such collaborations entail. Thus, it appears that knowledge transfer and misappropriation concerns are more salient in the IJV setting (e.g., Balakrishnan and Koza, 1993; Gulati and Singh, 1998; Pisano, 1989) than the verification costs affecting boards of unitary corporations (e.g., Linck *et al.*, 2008). It therefore appears that the functions and involvement of boards differ across organizational forms, and it would be valuable to test other aspects of boards in the joint venture context as a novel setting to test governance theories and consider debates in this literature.

Finally, it is commonplace for corporate governance research to use very broad proxies from secondary data for board involvement (e.g., number of directors on the board, percentage of outside directors, etc.) because of the lack of finer-grained information on the board's involvement, so it is valuable to study the actual involvement of boards in governing organizations. Given the mixed evidence that exists in corporate governance research on when boards are engaged or more passive (e.g., Judge and Zeithaml, 1992; Mace, 1986), we believe it is valuable to use primary data to investigate the determinants of board involvement, whether for IJVs or other organizational forms. The approach employed in our study might therefore be used in research on corporations, foreign subsidiaries, and other organizations to understand board involvement and its determinants in different settings.

Limitations and future research direction

In addition to investigating the avenues for future research mentioned previously, extensions could also address several limitations of this study. First, this research investigates the determinants of IJV board involvement using a cross-sectional design, so it would be valuable to examine how a board evolves over time as an ex post governance mechanism for an IJV (e.g., Reuer, Zollo, and Singh, 2002). It is possible, for instance, that partners adjust the level of board involvement to address changes in efficiency or equity conditions as a collaborative agreement is implemented (Ariño and de la Torre, 1998). Future research can therefore investigate the dynamics of board involvement as well as explore how changes in IJV boards might

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be related to adaptations in other formal and informal governance mechanisms that support international collaborations (e.g., contracts, incentives, trust, etc.) and that have received more attention in the literature in recent years (e.g., Argyres, Bercovitz, and Mayer, 2007). Furthermore, boards are simultaneously a structural arrangement for collaborative agreements as well as a venue in which collaborative processes occur (e.g., sense making, negotiating resource commitments and policies, resolving conflicts, and so on), so attending to boards and their evolution could facilitate understanding of how the structural aspects of joint ventures and collaborative processes affect one another over time (e.g., Ariño and de la Torre, 1998; Ring and Van de Ven, 1994).

Second, our study has focused on the determinants of board involvement, but we have not examined the actual performance consequences of board involvement for IJVs or their parent firms. It would therefore be interesting to examine the survival or efficiency implications of IJV boards or other specific outcomes, such as parent firms' achievement of certain strategic objectives (e.g., internationalization, accessing critical resources or knowledge, etc.) or more proximate outcomes such as the development of trust or interpartner learning (e.g., Dussauge, Garrette, and Mitchell, 2000; Makino *et al.*, 2007; Tallman and Phene, 2007).

Third, we have focused on the overall involvement of boards in the internal operations of IJVs, so it would be interesting to conduct field research to examine the specific ways in which directors are involved as well as investigate individual directors' activities (e.g., Ravasi and Zattoni, 2006). For example, it would be valuable to examine the involvement of board members from local partners versus foreign partners. A strength of our study is that we have used an established scale of board involvement (Kumar and Seth, 1998), but it is also the case that no consensus exists on the various functions that boards perform in general (Hillman and Dalziel, 2003), much less in the IJV setting. Moreover, there are likely to be unique functions of boards in the IJV context that can be identified and investigated in future studies, and some functions of boards of other organizations might not be as relevant to joint venture boards. For example, IJV boards might address knowledge transfer and leakage, contend with disputes among principals, offer access to local contacts and resources, and so forth. We would also anticipate that there could be heterogeneity within boards as to how involved individual directors are, and the precise nature of their involvement is also apt to vary. Thus, new research opportunities might exist if the individual director rather than the board as a whole is treated as the unit of analysis in future research.

Finally, our focus has been on the determinants of board involvement in international joint ventures, so future research could investigate the involvement of directors in different organizational forms in the international setting. For instance, it would be interesting to compare our results with those on the involvement of boards in wholly-owned foreign subsidiaries (e.g., Kriger, 1988). Such businesses are embedded in a firm's hierarchy so control rights exist at multiple levels, and the singular hierarchy confers greater auditing rights (Williamson, 1991) and incentive structures are also different, so it would be valuable to do comparative work on governance in international joint ventures and wholly-owned subsidiaries.

CONCLUSION

Boards of directors are both central to the theory of IJV governance and neglected by extant literature. In this paper we aim to advance current work on IJV governance by examining boards as an ex post governance mechanism and by investigating the determinants of board involvement. Extending and adapting recent work in finance and management on corporate governance in unitary organizations, we suggest that the hybrid and international aspects of IJVs lead to a fundamental tension between the need for administrative control to monitor and coordinate the venture's activities for parent firms versus the value of delegating authority to local IJV management. The primary theoretical contribution of our paper is to identify these two theoretical mechanisms underlying board involvement and to associate them with specific characteristics of IJVs that reflect the unique features of this organizational form. Consistent with the exchange hazards firms encounter in IJVs as well as efficiency considerations, parent firms tailor their usage of boards as a formal governance mechanism when implementing individual IJVs. As current research examines IJV governance in more fine-grained terms by examining governance mechanisms such as various contractual safeguards and relational governance, we would suggest that

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many interesting research opportunities also exist to devote attention to boards as an important ex post governance mechanism for international collaborations. Extending the reach of corporate governance scholarship to other organizational forms also holds promise in enriching this literature.

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APPENDIX 1

Measurement Scales

Board involvement

To measure board involvement within the IJV, respondents were asked, "To what extent are joint venture board members involved in the following?" The five-point scale was anchored at either extreme with the labels "no extent" and "very large extent." Respondents answered this question for the following four activities:

1. Participating in drawing up strategic plans
2. Approving budgets and short-term plans
3. Monitoring operating performance
4. Coordinating joint venture and parent actions

Market overlap

Respondents were asked to indicate, on a five-point scale ranging from "strongly disagree" to "strongly agree," the following question: "How similar were your firm and your partner(s) before the joint venture in terms of . . . ?" They were asked this question for the following three dimensions of market overlap, which were then multiplied or summed to create an overall measure of market overlap:

1. Products/services offered
2. Geographic markets served
3. Customer segments served

Environmental uncertainty

Respondents were first asked to indicate the degree to which the external environment was predictable, using a five-point scale anchored at the extreme values of "not at all predictable" to "accurately predictable." Specifically, they were asked "to what extent could you predict each of the following external factors?" for the following five aspects of the external environment:

1. Government policies and regulations
2. Customer demand
3. Supply of raw materials and equipment
4. Competitive climate
5. Technological trends

Because these aspects of the external environment can differ in importance across joint ventures in shaping the overall level of environmental uncertainty for an IJV, respondents were also separately asked the following question to determine appropriate weights to use to with the reverse-coded items above to calculate the environmental uncertainty measure described in the text:

"Please allocate 100 points among the following external factors according to their importance in determining the ultimate success of the joint venture (e.g., 50 customer demand, 50 competitive climate, 0 everything else):"

					= 100 points
Government policies and regulation	Customer demand	Supply of raw materials and equipment	Competitive Climate	Technological trends	Total

Contractual complexity

Respondents were asked, "Which safeguards listed below were put into the formal agreement of this venture? (tick all that apply)"

1. Periodic written reports of all relevant transactions
2. Prompt written notice of any departures from the agreement
3. The right to examine and audit all relevant records through a firm of CPAs
4. Designation of certain information as proprietary and subject to confidentiality provisions of the contract
5. Nonuse of proprietary information even after termination of agreement
6. Termination of agreement
7. Arbitration clauses
8. Lawsuit provisions