INFLUENCE OF BOARDS OF DIRECTORS ON CHINESE JOINT VENTURE PERFORMANCE

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Abstract

The efficacy of corporate governance practices are examined in the context of Boards that govern Chinese joint ventures. Results suggest that Board independence and diversity improve JV performance, while larger Boards reduce the dividends paid by JV. Findings are consistent with that adage that manageable-sized Boards should be preferred over larger ones that attempt to include the viewpoints of all possible affected constituents.

Keywords: joint venture, boards of directors, China
Influence of Boards of Directors on Chinese Joint Venture Performance

INTRODUCTION

JVs unite different parent companies. Often, however, JV partners have diverse and conflicting interests and objectives. Academic research and case studies are rife with illustrations of tensions and overt disagreements within JVs (Fey & Beamish, 1999; Habib, 1987; Julian, 2008; Lin & Germain, 1998; Shenkar & Zeira, 1992). As legal entities, JVs have their own boards of directors composed of representatives of the parent companies and senior managers of the JV. These boards are often the arena where differences between JV partners surface and play out. As a consequence, the dynamics of JV boards are somewhat different from boards of directors of conventional firms. Conventionally, following agency theory (Jensen & Meckling, 1976), the board of directors is responsible for insuring that shareholders’ (principals’) interests take precedence over managers’ (agents’) interests due to divergence of their interests.

JVs are not immune from principal-agent issues. In addition, JV boards must reconcile differences between principals – typically, two JV partners – in ways not captured by agency theory. Conflict resolution theory offers a venue for discussing the rationale and resolution of conflicts. From the conflict resolution perspective, the JV board becomes a conflict resolution mechanism through which JV sponsoring parents’ different views are communicated, these differences are resolved, and ideally their goals are transformed into one uniform strategy of the JV (Goodall & Warner, 2002; Janger, 1980; Leksell & Lindgren, 1982). In dealing with the conflicting desires of parent firms for cooperation and decision autonomy, an intermediate channel is necessary to make a balance between co-operative gains and losses (Fey & Beamish, 1999). Among a variety ways of resolving conflict, resource contribution can be a source of balancing the parent’s bargaining power. Resource contributions of the parent company can enhance its relative power vis-à-vis the counterparty (Pfeffer & Salancik, 1978).
The improved capability of influencing the partner’s decision dimension can induce reaching a compromise and resolving conflict in the JV (Lin & Germain, 1998).

JVs have been a popular organization form for foreign investment to enter and operate in China. Foreign companies often favor JVs due to regulatory entry barriers and a lack of local knowledge. However, managing JVs is not an easy task, which challenges both local and foreign partners (Harrigan, 1986; Kogut, 1989). The JV board’s successful functioning can be critical to JV success (Björkman, 1995; Goodall & Warner, 2002). Successful functioning requires the JV board to play effectively these roles, including setting up strategic goals, evaluating performance, approving major investment, determining the distribution of profit, appointing and remunerating key executive positions (Björkman, 1995; Child & Yan, 1999; Yan & Gray, 1994), solving critical problems (Leksell & Lindgren, 1982; Yan & Gray, 1994), and maintaining and developing relationships between the partners (Goodall & Warner, 2002; Janger, 1980). However, how can the board materialize these roles remains a challenge in practice.

Previous studies on boards of directors of subsidiaries (in particular, JVs) lack a theoretical underpinning, making them more narrative than theoretically sound and testable. This study examines how the viewpoints of three theories – agency theory, conflict resolution theory, and resource dependence theory – apply to the context of JV boards of directors. As noted earlier, we maintain that agency perspective, conflict resolution perspective and resource dependence perspective are complementary to each other in explaining the composition of the JV board of directors. Theoretical discussions enable the research on the JV board of directors to be integrated into the mainstream studies of the board of directors in common corporations. The characteristics of the JV board, in particular due to the division of equity between JV partners, and its impact, need to be addressed. Using the qualitative and quantitative data from 38 Sino-foreign JVs in China, this study provides empirical evidence in
the composition of the board and its relationship to JV performance.

In the JV setting, we divide directors into three categories: inside directors, outside directors, and independent directors. These different types of directors differ in their relationships with the JV. Inside directors refer to the directors who hold managerial positions in the JV. Outside directors refer to the directors who hold managerial positions either in the parent company or in another subsidiary of the parent company beyond the JV. For example, many multinational companies have established fully owned subsidiaries in countries close to their JV locations. Executives working in the fully owned subsidiary can serve as local presence of the foreign partner on the JV board. Independent directors refer to the directors from external organizations such as the local government and related organizations (e.g., supplier or buyer companies), including government officials, executives, and professionals (e.g., lawyers and bankers).

**THEORY AND HYPOTHESES**

**Agency theory**

Agency theory explains/anchors the manager-owner relationship in modern corporations. It maintains that conflicts of interests arise when there is a division of ownership and control (Berle & Means, 1932). The manager (i.e., the agent) may choose a series of actions that do not enhance the interests of the owner (i.e., the principal) because of the existence of asymmetric information, divergence of risk tendency, and outcome uncertainty (Eisenhardt, 1989; Jensen & Meckling, 1976). The central concern of agency theory is how to link the agent’s behavior with the principal’s goals. Agency arguments suggest that the board of directors has a monitoring function, or a “control” role, to protect the interests of shareholders (Boyd, 1990; Zara & Pearce, 1989). Effective monitoring can serve to improve performance by reducing agency costs (Fama, 1980).
In the agency view, boards of directors, the “goal keepers”, are deemed to be on the opposing but weaker position vis-à-vis the managers, the “damage causers”. Agency theorists argue that the board of directors requires certain structural considerations to make its monitoring role successful (Zahra & Pearce, 1989). One frequently discussed structural characteristic is board independence – the more independent the board is, the more incentives it has to monitor management (Barnhart, Marr & Rosenstein, 1994; Baysinger & Butler, 1985). Independent outside directors can objectively and impartially evaluate and reward top managers (Conyon & Peck, 1998), correct inappropriate managerial behavior (Brickley & James, 1987), make firm strategic changes (Goodstein & Boeker, 1991), and monitor strategy implementation (Rindova, 1999) due to their independence. By conducting due monitoring, outside directors are expected to enhance firm performance. Baysinger & Butler (1985) found that a higher proportion of independent directors lead to higher returns on equity. Schellenger, Wood & Tashakori (1989) found a positive relationship between outsider-dominated boards and firm financial performance measured by risk-adjusted market return. Nevertheless, empirical outcomes are far from conclusive in assessing the relationship of board composition and firm performance. Dalton, Daily, Ellstrand & Johnson (1998) provided a meta-analysis of previous board composition-performance research and found that board composition had no impact on firm performance.

Conflict resolution theory

Besides conflict embedded in the manager-owner relationship as agency theory illustrates, another level of conflict is between the JV sponsoring partners, which has captured the attention of JV scholars (Hennart, 1988; Steensma, et al., 2008; Yan & Zeng, 1999). JV parent conflict may arise from their incompatible goals in the JV (Hennart, 1988). Also, JV parents encounter the cooperation-competition conflict in which they are interdependent in reaching their respective goals but are impelled to gain more benefits from the collaboration
relationship because certain resources are limited (Buckley & Casson, 2002; Child & Faulkner, 1998; Deutsch, 1949). Research on conflict has taken diverse views including a developmental process view (Pondy, 1967), a system dynamics view (Walton, 1966), and a cooperative-conflictual interaction view (Aldrich, 1976). Based on these views, researchers have discussed conflict in intra-organization and inter-organization settings (Evan & MacDougall, 1967; Walton & Dutton, 1969).

Pondy’s (1967) five-stage model of conflict has received a wide acceptance and been used to analyze the development of parent conflict in the JV (Fey & Beamish, 1999). First, the JV parents’ differing interests and goals can be the source of conflict (i.e., latent conflict). Then, the parents would recognize the existence of their divergent goals (i.e., perceived conflict). After perceiving the conflict, JV parents may have a feeling of hostility, tension and stress (i.e., affective conflict). This can cause JV parents to have conflictual behavior when their disagreement is expressed (i.e., manifest conflict). Finally, conflict would either be suppressed or resolved (i.e., conflict aftermath). The emphasis of this research is on the latter three stages of conflict.

Conflicts in the JV are frequently studied because conflicts and their resolution affect JV performance (Dymsza, 1988; Lin & Germain, 1998). Conflict resolution literature discusses obstacles to conflict resolution (Arrow, et al., 1995), determinants of the positive and negative outcomes of conflict (Deutsch, 1973), and constructive management of conflicts (Deutsch & Coleman, 2000). Conflict resolution involves multi-dimensional strategies, comprising problem solving, compromising, forcing one’s position, and legalistic strategy (Frazier & Summers, 1984; Friedmann & Beguin, 1971; Pruitt, 1981; Thomas, 1976). Following this procedure, JV board becomes a conflict resolution mechanism through which the JV parents’ mutual views can be shared and discussed, pressure can be imposed, and agreement and compromise can be reached (Leksell & Lindgren, 1982). Regarding board structure,
independent directors may play an impartial role in making JV decisions for achieving the best interest of the JV, which helps to unify the goals of the parents. When the independent director’s neutral position is ascertained, decisions made with their involvement can be taken as fair decisions and accepted by both parents with little suspicion of intent (Daily, Johnson, Ellstrand & Dalton, 1998).

In summary, despite mixed empirical evidence and a lack of consequential support for the agency rationale, agency theory continues to be the major theoretical perspective in board research (e.g., Hillman & Dalziel, 2003). Agency theory provides a theoretically convincing argument that reveals the manager-owner conflict (Eisenhardt, 1989). By recognizing the imperfection of governance structures, it opens the discussion of how the board of directors can function to protect shareholders’ interests (Zahra & Pearce, 1989). Agency theory also fills in the vacancy for a straightforward, empirically testable theory on the board of directors (Eisenhardt, 1989). Conflict resolution theory, on the other hand, fills in the theoretical gap in our understanding of JV parent-versus-parent conflicts. Conflict resolution theory addresses the attention of how JV partners can use the board of directors to deal with conflicts and to achieve mutually consented goals. These two theories provide complementary rationale to explain the JV board structure, which will be discussed in detail in the following subsection. Taken as an exploratory study in an almost vacant research area, we put forward some tentative hypotheses for a testing purpose.

**Agency theory, conflict resolution theory, and JV boards**

The JV context we consider is that two or more parent companies pool resources in an independent entity and share their JV’s equity ownership. In view of agency theory, JV boards of directors are formed to monitor JV performance (Goodall & Warner, 2002) so as to protect the parent company’s interests from managerial encroachment; otherwise, JV managers would maximize their own utility through the JV, incurring loss of wealth to the parent company. On
the other hand, JV parent goal conflict is not a negligible issue because it is the source of JV strategic and operational conflicts, which may eventually lead to JV failure (Geringer & Hebert, 1989; Steensma et al., 2008). Thus, it is in the parent’s interests to assign outside directors and independent directors, rather than inside directors, to discipline managerial behavior and partner behavior of the JV.

Agency theory and conflict resolution theory together provide arguments for how the JV board with inside directors is unable to improve JV performance. In contrast to non-JV boards, JV boards are challenged by three major issues which make them difficult to reveal the JV top management behavior and evaluate its performance. First, as noted by conflict theory, the JV directors may be appointed by partner companies that have different and even conflicting goals (Shenkar & Zeira, 1992). For example, whereas the local parent may prioritize on the development of new products, the foreign parent may prioritize on obtaining local market knowledge by selling established products. Goal conflicts may drive the board of directors representing different partners to make incongruent strategic decisions for the JV. Non-unified strategies can leave the JV top managers room to pursue their own interests, blaming bad outcomes on unclear strategy. Second, JV top management performance may be measured against different criteria defined by different parent companies (O’Donnell, 2000). For instance, the local parent company may take the introduction of new products as an important performance measure for the top manager, while the foreign parent company may take the increase of market size as a key performance indicator. Uncoordinated performance criteria may again give managers leeway to reduce effort. Third, there is a high level of outcome uncertainty for JV performance due to higher risks in partnership than sole ownership (Hennart & Reddy, 1997), and host country environmental differences (O’Donnell, 2000). Thus, international JVs experience a larger fluctuation in performance outcomes. High uncertainty in terms of performance causes some companies not to employ any performance
measure for their JV top managers (Frayne & Geringer, 1994; O’Donnell, 2000). These issues aggravate the agency problem, making the alignment of managers’ interests and shareholders/parents’ interests difficult.

The board of directors with outside and independent directors can mitigate the agency problem and parent conflicts in the JV. Outside and independent directors in the JV can better protect the interest of the parent company, whereas inside directors cannot monitor managerial behavior without bias. Outside directors from the partner company can evaluate JV top managers in line with the parent company’s goals. Independent directors can take both parents’ goals into consideration, and make decisions that are seen impartial and acceptable to both sides. So, JV parent conflict may be reduced through the participation of independent directors. Thus, we have the following hypothesis:

Hypothesis 1. A higher degree of JV board independence will improve JV performance.

Resource dependence theory

In contrast to agency theory that views the board of directors as a monitoring body, resource dependence perspective views the board as a provider of resources (Hillman & Dalziel, 2003). Resource dependence theory is rooted in the assumption that differentiation and specialization of the organization drive its pursuit of resources from other organizations since self-sufficiency is not possible (Aldrich, 1976). Seeking resources from the external environment is indispensable for an organization’s survival and growth (Starbuck, 1965). Organizations may pursue external resources using a variety of strategies. These strategies can be either equity-based (e.g., a merger and acquisition or a JV), or non-equity based (such as through directors of the board) (Pfeffer & Salancik, 1978). Boards of directors can be a good source of resources that cannot otherwise be obtained (Pfeffer & Salancik, 1978). Boards of directors reduce the commitment of resources as mergers and JVs do – thus, are less costly.
and more flexible in acquiring key resources for the organization (Pfeffer & Salancik, 1978).

A board composed of members who can bring different and complementary resources can facilitate the organization to “internalize” resource dependence (Pfeffer, 1972).

Boards of directors can bring a variety of resources through a set of activities, including bringing in information, skills and access to key constituents (Gales & Kesner, 1994), providing prestige and legitimacy (Pfeffer, 1972; Selznick, 1949), participating in the strategic decision process (Judge & Zeithaml, 1992), and linking the firm with important external entities and stakeholders (Hillman, Cannella & Paetzold, 2000). In a theoretical discussion of board functions, Hillman & Dalziel (2003) defined the resources brought by the board of directors as “board capital”, which consists of human capital (i.e., experience, expertise, and reputation) and relational capital (i.e., network of ties to other organizations). They claimed that board capital facilitates the provision of resources, which, in turn, promotes firm performance.

**Resource dependence theory and JV board**

Formation of the JV is based on equity contributions of JV sponsoring parents, which are determined by their contributed resources. Normally, the larger the value of contributed resources, the higher the equity share owned by a particular partner (Schaan, 1983). Contribution of resources can be either monetary, or non-monetary (e.g., rights for using land), and either explicit (e.g., equipment) or implicit (e.g., technical know-how). The initial contribution of resources determines the parent’s capability to influence JV decisions such as appointing managers and directors on the board (Child & Yan, 1999; Tretiak & Holzmann, 1993). However, the influence in JVs is an on-going process rather than a one-shot action. That is, JV parents need to provide continuous contributions to the JV to exercise influence on it (Blodgett, 1991). Participation in the board of directors enables the parent to provide advice, expertise, and information for JV decisions (Björkman, 1995). The JV board functions as an
interaction, coordination, and negotiation platform between the parents and the JV to bring in key resources. Goodall & Warner (2002) found that the JV board provides a series of resources, such as participating in formulating the strategic plans, advising the JV’s management, facilitating the establishment of relationships with external parties, advising the parent’s management on their JV involvement, and providing knowledge of local conditions in a sample of 36 Sino-foreign JVs. Resource contributions can change the bargaining power of the partner, which increases its capability in influencing the other party’s decision variables (Pfeffer & Salancik, 1978). When potential conflicts exist, the party with stronger bargaining power can leverage its capability towards its preferences, thus reducing the intensity of conflicts (Lin & Germain, 1998).

Pfeffer & Salancik (1978) suggested that boards of directors can provide four types of resources/benefits: (1) advice and counsel, (2) legitimacy, (3) information channels between the firm and external entities, and (4) support from external entities. In the following subsection, we will illustrate how these resources are related to different types of board of directors of the JV.

**Inside directors**

Inside directors usually serve as executives or take other key positions in the JV. Parent companies are keen on appointing key positions with their own people (Killing, 1983; Schaan, 1983). Inside directors may have worked in the parent company prior to joining the JV; other inside directors are hired externally. For those directors with work experience in the parent company, their linkage with the parent enables them to bring valuable resources (e.g., expertise and information) to the JV, and provides channels of communication between the JV and the parent. For those directors hired externally, they may bring resources beyond what can be provided by the parent. Their industrial knowledge and market expertise can provide the JV with valuable resources to enhance JV competitiveness.
**Outside directors**

As outside (or parent) directors take executive positions in parent-related companies, they can have extensive knowledge of the parent (and/or subsidiary) organization and are responsible for linking the parent (and/or other subsidiaries) with the JV. They are the key group for formulating and monitoring the JV strategic decisions, appointing and rewarding JV key personnel, and evaluating JV performance. They also feed back JV information to the parent company to facilitate parent decisions. Outside directors can help to bring resources, including market knowledge, technical expertise and managerial knowledge, to the JV. For instance, the JV may need technical expertise to upgrade its product lines. This can be provided by the parent through sending temporary experts with the purpose of training and knowledge transfer. The transfer of implicit knowledge cannot be obtained on the marketplace with negligible costs because it concerns the loss of organizational competitive advantage (Barney, 1991; Wernerfelt, 1984). It may be possible only when an equity relationship, for example a JV, is involved. On the other hand, parent companies are eligible to appoint directors on the board because of their equity ownership. This eligibility, for example, is stipulated in the JV law of China that parent companies shall appoint the board of directors.

**Independent directors – executive and expert directors**

Executive and expert directors include former or current executives of other external organizations such as vertically related companies, and professional experts (e.g., lawyers and bankers). Due to their experience in decision making in other organizations and their professional expertise (Baysinger & Butler, 1985), these directors bring knowledge of strategic decision making and internal operations to the JV. Their experience outside the JV enables them to provide alternative viewpoints, and provide access to vital resources (e.g., legal support and financial capital) so as to improve the JV’s proficiency in operating its local business.
Independent directors – local official directors

Local officials may be involved in the JV board when the government owns a share of JV equity, or even without equity ownership. For example, the JV may be bridged by the local government. In exchange for the “favor”, the JV may invite local officials to sit on the board. Local officials bring many resources beyond pure business information. They have knowledge and experience with local government requirements and local practices. For a country as large as China with high regional diversification, whereas legislation stipulates general guidance on the national level, local practice is often at the discretion of the local government. Local practices may vary greatly across regions and provinces in China (Luo, 2001). Local officials can help to reduce uncertainties related to indigenous surroundings of the JV. Local officials may have connections and ties with important government organs. In an environment where relationships and social networks play an important role, local officials may often help the JV to circumvent external hindrance, dissolve complexities, and even gain favorable treatments.

In summary, outside and independent directors may have more linkage to the external environment than inside directors. JVs benefit from the resources that outside and independent directors can bring. For example, Goodall & Warner’s (2002) study indicates that outside directors on the JV board can inform the JV management of local situations and legal liabilities and provide management expertise. Resource dependence perspective leads to a hypothesis similar to agency perspective regarding board independence. That is, board independence is positively associated with JV performance as hypothesis 1 predicts.

Based on resource dependence theory, researchers argue that as the number and diversity of directors increase, the board is more capable in building up “external linkage” to bring in critical resources for the organization (Goodstein, Gautam & Boeker, 1994; Pfeffer & Salancik, 1978). A variety of directors may provide to the CEO a high quality of advice that is not available internally (e.g., Zahra & Pearce, 1989). Each of the outside and independent
directors brings different attributes, information, and linkages to the board (Baysinger & Butler, 1985; Kesner, 1988; Kosnik, 1990; Westphal & Zajac, 1997). Thus, the size and diversity of the board are positively associated with firm performance (Bethel & Liebeskind, 1993; Goodstein, *et al.*, 1994; Pfeffer, 1972, 1973). JVs need more diversified directors because the JV management may have limited product and managerial knowledge, industrial and market knowledge, and local experience and contacts. Outside and independent directors can help to fill in these gaps. Thus we suggest:

**Hypothesis 2.** A larger JV board leads to better JV performance.

**Hypothesis 3.** A more diversified JV board leads to better JV performance.

Although the monitoring role, the conflict resolution role, and the resource provision role of the directors differ from each other, but in practice, directors may play all three roles at the same time (Johnson, Daily & Ellstrand, 1996; Lin & Germain, 1998). In the monitoring role, the board of directors serves to regulate internal managerial behavior. In the conflict resolution role, the board serves to balance the interests of multiple parents. In the resource provision role, the board serves to link the JV with external factors that generate external dependencies. These three roles are complementary to each other (Hillman, *et al.*, 2000; Hillman & Dalziel, 2003; Lin & Germain, 1998) in maximizing the interests of the partner companies (*i.e.*, the shareholders).

**DATA AND METHODOLOGY**

**Sample and data collection**

We collected data from 42 Sino-foreign equity JVs (EJVs)\(^1\) in 2007. Due to missing information of 4 companies, our hypotheses were tested using data collected from 38 JVs. A

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\(^1\) It distinguishes EJVs from contractual JVs (CJVs) in China. EJVs differ from CJVs in that contribution made by EJV partners requires independent evaluation, while CJV partners themselves can determine the value of their contribution and their relevant equity in the JV. The EJV partner is entitled to share profit
questionnaire was completed by one person representing each JV during a personal interview. The interviews enabled us to probe the respondents’ in-depth thinking and guided our interpretation of certain phenomena (Schwab, 2005). As the business community in China was not accustomed to academic collaboration, face-to-face interaction enhanced understanding and motivated participation. The design of our questionnaire was modified slightly from that of Sim & Ali (1998, 2000). The instrument was translated, back-translated, and retranslated back into Chinese by a bilingual researcher. The interviews were conducted in either Chinese or English. Our interviewees were JV board members, JV general managers, deputy general managers, and senior executives (including both expatriates and locals).

According to previous research, there is a significant correlation between the parent’s assessment of JV performance and that of the JV general manager (Geringer & Hebert, 1991).

Our sample was comprised of 21 Sino-European JVs, 5 Sino-U.S., and 12 Sino-Asian (foreign parents were based in Japan or Singapore). The interviews were taken with 28 JVs located in Beijing, 2 in Shanghai, and 8 in other parts of China. The JVs represented a range of industries, including chemical products, machinery, electric technology and mechanical products, and vehicle parts.

25 JVs had only two parents (one Chinese and one foreign), 9 JVs had three parents, 2 had four parents, and the rest 2 had six parents. The JVs had between 1-20 years of commercial operation by 2007. In comparison, Goodall & Warner’s (2002) firms were between 1-16 years old and Björkman’s (1995) were between 1-11 years old. Our sample companies included both young JVs (e.g., 1 to 3 years in operation), and rather old JVs (e.g., more than 10 years in operation) (see Table 1).

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based on the proportion of equity it owns, while the CJV’s profit sharing does not have to be tied to the partner’s equity stake (Devonshire-Ellis, et al., 2007). This study uses JVs to refer to EJVs.
Table 1. Age of JVs (Number of years in operation)

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of companies</th>
</tr>
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<tbody>
<tr>
<td>1-3 years</td>
<td>9</td>
</tr>
<tr>
<td>4-10 years</td>
<td>10</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
</tr>
</tbody>
</table>

In terms of JV size, we elicited the information of annual sales and number of employees in 2006. The 2006 sales volume ranged from 210,000 Yuan RMB to 2,280,000,000 Yuan RMB with a median of 89,000,000 Yuan RMB. The JVs varied widely in the number of employees from 6 to 5,000 people with a median of 300 people. The big variety of sample companies regarding location, industry, and size was caused by the difficulty of gaining collaboration with companies. On the other hand, the advantage of selecting sample companies of different characteristics is that it strengthens the capability to generalize the research findings (Yin, 1989). A wide range of sample companies was also studied in previous research (e.g., Goodall & Warner, 2002; Kriger, 1988).

24 JVs (63%) had foreign majority/major partners, 10 JVs (26%) had Chinese majority/major partners, and 4 JVs (11%) had 50-50 split equity.2 Over the years, foreign companies had the tendency to increase their share of equity in the JV. Conversely, Chinese partners had the tendency to decrease their equity.

On average, the JV board of directors consisted of 6.29 directors (s.d. 1.78). In our sample companies, the majority had 5 directors (14 JVs: 37%), 6 (6 JVs: 16%) directors and 7 (10 JVs: 26%) directors on the board. Compared with Björkman’s (1995) finding of an average of 7.64 directors in a sample of Sino-Western JVs, board size in our sample of

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2 When there are only two JV partners (one Chinese and one German), the majority owner is the party that owns more than 50% of the equity. When there are more than two partners, the major owner is the party that owns more shares of equity than any other single partner. When there are only two JV partners, split equity refers to 50-50 distribution of equity between the partners. When more than two partners are involved, split equity refers to equal distribution of equity among all partners.
Sino-foreign JVs was relatively small. 13 JVs (34%) had only outside/independent directors, and the rest 25 JV boards (66%) were composed of both inside and outside directors.

On average, the majority/major Chinese parents appointed 2.79 board members (including chairman) (s.d. 1.23) and the majority/major foreign parents appointed 3.37 board members (including chairman) (s.d. 1.42). In 22 JVs (58%), a majority of directors and chairman/chairmen represented the foreign parents. In 8 JVs (21%), a majority of the directors and chairman/chairmen represented the Chinese parents. For the remaining 8 JVs (21%), the foreign and Chinese parents appointed an equal number of directors (including chairman).

9 JVs had one chairman to represent the JV partner. A majority (29 out of 38) of the JVs had two chairmen (one chairman and one vice chairman) on the board. Among the 9 JVs with one chairman, 7 of them represented the foreign partners and 2 represented the Chinese partners. Our sample shows that the majority owner was entitled to appoint the chairman, and the minority owner was entitled to appoint the vice chairman (if any). 10 JVs had one board meeting per year, 17 JVs had two board meetings, 3 JVs had three board meetings, and 2 JVs had four board meetings. Information on board meeting for 6 JVs was missing.

Measures: dependent variables

JV performance. Different from studies on the board of directors in general organizations, which have used market-based indicators and/or accounting-based financial indicators to measure company performance (Dalton et al., 1998), we used subjective assessment in the JV setting. It has been widely accepted to use subjective assessment to measure JV performance (Geringer & Hebert, 1989). JV performance was assessed using four subjective measures. First, the interviewee was asked to assess the overall performance of the JV on a 5-point scale in which “1” indicated that he/she was very dissatisfied, and “5” indicated that he/she was very satisfied’ (abbreviated as OverallSatisf).
Second, the interviewee was asked to indicate his/her assessment, from the viewpoints of the Chinese and foreign parents separately, on the level of achievement of: a) sales growth (SalesGrowthCPFP); b) market share (MarketShareCPFP); c) profits and dividends (ProfDividCPFP). Each of these three performance measures was coded using a scale in which “1” indicated that the level of achievement of the specific performance measure was far short of expectation, and “5” indicated that the level of achievement of the specific performance measure far exceeded expectation. In obtaining each of the latter three measures, the average score of the Chinese parent and the foreign parent’ views was computed.

**Measures: independent variables**

**Board independence.** Board independence was measured by the proportion of outside and independent directors (PropOutIndepDirectors). To compute the proportion of outside and independent directors, responses to the number of outside and independent directors of each JV were added, and then divided by the total number of directors of that JV. We combined the categories of outside and independent directors because no firm in our sample had an independent director.

**Board size.** Board size was measured in terms of total number of directors (NrBoD).

**Control variables**

**JV size.** According to prior research, the two firm size measures – sales and number of employees – are highly associated. So we used the logarithmic transformation of the JV’s sales volume in 2006 (Sales) to represent firm size because sales was a more useful variable in our tests.

**JV equity.** We predicted that whether the local Chinese parent owns the majority/major equity or the foreign parent owns the majority/major equity can make a difference in the JV performance. JV equity (Equity) measures the percentage of parent equity ownership. It was
used as a dummy variable, with the Chinese majority/major equity ownership assigned with a value of 0, and the foreign majority/major equity ownership assigned with a value of 1.

**Number of parents.** Number of parents (NrParents) was measured by the number of sponsoring parents.

We also wanted to control JV length (JVLength), which was measured in terms of number of years in operation of the JV. JV length may also be positively linked to JV performance – the longer the JV is in operation, the better its performance. However, we found statistically significant correlations between JV length and board size and sales in the correlations tests presented in Table 2. Also, collinearity diagnostics indicated the presence of multicollinearity to an appreciable degree. Thus, we excluded JV length in the regression model illustrated below.

**Method specification**

We use multiple regression analysis to test the influence of board independence and board size on JV performance. The form of the regression equation can be written as:

\[
JV\ Performance = a + b_1 \times \text{PropOutIndepDirectors} + b_2 \times \text{NrBoD} + b_3 \times \text{Sales} + b_4 \times \text{Equity} + b_5 \times \text{NrParents}
\]

**RESULTS**

Descriptive statistics and correlations for all of the variables are presented in Table 2.

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3 Specifically, the variance inflation factor (VIF) value for JV length is 1.89 (see Hair *et al.*, 1998).
### Table 2. Descriptive statistics and correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PropOutIndepDirectors</td>
<td>0.81</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. NrBoD</td>
<td>6.29</td>
<td>1.78</td>
<td>-0.05</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. NrParents</td>
<td>2.56</td>
<td>1.01</td>
<td>0.25</td>
<td>0.32</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Equity</td>
<td>NA</td>
<td>NA</td>
<td>-0.35*</td>
<td>-0.02</td>
<td>-0.30</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. JVLength</td>
<td>9.08</td>
<td>5.12</td>
<td>-0.02</td>
<td>0.43**</td>
<td>0.25</td>
<td>-0.24</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Sales^b</td>
<td>7.84</td>
<td>0.90</td>
<td>-0.19</td>
<td>0.26</td>
<td>-0.14</td>
<td>0.12</td>
<td>0.54**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. OverallSatisf^f</td>
<td>3.50</td>
<td>1.22</td>
<td>0.03</td>
<td>0.27</td>
<td>0.10</td>
<td>-0.05</td>
<td>0.35*</td>
<td>0.41*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. SalesGrowthCPFP</td>
<td>2.94</td>
<td>0.81</td>
<td>-0.24</td>
<td>0.10</td>
<td>0.07</td>
<td>0.11</td>
<td>0.44*</td>
<td>0.58**</td>
<td>0.62***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. MarketShareCPFP</td>
<td>2.89</td>
<td>0.77</td>
<td>-0.29</td>
<td>-0.25</td>
<td>-0.32</td>
<td>0.11</td>
<td>0.09</td>
<td>0.25</td>
<td>0.46*</td>
<td>0.70***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10. ProfDividCPFP</td>
<td>2.88</td>
<td>1.02</td>
<td>-0.15</td>
<td>-0.07</td>
<td>0.33</td>
<td>-0.05</td>
<td>0.29</td>
<td>0.42*</td>
<td>0.45*</td>
<td>0.44*</td>
<td>0.55**</td>
<td>1</td>
</tr>
</tbody>
</table>

Independent variables: PropOutIndepDirectors = proportion of outside and independent directors in relevance to total number of directors; NrBoD = number of board of directors.
Control variables (tentative): NrParents = number of parent companies; Equity = majority/major equity ownership by the parent; JVLength = number of years in operation of JV; Sales = sales volume of JV in 2006.
Dependent variables: OverallSatisf = level of overall satisfaction of the interviewee to the JV; SalesGrowthCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of sales growth of JV; MarketShareCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of market share of JV; ProfDividCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of profits and dividends of JV.

^a N = 38
^b Logarithm of 10
* p < 0.05; ** p < 0.01; *** p < 0.001
Table 3. Regression Models for Board Structure and JV Performance

JV Performance = a + b1 * PropOutIndepDirectors + b2 * NrBoD + b3 * Sales + b4 * Equity + b5 * NrParents

<table>
<thead>
<tr>
<th>JV performance measures</th>
<th>Intercept</th>
<th>PropOutIndepDirectors</th>
<th>NrBoD</th>
<th>Sales</th>
<th>Equity</th>
<th>NrParents</th>
<th>F-Val.</th>
<th>R²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>OverallSatisf</td>
<td>-3.99</td>
<td>2.69†</td>
<td>0.09</td>
<td>0.59*</td>
<td>-0.22</td>
<td>0.07</td>
<td>2.27†</td>
<td>0.33</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>(2.43)</td>
<td>(1.42)</td>
<td>(0.13)</td>
<td>(0.24)</td>
<td>(0.50)</td>
<td>(0.22)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SalesGrowthCP FP</td>
<td>-0.76</td>
<td>0.02</td>
<td>-0.09</td>
<td>0.54**</td>
<td>-0.27</td>
<td>0.07</td>
<td>2.39†</td>
<td>0.41</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>(1.65)</td>
<td>(1.02)</td>
<td>(0.09)</td>
<td>(0.16)</td>
<td>(0.35)</td>
<td>(0.18)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MarketShareCP FP</td>
<td>3.22</td>
<td>0.04</td>
<td>-0.22†</td>
<td>0.25</td>
<td>-0.13</td>
<td>-0.41</td>
<td>1.55</td>
<td>0.39</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(2.10)</td>
<td>(1.18)</td>
<td>(0.11)</td>
<td>(0.20)</td>
<td>(0.43)</td>
<td>(0.34)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProfDividCPFP</td>
<td>0.12</td>
<td>-1.27</td>
<td>-0.22†</td>
<td>0.57**</td>
<td>-0.41</td>
<td>0.44†</td>
<td>3.47*</td>
<td>0.52</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>(1.87)</td>
<td>(1.15)</td>
<td>(0.11)</td>
<td>(0.19)</td>
<td>(0.40)</td>
<td>(0.21)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Independent variables: PropOutIndepDirectors = proportion of outside and independent directors in relevance to total number of directors; NrBoD = number of board of directors.
Control variables: Sales = sales volume of JV in 2006; Equity = majority/majority equity ownership by the parent; NrParents = number of parent companies.
Dependent variables: OverallSatisf = level of overall satisfaction of the interviewee to the JV; SalesGrowthCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of sales growth of JV; MarketShareCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of market share of JV; ProfDividCPFP = the average score of the Chinese and foreign parents’ assessment on the level of achievement of profits and dividends of JV.
Entries represent unstandardized regression coefficients for all variables with N = 38. Standard errors in parentheses.
† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001

Table 3 presents the results of regressions models used to test the hypothesized effects of hypotheses 1 and 2. Summarizing the results, the table indicates that three of the four regressions which examine our hypothesized effects of board independence and board size on JV performance measures have $F$-values significant at the 0.10 level or beyond. Of these three regressions, one regression derives significant explanatory power from board independence, and one regression derives significant explanatory power from board size. We note from Table 2 that there is a positive correlation between the proportion of outside and independent directors and JV equity (-0.35, $p < 0.05$). However, diagnostic tests did not indicate the presence of multicollinearity to any appreciable degree.

Table 3 indicates support to hypothesis 1 when JV performance is measured by overall satisfaction. The evidence is consistent with our expectation regarding the positive influence
of board independence on overall satisfaction ($b = 2.69, \ p < 0.10$). Table 3 does not indicate support to board independence and board size on performance measured by the achievement of sales growth. As mentioned above, the $F$-value was not significant for the regression with performance measured by the achievement of market share. Table 3 indicates that there is statistically significant association between board size and performance measured by the achievement of profits and dividends ($b = -0.22, \ p < 0.10$). However, contrary to hypothesis 2, the sign for the regression coefficient was negative. This indicates that a bigger board decreases profits and dividends.

Hypothesis 3 suggested that a more diversified board will improve JV performance. As discussed above, in our sample JVs, all external directors represented the parent companies and there were no independent directors who were governmental officials, outside executives or professional experts. Thus, hypothesis 3 is not supported. This shows that the JVs are dependent on the parent companies for necessary resources rather than other external parties to a substantial and indispensible degree.

**DISCUSSION**

This study has endeavored to extend the discussion of boards of directors in conventional organizations to the context of JVs. Both theories need to be developed and empirical tests be conducted. With the development of insights in the research of boards of directors in common organizations, research on the board of subsidiaries (including JVs) should build up its theoretical rationale by considering their characteristics, such as equity structure, relationship of major shareholders, and incentives for board supervision. This research advances a step further by integrating resource dependence theory and agency theory to explain the composition of the JV board and its impact on JV performance. Different from common organizations, JVs concern separation of control between the partner companies. The tendency to use the board to resolve parent conflicts invites additional rationale from conflict
resolution theory.

We found support that JV board independence enhances overall performance. In support of our theoretical arguments, board independence improves the monitoring of the managers and the collaborating partners, and brings more resources to the JV. However, there was a lack of such support when performance was measured by the other three indicators. Also, board size was proved to negatively affect the achievement level of profits and dividends. This was contradictory to our predicted direction. It may be explained that a bigger board reduces the parent’s agreement of allocating dividends.

In an earlier study, Kriger (1988) suggested that wholly owned subsidiaries bring knowledgeable independent directors to sit on the board, who can guide and advise management on the local environment and development. Viewing from the resource dependence perspective, the board of directors is a good source to bring resources (such as technical expertise and local market knowledge) to the JV. However, there were only outside directors but no independent directors in our sample JVs. This indicates that directors from the partners have taken the role in bringing in the necessary information and connections. In contrast, external organizations (e.g., government organs) were not as important to the JVs as the parent companies regarding resource provision. The essence of joining efforts in forming the JV is to utilize the special resources brought by each partner. Thus, the composition of the board of directors has been pre-determined regarding the trust on the partner’s capabilities in providing diverse capabilities and resources.

On the other hand, it may be of greater concern of how the JV partner could best exercise its rights and exerts influence over JV decisions. To occupy the board seats with parent executives was an effective mechanism to balance the parent’s power vis-à-vis the counterparty and to better control the JV management. Instead of giving seats to independent directors, it is in the parent’s best interest to appoint its own people to sit on the JV board.
From the agency perspective, monitoring can be exercised by appointing parent representatives on the board. Due to a lack of board diversity, we could not provide support to the relationship between board diversity and JV performance.

In summary, despite the theoretical temptation, we obtained limited empirical support to the theories on which this research is based. This may be explained by the following reasons. First, research findings on the board composition-performance relationship in conventional corporations is messy and inconclusive (Dalton, et al., 1998). As the meta-analysis of Dalton, et al. (1998) suggests that better models be employed by, for example, examining the moderating influences rather than only focus on the surface of the composition-performance relationship. JVs have their own structural characteristics, such as shared ownership and parent appointed managers, which may be integrated in the building of the model.

The second reason concerns the difficulty of selecting appropriate performance measures for the JV. Oftentimes, the choice of performance measures affects the results of investigation. As mentioned above, researchers have used market-based measures and/or accounting-based indicators to evaluate firm financial performance (Dalton et al., 1998). But JVs in China are normally not public companies. Thus, almost no public information on market-based and accounting-based performance for JVs was available. Instead, subjective evaluation was used as a proxy of JV performance, which has been widely accepted by JV researchers (Beamish, 1984; Geringer & Hebert, 1989; Killing, 1983; Yeheskel, et al., 2001). Nevertheless, the suitability of using subjective evaluation to replace market-based and accounting-based performance remains questionable for the board research. Regarding the subjective measure, there are concerns on the use of a general single measure versus a composite measure (Ding, 1997; Killing, 1983). Following Pangarkar & Klein (2004), we used four single measures: overall satisfaction with the JV performance, the achievement levels of sales growth, market share, and profits and dividends. But the negative direction of the relationship between board
size and the achievement of profits and dividends in contradiction to our prediction may have exposed the imperfection of our performance measure(s).

We suggest that, in the JV board context, performance measures be linked to the roles played by the board following the rationale of the theory. For example, as resource dependence theory proposes that the board of directors primarily practice the role of bringing in resources. In that case, JV performance should capture the benefits due to resource acquisition. For instance, performance measures may include access to local market, access to capital and acquisition of technical expertise. This helps to evaluate the more direct effect of JV boards on performance within the structure of the theoretical argument.

Though, as noted early, the parent’s assessment of JV performance is correlated with the assessment of the JV general manager (Geringer & Hebert, 1991), ideally, we should have interviewed JV board members and parent executives, but due to resource and time constraints, we could not reach them. Further research may consider drawing a sample from board members and parent company executives, in part because they have fuller information on how the JV board functions, what its challenges are, and what solutions are available.

While we boast our first-hand data using questionnaires which enabled us to answer more focused questions on the JV board of directors, considering the constraint of sample size, we take this research as an exploratory study aiming to open the discussion of an interesting area of research.
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