The Independent and Interactive Roles of
Procedural, Distributive, and Interactional Justice in Strategic Alliances

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Abstract
This study extends the existing research on strategic alliances (SAs) by exploring independent and combined effects of distributive, procedural and interactional justice in this setting. By integrating justice and alliance theories, we develop a framework that links payoff for cooperation with organizational justice as perceived by the boundary spanning executives in SAs, through whom perceptions of justice are transformed into parent actions. The analysis of 127 SAs demonstrates that when goal differences between parties are high, the joint effect of procedural and distributive justice is significantly positive in relation to alliance performance. When the level of interactional justice is high, procedural or distributive justice exerts an even stronger effect on alliance performance. Along with these results, a justice perspective enriches alliance research, especially regarding procedural formalization, incentive structure, and interparty attachment.
In recent years, research on organizational justice has proliferated. The field of organizational justice began to develop in the 1960s, when Adam’s (1965) introduced his equity theory, which focused on the perceived fairness by employees of outcomes, such as pay selection and promotion decisions. This aspect of organizational justice came to be known as distributive justice (DJ) because it related to the fair distribution of outcomes within the workplace. Since the distribution of rewards or outcomes was not always as important as the process by which they were allocated, the focus of research on organizational justice shifted to procedural justice (PJ) or perceived fairness of the process by which outcomes are reached (Lind & Tyler, 1988). This form of justice is found in procedures that embody certain types of accepted normative principles, such as consistency, bias-suppression, accuracy, correctability, representativeness, and ethicality (Leventhal, 1980). Meanwhile, the study of interactional justice (IJ)—or perceived fairness of the nuances of interpersonal treatment—emerged. IJ represents the interpersonal aspect of justice or the way in which superiors treat employees while enacting procedural justice (Bies & Moag, 1986).

Overall, research on organizational justice has typically focused on micro-level aspects of the organization, which has resulted in a paucity of insight into higher level topics, such as interfirm cooperation (Konovsky, 2000:506). On the other hand, justice theory and its central principles are potentially applicable to some macro-level phenomena, in particular those associated with the manner in which resources are allocated within a particular firm as well as between firms (Kim & Mauborgne, 1993). The purpose of the present study is to address organizational justice in one particular macro-level context—that of strategic alliances (SAs)—and to accordingly emphasize one special high-level team—the top executives, known as boundary spanners, who represent each investing party in these SAs.

As we have discovered during our many field trips to emerging markets, when organizations select their partners for SAs, they not only assess partners’ ability but they also focus on partners’ integrity, benevolence, trustworthiness, and affective states. In particular, alliance executives in China have often reported to us that it is not always easy to build and preserve trust with partner firms and that they are sometimes overwhelmed by the fear of a partner’s opportunism. Interestingly, one
executive indicated that he worried more about uncertainty within an alliance rather than uncertainty outside of that alliance; this fear cannot be alleviated if outcome sharing, joint decision-making procedures, and interactions are not conducted justly. Another executive commented that existing trust might well slip into distrust if organizational justice is absent. In such situations, helping executives to perceive justice within the alliance may in turn garner their confidence in partner firms and their ability to cooperate with them. The use of justice thus creates a strong foundation for interparty cooperation and provides a strong base for the kind of evolving cooperation needed in a volatile environment (Child & Faulkner, 1998).

Although a wealth of knowledge has been accumulated in the field of SAs regarding procedure-related formalization and routinization (Gulati & Singh, 1998; Poppo & Zenger, 2002; Tallman & Shenkar, 1994), outcome-related risk sharing and incentive structure (Das & Teng, 1998; Deeds & Hill, 1998; Ring & Van de Ven, 1992), and interaction-based communication and trust (Gulati, 1995; Inkpen & Currall, 1997; Zaheer, McEvily & Perrone, 1998), very few studies have addressed the importance of PJ, DJ and IJ in SAs. Justice is an important aspect in an SA’s procedure formalization, incentive structure, and interparty communication. Indeed, without procedural, distributive, and interactional justice, structurally and contractually governed formalization and incentive structure alone may not sufficiently motivate each party to commit necessary resources, beyond what is specified in a contract. To fill this void in the literature, we intend to theorize and verify the unique importance of different forms of justice in association with SA performance and to assess the combined effect of PJ, DJ and IJ on SA performance.

We believe that it is important to improve our understanding of organizational justice in SAs for two reasons. First, understanding the unique property of each type of justice in relation to SA performance will help pinpoint how that justice type functions so that one can identify the optimal justice channels through which a party’s goals can best be achieved. Second, knowing the joint effects of PJ, DJ and IJ may help develop an SA’s justice system in which various types of justice complement one another. For these reasons, the present study is likely to provide a valuable perspective on
procedure formalization, incentive structure, and interparty attachment and thus meaningfully contribute to the research on alliance management. The SAs included in this study consist of (1) equity joint ventures and (2) co-production alliances that have their own operating entities (but that are not legally and financially independent). An equity joint venture is an alliance that combines resources from more than one organization to create a new financially and legally independent entity, which is distinct from its parents (Inkpen & Beamish, 1997). The inclusion of co-production alliances that have their own operating entities allows us to have a larger sample to survey alliance executives and to compare these alliances to equity joint ventures in the effects of organizational justice. In addition, to avoid a single-party bias toward perceived justice, this study defines and measures justice from the two parties’ perspectives (through their representatives, known as boundary-spanning executives in an alliance).

In our theoretical framework, we develop the following logic: (1) Each type of justice has a unique property and plays a unique role in improving SA performance. Emphasizing the principle of *equity*, DJ improves performance through increased forbearance and decreased opportunism. Emphasizing the principle of *instrumentality*, PJ improves SA performance through improved formalization and routinization that guides daily exchanges or reduces relational risk through an institutional framework that restrains private incentive seeking. Emphasizing the principle of *social exchange*, IJ bolsters relational attachment through heightened communication, socialization, and knowledge sharing. Through these different properties and roles, each form of justice may add unique value to SA performance. (2) Interactively, DJ, PJ and IJ function together to improve SA performance because they may complement one another in stimulating interparty exchange. In particular, when goal differences between parties are high, it becomes more important for PJ and DJ to reinforce each other in sharpening the function of justice that covers both means and ends of fairness in exchange. IJ complements PJ in providing social elements that foster the enactment of structural elements while complementing DJ in incorporating socially embedded reward elements into an economically structured gain-sharing system.
THEORY DEVELOPMENT

Defining Three Forms of Justice in Alliances

Justice has been generally defined as a tripartite concept consisting of DJ, PJ and IJ.\(^2\) DJ is generally defined as the distribution of benefits and harms, rewards and costs or other things that affect the well-being of the individual members of a group or community (Colguitt, 2001; Deutsch, 1985; Greenberg, 1987). Depending on the group of individuals or entities involved, outcome items vary from individual-related outcomes—such as pay raise, job security, promotion or layoffs, workplace retaliation, and organizational citizenship behavior—to group-related outcomes, such as subsidiary performance, partner commitment, profit-sharing in entrepreneur-investor relations, and resource allocation in mergers and acquisitions. The essential values of DJ are those values that foster effective cooperation to promote each member’s well-being in economic, social, psychological and physiological areas. Three basic DJ principles, or distributive rules, are equity, equality and need (see Deutsch, 1985; Tyler, 1994).

In the specific setting of SAs, we define DJ as the extent to which interparty sharing of the reward from cooperation is fair in view of each party’s contribution, commitment, and assumption of responsibility. Rewards can be monetary, as in the case of profits and dividends, as well as nonmonetary, such as knowledge acquisition and reputation enhancement. Generally, monetary-reward-sharing between parties is more likely to be specified in an SA contract than non-monetary-gain distribution. Therefore, when alliance executives consider non-monetary rewards, their assessment of DJ is typically more perceptual in nature. This perception is strengthened by the fact that parties attach varying weights to different aspects of rewards and that the real contribution of each party to strategic alliance operations does not always coincide with ownership distribution or arrangement. Fairness is generally perceived as the degree to which a party’s real gains accord with their resource (e.g., capital, technology, brand, machinery, distribution, etc.) contribution, ongoing commitment in joint management and cooperation, and risk or responsibility bearing throughout the
course of joint venturing. For instance, in our interviews with Shanghai-based joint venture executives, we learnt that if a foreign party contributed more much-needed advanced technologies than the contract specified, its Chinese partner was often willing to reward the foreign party with a higher profit/royalty sharing and/or a greater decision-making power in product development. An executive of Shanghai Movie and Photo Industries Co., the alliance partner of Xerox, clearly told us that this outcome distribution was fair because it equally motivated both parties. Similarly, if a party dedicates more to the alliance by utilizing its unique business networks with buyers, suppliers, distributors and regulators and is rewarded by another party who provides the former with more technological knowledge, DJ as perceived by both parties will increase. Foreign automakers in China, for instance, tend to perceive higher gain-sharing fairness when their increased technological commitment is returned by the Chinese partners’ greater market access or dealership network sharing (Automotive News, 2006). The perception of DJ is usually compared with the internal referent (the partner firm) and the system referent (alliance contract or policies, if any) as portrayed by boundary spanners who gauge the level of higher-order organizational justice extant in reward sharing or outcome allocation between partner firms.

PJ generally refers to individuals’ perceptions about the fairness of formal procedures governing decisions involving their treatment and benefits. Its basic premise is that fair treatment determines individuals’ reactions to decisions and is thus central to their behavior (Lind & Tyler, 1988). PJ emphasizes structural elements, such as process control and voicing opportunity as well as work relationships, as major determinants of fairness perceptions (Greenberg, 1987). Justice research has extended from how fairness influences lower-order attitudes concerning a particular decision outcome (e.g., self-esteem, social identity and team spirit of employees or subordinates) to how it affects higher-order, long-term attitudes such as commitment, trust, and social harmony towards groups, subunits, and institutions (Konovsky, 2000).

In a setting of SAs, we define PJ as the extent to which the strategic decision-making process and procedures that impact each party’s gains and interests are impartial and fair as perceived by the
boundary spanners representing each party in the alliance. *Fairness* is defined as occurring when the procedures and criteria used in these decisions and the execution of these decisions are (1) transparent, adjustable and correctable; (2) unbiased, representative and nondiscriminatory to each party; and (3) in accordance with contractual specifications. For example, alliance parties may perceive high “transparency” if (1) there are well-defined channels for open discussion between the parties during the formulation and the execution of related procedures; (2) related procedures or joint decisions are always made after considering both sides’ views; and (3) it is clear what is expected from both sides regarding preparing, altering, and adopting related procedures. Similarly, perceived “unbiasedness” may increase when (1) there is no discrimination against either party in preparing and executing related procedures; (2) each party’s participative power in preparing and executing related procedures complies with the alliance contract and is commensurate with its resource commitment to joint operations; and (3) all related procedures are designed for the sake of joint returns and alliance growth, not for an individual party’s sole benefit. International joint ventures in Vietnam, for instance, often face high conflicts when such procedures are biased and when procedural power is incongruent with resource commitment (Barden, Steensma and Lyles, 2005). A French automaker, Peugeot, terminated its alliance with Chinese partners in Guangzhou because it saw unfairness when its managerial autonomy was procedurally undercut by local partners and its participative power in these procedures was lower than it should be in view of its contribution (Harwit, 1997). Generally, the major areas requiring PJ include procedures used in (1) building and structuring an SA (i.e., board formation and decision making, contract codification, and alliance establishment), (2) organizing and managing an SA (i.e., strategic planning, autonomy allocation, and routine management), (3) governing resource sharing (i.e., knowledge transfer, innovation, and resource contribution), and (4) executing SA plans and decisions (i.e., clarity of execution procedures, contract-execution monitoring, and decision-execution monitoring).

IJ focuses on individuals’ perceptions of the quality of interpersonal treatment received during the enactment of organizational decisions and procedures and includes various human-side behaviors
displaying social sensitivity, such as respect, honesty, dignity, and politeness, performed by the originator of justice toward the recipient of justice (Bies, 2001; Bies & Moag, 1986; Cropanzano, Prehar & Chen, 2002). IJ is most likely to be obtained when the originator of justice treats the recipient with sensitivity and provides the latter with justifications or explanations (Tyler & Bies, 1990). While procedural justice focuses on the formal aspect of the exchange process, IJ emphasizes the social aspect of the process (Skarlicki & Folger, 1997). Because IJ is determined by interpersonal behaviors, IJ influences cognitive, affective, and behavioral reactions toward the other party’s representative (Tyler & Bies, 1990). In addition, the person representing the organization in terms of enacting the formal procedures or making critical decisions will also be seen as the representative for high-order justice, which often has organizational consequences through the fairness heuristic effect (Bies & Moag, 1986; Rupp & Cropanzano, 2002).

In an SA setting, we define IJ as the extent to which interpersonal treatment and information exchange between boundary spanners representing each party are fair. Boundary spanners are the leading executives appointed to an alliance, by the different investing parties, as representatives. The top management team in a cross-cultural SA, therefore, is made up of boundary-spanning executives from different countries working at the organization-organization interface and performing the roles demanded by their respective parent organizations as well as by the joint venture or alliance charter or constitution (Schuler, Jackson & Luo, 2003). Each boundary spanner is both the originator (toward the other) and the recipient (from the other) of IJ in a dyadic link between two spanners. Here, fairness is defined as compliance with social sensitivity—including the provision of honesty, courtesy, openness, feedback, mutual understanding, and respect for each other’s social norms—in the course of interpersonal treatment. Such social or interpersonal sensitivity is found to have a significant impact on local-expatriate relationships and local employees’ incentives and productivity in the setting of cross-cultural alliances (Chen, Choi and Chi, 2002). In a series of interviews we conducted in Nanjing and Shanghai, local executives told us that, when their foreign counterparts showed more respect and openness toward them, they became more attached with foreign counterparts and perceived higher
fairness in interpersonal treatments. We also learnt from these interviews that some local executives felt treated unjustly by foreign counterparts when they received neither courtesy and respect nor cultural sensitivity and mutual understanding. While some elements of IJ overlap with communication and trust in SAs, IJ specifically addresses the fairness of personal interactions between boundary-spanning executives who work together at an SA. IJ focuses on social sensitivity in personal interactions; IJ and communication reinforce each other.

**Theoretical Framework of Justice in Alliances**

Figure 1 schematically highlights a theoretical model of justice and performance in strategic alliances. Although justice is a foundation for all types of economic transactions, each form of justice possesses a unique emphasis, function and objective and has a peculiar theoretical underpinning to explain its value added to the results of cooperation. Equity theory (Adams, 1965) sheds light on the importance of fair distribution of resources and outcomes in exchange relationships and underscores the link between sharing returns and each party’s actual contribution and responsibility. According to this theory, equity is the basic norm of DJ, and inequity leads not only to the dissatisfaction of a suffering party but also to other harmful consequences, such as discontinuity of ongoing exchanges, jeopardy in adaptation, and reduction of commitment, which eventually harms the relationship itself (Adams, 1965:267-270). Equity theory also suggests that individuals or parties are more likely to commit to the existing relationship, even under uncertainty, if they believe that rewards will be commensurate with their efforts (Walker & Pettigrew, 1984). Through the equity effect, DJ is a normative force that affects each participant’s motives for repeated exchanges. If participants believe they are treated unfairly as to outcome sharing, their incentives will be hindered and they may even work against each other’s interests, resulting in interparty conflicts, unstable interdependence or even partnership termination (Johnson, Korsgaard & Sapienza, 2002). Similarly, alliance theorists hold that the inequity in gain-sharing that is disproportional to a party’s contribution yields the potential hazard of opportunistic behavior (i.e., self-interest-seeking with guile) in a continuing collaboration process, which then creates a significant obstacle to fostering
confidence in cooperation (Hennart, 1988; Parkhe, 1993; Williamson, 1999). Because of inherent instability arising from the fact that the parties to the exchange interdependently share pooled resources while maintaining their respective parent identities, an SA’s evolution relies partly on equity in gain-sharing. With equity in play, DJ also reduces transaction costs (i.e., firms perceiving the threat of inequity are faced with a greater need for screening, negotiating, and monitoring partners’ behavior) as well as coordination costs (i.e., inequity accentuates a need for realigning the interdependence of tasks and resources along organizational boundaries) (Gulati & Singh, 1998).

While equity theory offers insights into the importance of DJ, the instrumentality paradigm explicates the role of PJ. This paradigm claims that fair procedures lead to favorable outcomes through process control (Thibaut & Walker, 1975). Distribution of these controls among different parties or individuals is the key procedural characteristic that shapes individuals’ views about the fairness of procedures. Individuals view procedures as most fair when control is vested in the participants (Tyler, 1989). People prefer procedures that maximize their personal outcomes, and procedural control is perceived as the best means for ensuring the best personal outcome (McFarlin & Sweeney, 1992). The instrumental perspective assumes that parties do not often have information regarding the trustworthiness of strategic partners nor any information regarding the final gains shared. Therefore, parties refer to the fairness of procedures in decision-making participation or sharing to determine the trustworthiness of an authority or other party and will react positively to that party or joint activities if procedural fairness is present (Lind, 2001). This perspective also argues that PJ can affect DJ such that when procedural information is available before outcome information, such information about procedures will affect judgment about the fairness outcomes (Brockner, 2002). Complementary to this paradigm, alliance theory suggests that procedural control exercised jointly by both parties is instrumental in directing alliance evolution, monitoring each party’s behavior and governing decision-making and implementation (Mjoen & Tallman, 1997; Ring & Van de Ven, 1994). Furthermore, it improves collective governance over joint activities and minimizes appropriation concerns during knowledge exchange between parties (Gulati & Singh,
The logic of IJ is underpinned by social exchange theory. Unlike purely economic exchange, whose wisdom is partially shared by PJ and DJ, IJ is incrementally embedded in a social exchange climate, which is not bound by any specified terms or responsibilities but by social norms that are prevalent in the society surrounding such relationships (Blau, 1964; Granovetter, 1985). Boundary spanners are willing to commit to such relationships because (1) cooperation is initiated by the expectation that an individual’s contribution will be reciprocated in the future by its receptor; (2) if one violates these social norms, he will lose his “face” value, or reputation, in the community or society, which in turn hampers his future attempts to cooperate with others; and (3) partners in most SAs have previously cooperated in various ways, giving rise to trust between parties and between their executives. This precipitated trust, along with the fact that most parties target long-term cooperation in SAs, increases the level of social embeddedness embodied in interactions (Levinthal, 1980). Corroborating this view, research on strategic alliances suggests that fair treatment in interpersonal relations and information-sharing strengthens relational attachment between boundary spanners, which may in turn become social capital that nourishes cooperation (Luo, 2001; Seabright, Levinthal, & Fichman, 1992). According to these authors, relational attachment reflects the degree to which boundary spanners from each party are socially bound through their development of interpersonal relationships and information-sharing or learning. Without fair treatment in interpersonal relationships, the interaction between spanners becomes an economic rather than a social process, which is difficult to sustain for long (Gulati & Westphal, 1999; Inkpen & Beamish, 1997).

From Theory to Hypotheses

Building on the theoretical underpinnings discussed above, we hypothesize in this section how the three forms of justice separately and jointly influence SA performance, measured in this study by asset turnover (sales revenues divided by total assets). Although this measure does not
represent all aspects of SA performance, it has some strength. First, its revenue portion captures in part financial return or profitability. Second, its nominator (sales revenue) is often the prime target and thus an appropriate performance indicator for investment in an emerging market (the data setting of this study). Third, asset turnover is the most important measure to show that total assets are used efficiently, and macro-level justice seeks such efficiency.

**Individual Effects**

As each form of justice improves, unilateral commitment of resources from each party and reciprocal sharing of expertise between parties will both heighten. Thus, the three forms of justice are likely to have an individual and favorable impact on alliance performance. Under higher DJ that bolsters the equity perception, each party’s incentive for interpartner exchange becomes stronger because of increased confidence in impartial gain-sharing. This confidence also energizes forbearance, which then helps stabilize organizational performance (Buckley & Casson, 1988; Das & Teng, 1998) or results in a more-stabilized cooperative environment (Deeds & Hill, 1998). Due to equity hostage or resource mixture in SAs (Hennart, 1988) and a well-recognized high failure rate of these alliances (Blodgett, 1992), executives from each party anticipate that nothing is guaranteed with respect to the ultimate payoff. As such, when they gauge dyadic and dynamic relations with the other party and strategically plan their own party’s commitment to the alliance, they will likely attach greater importance to the fairness of outcome distribution than to the outcome itself. As one senior executive commented in our interview that he would not mind if the alliance did not make profits in the first three years; but what mattered was whether gain or loss sharing between parties was fair. Fair treatment in outcome distribution helps remove fears of exploitation and stimulate openness of communication between boundary spanners (Johnson, 1997; Skarlicki & Folger, 1997; Tyler & Bies, 1990). Opportunism may simply be, as Barney stated (1999:143), part of the cost of gaining access to the special capabilities controlled by another firm that cannot be developed internally or secured through acquisition in a cost-effective way; however, enhanced DJ can reduce this opportunism and facilitate mutual access to, and sharing with, each other’s resources pooled to the alliance. This will
be conducive to alliance performance, such as asset turnover.

Under higher PJ, each party’s incentive for commitment and cooperation is also stronger because fair procedures, rather than expected favorable payoffs, really determine a party’s behavior and commitment (Lind & Tyler, 1988). PJ is particularly instrumental in creating standards and norms of expected behavior and establishing an effective governance structure that encourages cooperation (Folger & Konovsky, 1989; Tyler, 1989). These norms facilitate daily exchanges and routine operations. The growth of relational value emanating from this improvement may transform into increasing asset efficiency through improved governance, which strengthens process control and process effectiveness for both primary activities (e.g., production, inbound or outbound logistics, and marketing) and support activities (e.g., procurement, innovation, and human-resource management). In addition, PJ improves the effectiveness of formalized and routinized policies in a particular relationship because formalized procedures in joint control are unbiased toward both parties and thus viewed as safeguards against dysfunction (Brockner, 2002; Skarlicki & Folger, 1997). In foreign joint ventures in Vietnam, for instance, managerial control and monitoring become more streamlined or effective when such control is procedurally just to all parties (Barden, et al., 2005). Furthermore, favorable PJ increases interpartner conformity in strategic responses to major events or market changes, even though the consequences of such events may be unfavorable to one party (Kim & Mauborgne, 1998). Alliance performance as measured by asset turnover is expected to increase with the above improvements.

Finally, high IJ increases solidarity between boundary spanners, reduces interparty conflicts, and improves interorganizational attachment (Mohr & Spekman, 1994; Nooteboom, 1996). Increased IJ also improves teamwork at senior levels, which stimulates coordination, understanding, and learning and thus alleviates coordination and bureaucratic costs. According to social exchange theory, interorganizational attachment is often originated from, developed through, or manifested in interpersonal links between boundary-spanning executives (Seabright, et al., 1992). Through improved relationships and mutual learning between boundary-spanning executives, IJ can reduce
incongruities between parties in corporate culture and managerial style, which spurs sharing and cooperation between parties. It is reported, for instance, that superior interactions between local executives and foreign expatriates, such as open communications, timely feedback, mutual respect, and interpersonal learning can significantly curtail differences in parent culture, strategic philosophy, and routine administration for U.S.-China alliances (Beamer, 1998). Boundary-spanning executives in an alliance represent their parent companies; their views toward IJ and their personal interactions with counterparts influence parent actions in interparty exchanges. Increased IJ between boundary spanners will therefore facilitate parent-level collaborations and contribute to alliance performance measures such as asset turnover. In light of the above discussions, we propose:

**Hypothesis 1:** There will be a positive relationship between each form of justice (PJ, DJ and IJ) and alliance performance (as measured by asset turnover).

**Interactive Effects**

Figure 1 also shows the theoretical logic behind the interaction effect between different forms of justice in relation to alliance performance. A key notion in justice theory is that PJ and DJ can function together to determine perceptions and contributions of fairness, especially when expected outcomes are unfavorable (Folger, 1987; Lind, 2001). In this circumstance, people use their evaluations of process and outcome to generate a global impression of the fairness of an authority, which is then used to determine whether or not to accept the mandates of an authority. If their evaluations of process and outcome are simultaneously high, they will have more positive reactions to their encounters with other people, groups, and organizations despite any anticipated outcome unfavorability (Brockner & Wiesenfeld, 1996; Lind, et al., 1993).

We envision that this view may apply to the SA context as well. Although SA partners are unable to accurately predict in advance outcome favorability or joint payoff, because of a large array of organizational and environmental contingencies (Parkhe, 1993), they generally gauge cooperation risks and returns from goal differences between parties (Beamish & Banks, 1987). Differences in the strategic goals underlying each party’s SA formation hamper their perception and commitment toward the favorability of collective gains. This goal disparity increases opportunism (Hill, 1990).
When goal differences are higher (e.g., a local party seeks knowledge acquisition whereas a foreign party seeks global market expansion), the joint force between DJ and PJ will become more salient in mitigating opportunistic behaviors. With high goal differences in place, a party’s responses and commitments to joint activities depend more strongly on its perceptions of how it is treated in both processes and outcomes by the other party. Confidence and commitment will be higher if outcomes resulting from fair procedures are seen as justified. The instrumentality logic holds that, when inter-group objectives and values significantly differ, people will attach greater importance to procedure fairness and outcome sharing fairness to determine their organizational citizenship behaviors (Farh, Earley & Lin, 1997; Folger, 1987; Konovsky & Organ, 1996). In the presence of high goal differences between SA parties, the combination of increased PJ and DJ is expected to reduce the hazardous impact of goal differences on SA performance. If goal differences are low, the combined effect may not be significant (but PJ and DJ still create their individual effects separately) because it is significant goal differences that propel SA parties to demand greater justice in both decision-making processes and gain-sharing at the same time so that fairness prevails in the entire cooperative chain comprising both procedures and outcomes.

In the situation of high goal difference, a party is unlikely to be satisfied if it perceives only high PJ or only high DJ. Instead, parties want the complementary effect of PJ and DJ: DJ helps establish a fair incentive system that shares collective gains generated through a series of fair procedures set forth by both parties, while PJ helps establish an effective channel to realize these gains distributed on the basis of DJ. Put alternatively, in the situation of high goal differences, a party may have some tolerance if only procedure or only outcome distribution is unjust. However, if both procedure and outcome distribution are unfair, it may exit from this alliance. The divorce of Peugeot’s joint venture in Guangzhou, an example we previously noted, may have in part to do with this: Peugeot realized substantial goal differences with the Chinese side from the very beginning (the French investor aimed at local sales but the local partner eyed on employee training and content localization). Its real contributions (e.g., knowledge, technology, training) to the venture also far
surpassed its contractual obligation (it only shared 22% of ownership and profit). Nevertheless, Peugeot tolerated these goal differences and distributive injustice all the way until the point when its power in participating in joint decisions was weakened and its voices were ignored (procedural injustice). These discussions lead us to expect:

**Hypothesis 2:** When goal differences between parties are high, the two-way interaction between PJ and DJ will be positively related to alliance performance (as measured by asset turnover).

Social exchange theory holds that economic actions, including formal outcome allocations and structural procedures of interfirm exchange, are nurtured or promoted in a socially-embedded structure (Granovetter, 1985). This view implies that social exchange structure can moderate the consequence of formal allocation processes and structural procedures. Similarly, justice theorists suggest that PJ and DJ are important and necessary, but not sufficient, to cause individuals to react positively to the decision maker or to make organizational commitments (Bies, 2001; Folger, 1987; McFarlin & Sweeney, 1992). When PJ and DJ are accompanied by improper IJ conduct, recipients may feel particularly resentful toward decision makers. A socially acceptable conduct that fulfills these decision makers’ interactive fairness or moral obligations dissociates them from unfavorable reactions or resentment (Brockner & Wiesenfeld, 1996). Provided that interactive fairness is established and enforced, PJ or DJ may be further facilitated to improve outcomes in a superior environment.

Specifically, justice theorists suggest that, in a volatile environment (the setting of this study), IJ is often used by exchange parties as a reference to gauge fairness in gain-sharing (Cropanzano, Prehar & Chen, 2002; Welbourne, Balkin & Gomez-Mejia, 1995). A party receiving superior IJ may attach higher satisfaction with the same level of DJ; this heightened satisfaction increases a party’s commitment to joint activities, thus making the same level of DJ more contributive to alliance performance (Tyler, 1994). Similarly, social exchange theorists suggest that when interactive procedures are fair, boundary spanners’ needs for self-esteem and self-identity are likely to be satisfied (Williams, 1988). With improved identity and esteem, the role conflict and role ambiguity of boundary spanners are reduced. Boundary spanners on both sides of the SA will grow into a
stronger team, one that can make better decisions in repeated exchanges (Shenkar & Zeira, 1992). An executive at Xerox’s joint venture in Shanghai explicitly commented in our interview that, as personal interactions between different party representatives improve, decision making for joint activities, such as new investments, product development, market expansion, and financial planning, becomes more efficient and effective. In these circumstances, DJ may add more value to cooperation outcomes such as alliance performance because senior managers’ reactions to distributive equity are more positive when they use improved IJ to predict the future justice of outcome distribution (Tyler, 1989).

Meanwhile, improved IJ offers a better social environment within an SA and improves information sharing and personal relationships between the boundary spanners representing different parties. Justice theory espouses that improved information sharing and interactions between parties help create a better environment in which to develop, comprehend and comply with procedures, thus intensifying the role of PJ in contributing to group performance (Korsgaard, Schweiger & Sapienza, 1995; Tyler, 1994). Meanwhile, alliance research documents that IJ can compensate for PJ’s limitations in governing alliance adaptation and change in a dynamic market. Neither contractual nor structural mechanisms can completely govern and monitor long-term operations of SAs, given the fact that no party can anticipate in advance changes of market and regulatory conditions (Das & Tang, 1998; Meyer, 2001; Poppo & Zenger, 2002; Williamson, 1999). This limitation, however, can be redressed in part by relational attachment between top executives, fostered by fairness in information sharing and social interactions (Luo, 2001). Johnson (1997) reported that, in the context of U.S.-Canada alliances, PJ contributes more to partner commitment when personal interactions between boundary spanners are superior. With strong IJ operating, PJ is thus likely to be more powerful in augmenting the returns on cooperation. We accordingly project:

**Hypothesis 3:** When IJ is higher, there will be a stronger positive relationship (a) between DJ and alliance performance and (b) between PJ and alliance performance (as measured by asset turnover).
METHODS

Data Collection

We used cross-cultural SAs in China as the empirical setting in which to test our hypotheses. Today, China is the world’s largest production center for global manufacturers and attracts, on average, $140 million in foreign capital per day. About 65% of such capital is invested through SAs. These SAs are a productive setting in which to examine the processes and outcomes of cross-border cooperation, given the complex nature of alliance projects and the broad diversity of foreign investors in such projects. For this study, we collected data from three major sources: (1) an initial survey, conducted from May to August 2000, targeted at alliance CEOs (general managers), who responded to questions concerning alliance background, their own justice perceptions, goal differences between parties, and the name of the leading manager (typically, the senior deputy general manager) who represents the other party in the alliance; (2) a second survey, conducted right after the first, targeted to the second party’s justice perceptions; it was sent to the chief manager whose name had been given by his or her counterpart in the first survey; and (3) archival data, used to measure asset turnover and several control variables. The two survey questionnaires were initially cross-checked by four management professors in China and further tested for instrument validity with eighteen SA managers. On the basis of feedback from the scholars and managers, we reworded questions or terms that were considered ambiguous.

Sample SAs were identified from the CD-Rom Directory of Foreign-Invested Enterprises compiled by the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) in China. We limited the sample to those SAs with one foreign parent and one Chinese parent, all operating in various manufacturing industries. Our sample was also limited to SAs in the province of Jiangsu (where we obtained outcome information from the province’s local authority) that had been established for at least three years (most survey questions referred to the past three-year period). Although using a single province as the source for this study has its limitations, Jiangsu, with about 80 million people, is perhaps the best setting in which to analyze SAs in China. First, Jiangsu is the country’s second-ranked province in luring foreign capital and the third-ranked province in generating GNP. Second, it has
both very developed and much-less-developed regions, akin to the nation’s disparities across regions. Finally, its policy treatment of SAs is very common to other provinces’ policies.

According to the above criteria, we selected a random sample of 440 SAs. We collected (with one reminder) 176 completed questionnaires (40% response rate) from the first survey. Out of the 176 first-survey sample, 127 counterpart managers completed our second survey and therefore served as our final sample. These sample firms originated mainly in Europe, the U.S., and other Asian countries. On average, sample firms were 7.23 years old by the end of 2000, with 454 employees and $7.03 million in investment capital. About 72% of them were equity-based joint ventures, with others being co-production alliances with operating entities. On average, the respondents in the two surveys had been working for 3.5 years (by the end of 2000) with their current SAs and had approximately 2 years experience working on other alliances before joining their current SAs. We checked the nonresponse bias on the basis of the information from the aforementioned Directory. The mean differences between responding and nonresponding firms along major firm attributes such as total investment, foreign equity, duration, registered capital, and age were contrasted using a $t$-test. The results showed that all $t$ statistics were nonsignificant ($p > 0.10$). We also semistructurally interviewed fifteen respondents to check their response accuracy. The results (Guttman Split-Half $R > 0.88$) showed a high consistency between the respondents’ interview reports and their survey answers.

**Measurement**

Using our early definition of each form of justice in SAs and drawing from several studies in both the justice (Kim & Mauborgne, 1993; Lind et al., 1993; McFarlin & Sweeney, 1992; Tyler, 1994; Tyler & Bies, 1990; Welbourne et al., 1995) and alliance literature (e.g., Johnson, 1997), we developed a multi-item construct to measure each justice variable, all on a seven-point Likert scale (see Appendix 1). Specifically, PJ was measured by an average of eight items that address the fairness of various procedures used in formulating and managing the alliance, governing exchange, and executing joint decisions and contracts. DJ was measured by an average of four items that capture fairness of various reward/return sharing in view of each party’s contributed resources, continued commitment, amount of effort, and level of responsibility. IJ was measured by an average of six items that reflect
interpersonal and interactional treatment. In the main (first) survey, Cronbach’s alpha for PJ, DJ and IJ is 0.77, 0.88 and 0.84, respectively, demonstrating a satisfactory internal consistency for all justice variables. In a rotated three-factor analysis, items for PJ, DJ and IJ are clearly loaded in three different factor structures, hence demonstrating the discriminatory validity that differentiates the three justice constructs. With the exception of one question item of PJ (omitted in the analysis), all other items of PJ as well as DJ are each accompanied with a high loading coefficient (0.70 or higher). Consistent with these coefficients, communality estimates of PJ items (0.85-0.93), DJ items (0.89-0.95) and IJ items (0.88-0.96) are all high. These coefficients and estimates validate the appropriateness of individual items constituting PJ, DJ or IJ. The final scores of PJ, DJ and IJ were computed in two steps: First, we obtained the mean (average) of the two parties’ perceived PJ, DJ or IJ. Second, this mean was then weighted by the James, Demaree and Wolf’s interparty agreement index ($R_{ag}$) in each justice variable between the two parties (1984:88).

As the alliance performance variable, asset turnover was measured using archival data collected from the Jiangsu Commission of Foreign Trade and Economic Cooperation. Asset turnover was defined as average annual sales divided by average total assets over the three-year period (1998-2000). We obtained the performance information from a separate, archival source in an effort to reduce the common method variance. We acknowledge that asset turnover does not indicate all aspects of alliance performance; nevertheless, as Arino (2003) recently verified, this type of measure is highly correlated with other objective (e.g., profitability) and subjective (e.g., overall satisfaction) performance outcomes. To probe whether perceived justice automatically reflected overall satisfaction with previous performance, this study also checked the partial correlation (i.e., correlation after controlling for other variables in this study) between justice variables and previous asset turnover (1996-1997). The results (0.15 for PJ, 0.08 for DJ and 0.11 for IJ) suggest the absence of this autocorrelation.

In all tests we controlled for effects of industry (compound sales growth, 1998-2000, based on the China Statistical Yearbook), location (a city’s GDP growth based on the Jiangsu Statistical Yearbook), size (millions of dollars in investment), alliance age (number of years in existence by 2000), alliance
form (1 = equity joint venture; 0 = otherwise), and national-level cultural distance. Cultural distance (CD) was calculated using Kogut and Singh’s composite index (1988), with Hofstede’s latest dataset (2001:500-502), which contains five cultural dimensions, including power distance, uncertainty avoidance, individuality, masculinity, and long-term orientation (CD=1/5Σ[(Di-Dk)^2/Vi], where Vi is the variance of cultural dimension i, and Di and Dk are the scores of cultural dimension i for the country of foreign origin and China, respectively). Table 1 reports the descriptive statistics and Pearson correlation between all related variables.

RESULTS

We first conducted a multiple regression to verify the individual effect of each form of justice (Table 2). The estimates of variance inflation factor (1.2-1.8) for all predictor and control variables suggest an absence of multicollinearity among them. A modified Kolmogorov-Smirnov test that we performed also validates the normality of these variables as well as dependent variables (p>.20 for each). Overall, PJ, DJ and IJ are individually and positively associated with asset turnover, though PJ and IJ’s coefficients are more significant (p<.01 or lower) than DJ’s (p<.05 in Model 2 and p<.10 in Model 3) in relation to this performance measure. This result supports Hypothesis 1. A comparison of Model 2 with Model 1 (the base model composed of a group of control variables) suggests that the inclusion of three justice variables significantly adds the model’s power in terms of explaining the variance of asset turnover (hierarchical F=9.77, p<.001).

Table 2 (Model 3) also reports the results pertaining to two-way interactions (all interaction components were centered using Aiken and West’s technique (1991:28-45). Interestingly, the two-way interactions between PJ and DJ and between IJ and DJ are not related to asset turnover, but the two-way interaction between IJ and PJ is significant in relation to asset turnover (β=0.28, p<.001). To further test Hypothesis 2, which proposes an interaction effect of PJ and DJ in the face of goal difference between alliance parties, we followed the steps suggested by Sharma, Durand and Gur-
Arie (1981) and performed a subgroup regression analysis (Table 3). We used the mean of goal difference ($\mu = 4.70$) as the cut-off line to divide the total sample into the high-goal-difference group (N=67) and the low-goal-difference group (N=60), and we re-ran the hierarchical regression models. In the high-goal-difference group, the interaction between PJ and DJ is significantly and positively related to asset turnover ($\beta = .20; p<.05$, Model 2). However, in the low-goal difference group, the same interaction is not significantly linked to asset turnover ($\beta = .03$). To further verify this effect, we plotted this interaction (Figure 1) in the two sub-groups. The results show that the interaction effect in relation to asset turnover exists in the high-goal-difference group (Panel I), but it does not exist in the low-goal-difference group (Panel II). These findings lend support to Hypothesis 2.

As shown by the results exhibited in Table 2 (Model 3), IJ’s interaction with PJ is significantly favorable to asset turnover, but its interaction with DJ is not significant. To additionally validate Hypothesis 3, which emphasizes the interaction effects between IJ and PJ and between IJ and DJ (IJ was proposed as a moderator), we plotted these interactions. Consistent with the results in Table 2, the plots in Figure 2 reveal that PJ becomes stronger in contributing to asset turnover (Panel I) when IJ is higher. However, the relationship between DJ and asset turnover remains the same regardless of the actual level of IJ (Panel II). The above evidence demonstrates that IJ facilitates PJ in bolstering an SA’s asset turnover but it does not facilitate the influence of DJ on this outcome. On the basis of these findings, Hypothesis 3b is supported but Hypothesis 3a is not. The rejection of Hypothesis 3a implies that DJ and IJ work separately, not jointly, to influence alliance performance and that unlike PJ, DJ is not significantly sensitive to social exchanges between alliance members, especially between boundary-spanning executives representing different parties. Finally, in order to assess whether different alliance forms in the sample might present a different result regarding the relationship between justice and alliance performance, we conducted a subgroup regression analysis (Models 5-8, Table 3) that divided the sample into equity joint ventures and co-production alliances. Overall, the two groups present similar results regarding the effect of PJ and IJ but present different results regarding the effect of DJ. In particular, DJ has a significant effect on asset turnover in
the group of equity joint ventures but not so in co-production alliances. From this result, we can infer that distributive justice is more important in tightly structured alliances than in loosely structured alliances.⁵

[ Put Figure 2 about here ]

**DISCUSSION AND CONCLUSION**

This study explores how PJ, DJ, and IJ are individually and interactively associated with alliance performance. In our analysis of 127 SAs, the main and interactive effects of PJ, DJ, and IJ generally accounted for significant variance in SA performance in terms of asset turnover. Consistent with predictions derived from an overarching framework that integrates justice and alliance theories, all three forms of justice are important to this performance outcome, with PJ and IJ being even more salient in contributing to this performance compared with DJ. When the sample is further divided by goal differences between alliance parties, these results remain consistent in both the high-goal-difference and the low-goal-difference groups. When the sample is divided by alliance form (equity joint venture vs. co-production alliance), we find that the three forms of justice are all critical in equity joint ventures, but only PJ and IJ remain significant in co-production alliances. We hypothesize and validate that, in the face of high goal differences between alliance parties, PJ and DJ will significantly interact with each other and jointly influence alliance performance. There is also a stronger relationship between PJ and performance (but not between DJ and performance) when IJ increases. That is, in an environment where interactional fairness is superior, PJ tends to contribute more to an SA’s asset turnover. This facilitating role of IJ on the PJ-performance link exists in all subgroups (divided by goal difference or alliance form).

The main results of the present study add meaningful information to the literature on alliances. This study defined the three forms of justice in the alliance context and validated the constructs of these variables. These conceptual attempts may help future investigation of this issue in the realm of SAs or networks in general. For instance, using our definition, construct, or framework, one may discern in what specific ways these forms of justice shape each party’s
cooperative behaviors, such as ongoing commitment, conflict mitigation, forbearance, and risk taking. Moreover, we document that justice influences SA performance that indicates sales revenue per dollar of total assets. SA performance is a critical research issue, and yet its link with justice was not previously established. Extensive research on joint ventures or SAs has established that alliance performance is determined by both economic/structural factors, such as contracting, control, complementarity, and governance (e.g., Beamish & Banks, 1987; Dyer, 1997; Geringer & Hebert, 1989; Killing, 1983; Park & Ungson, 1997; Parkhe, 1993; Reuer & Arino, 2002; Ring & Van de Ven, 1992; Yan & Gray, 1994), and social/relational factors, such as trust, attachment, familiarity, and interpersonal relationships (e.g., Das & Teng, 1998; Gulati, 1995; Inkpen & Currall, 1997; Levinthal & Fichman, 1988; Luo, 2001; Zaheer, McEvily & Perrone, 1998). This study shows that justice is another important social or relational determinant of joint venture performance. Although this study cannot show the relative power of justice in comparison with other social or relational factors, it demonstrates that the three aspects of justice both individually and interactively influence joint venture performance in a significant manner. This reveals a difference between justice and other social or relational variables—that is, justice entails three distinctive constructs (PJ, DJ, and IJ), each of which has a unique logic and path in affecting interparty cooperation and joint venture performance.

Indeed, presenting all three forms of justice within an integrated model enabled us to comprehensively assess the importance of all of the related forms. We argue that DJ improves alliance performance through the equity effect, which reduces relational risk; IJ improves alliance performance through the social exchange effect, which enhances relational attachment; and PJ improves alliance performance through the instrumentality effect, which fortifies relational value. Jointly, their interactions prevail because fairness in one aspect reinforces justice in another (referent-cognition effect) or contributes to a more suitable environment in which other justice forms function (adaptive- or complementary-governance effect). More specifically, IJ fosters PJ by providing a better social environment that complements the formal process of interparty exchange, whose routine decisions are often made by boundary-spanning executives. Because people use their
evaluations of both process and outcome to generate a global impression of fairness under uncertain conditions, the combined effect of PJ and DJ is also stronger when alliance parties’ strategic goals are more significantly different.

Extant theories on cooperation process mainly focus on managerial control (e.g., procedural formalization) or safeguard mechanisms (e.g., incentive structure and contract), leaving cognitive, affective, and behavioral reactions to interorganizational justice virtually unexplored. Our framework and analysis provides an additional and complementary perspective toward the process and outcome of interfirm cooperation. We construed that justice is an important building block of the cooperation process and that it has important repercussions for the outcome of cooperation. The process domains of justice include cooperation procedures, the reward-distribution scheme, and interpersonal treatment between boundary spanners. PJ complements procedural formalization by capturing the fairness and acceptance aspect of procedures; very detailed procedures may not improve alliance performance if they are not fair to both parties. It is this fairness in formalized procedures that holds each party’s confidence and makes these procedures more instrumental in the course of daily operations. Similarly, DJ complements incentive structure by linking payoff sharing with each party’s contribution, commitment and responsibility. Gain-sharing based on the ownership distribution may or may not reflect justice or equity, and this equity is the foundation for reciprocity, a key to ongoing interfirm exchanges. In our recent field study in China, we often heard complaints from foreign investors as well as local companies that their profit-sharing based on the ownership distribution was inconsistent with their real contributions. Lastly, IJ adds fairness in interparty interactions, and its importance, as documented above, includes not only individual but also moderating effects on alliance performance. Previous studies already established that interparty attachment is important to cooperation outcomes (Levinthal & Fichman, 1988; Luo, 2001; Seabright, et al., 1992), and IJ complements this attachment.

These complementary effects can also been seen from the joint effects of the three forms of justice. Justice theorists hold that equity and instrumentality are both important foundations for cooperative behaviors and that they function in complementary and heuristic ways. Building on this
view, we explained that equity attenuates relational risk, while instrumentality spurs relational value and curbs relational risk. Boundary-spanning parties need justice in procedures, distribution, and interaction to foster repeated economic exchanges that are gradually embedded in a social exchange context. Rooted in social exchange theory, IJ strengthens relational attachment, which may not only transform into trust but may also create a more adaptive climate that encourages DJ or PJ to play a role. Their joint effect infers that an adaptive-governance system can be built in an SA through these forms of justice that monitor economic as well as social exchanges. The concept of adaptive governance has recently received increased attention (Luo, 2002; Poppo & Zenger, 2002; Williamson, 1999), and we view PJ, DJ, and IJ as a critical part of this governance architecture. Meanwhile, we realize that alliance theories, especially cooperation and control explanations, are helpful in explicating a macro-level justice phenomenon. A party’s organizational behavior in reaction to justice depends on how this party safeguards its own interests in the course of mutual commitment to boundary-spanning exchanges. Private control and reciprocal cooperation coexist in this course, requiring a justice or equity foundation to avoid the hazards of private control and to nourish rent generation from cooperation.

1. This study also offers some practical implications, especially to cross-cultural alliance executives. As expressed to us by an executive during one of our recent trips to China, internal stability inside an alliance is critical to alliance success, particularly for alliances operating in a volatile market. Maintaining this internal stability is a daunting challenge, especially when two parties have very different goals. Establishing and adhering to procedural, distributive, and interactional justice may go a long way in maintaining such stability and, as shown by the present study, can contribute to success in strategic alliances. During our recent visits of foreign joint ventures established by Siemens, Phillips, Lucent, Avon, Gillette, and Nestle in Jiangsu and Zhejiang provinces, we were repeatedly told by their executives that interpartner conflict actually did not matter as much as the word said or most people thought; what mattered so much was whether or not justice in gain or loss sharing, decision-making procedures, and cross-cultural interactions was in place. These executives believe that as long as justice is present in these areas and fair to all parties, conflicts between alliance
parties will fade away more quickly, or will not cause severe damages because these conflicts become less likely to transmit into partner actions against sharing and cooperation. One executive at Phillips’s joint venture in Nanjing commented in our interview that no joint venture contracts were complete, especially in China, and justice thus became a critical foundation supporting ongoing collaborations between alliance partners who often face many unexpected contingencies and uncertainties. The key results of this study suggest that alliance executives should treat organizational justice as the system encompassing not only PJ but also DJ and IJ, given the individual and joint effects of the three aspects of justice that this study documented. In addition, they should anticipate complementary gains from the coexistence of the three aspects of justice, especially in the face of goal differences between parties. We left with an impression after a series of interviews in Shanghai, Jiangsu and Zhejing that most alliance executives had realized the importance of justice but not yet purposely designed the organizational justice system. The above results remind that this system design is important because alliances can benefit most when the three aspects of justice independently and interactively work together.

Future research needs to address some limitations of this study and further advance research on organizational justice within SAs. First, we scrutinized a link between justice and outcome but did not unveil whether such links are established through any intermediaries or mediated by any other variables. We argued that justice influences asset turnover because of increased relational value or attachment or decreased relational risk. However, such value, attachment, or risk is also determined by other factors, such as interparty familiarity, cooperation history, resource complementarity, unilateral commitment, and goal congruity. Are these factors simply the antecedents of justice, intermediaries between justice and performance, or moderators of the justice-outcome link? Knowing the roles of these variables can help us accurately identify the path of attaining superior justice and satisfactory cooperation at the same time. Because we measured alliance performance by asset turnover only, which clearly is a limitation, future research should include more performance indicators (objective and subjective) to accurately and comprehensively reflect multifaceted alliance
In addition, we emphasized how current justice affected current outcomes but could not tell how stable such relationships would be longitudinally. Would they simply be linear over time or curvilinear, reaching an optimal point at which justice’s contribution to the outcomes of cooperation stops or declines? Justice is not a panacea for all performance problems. When external and internal conditions change, the relative importance of justice may also change. Furthermore, we examined the importance of different forms of justice but did not analyze when they become even more important. Justice is expected to be of varying importance to different SAs, even within a particular alliance under various conditions. For instance, will justice be more essential under greater environmental uncertainty or for SAs whose parents are very unequal in bargaining power? Does the joint effect of PJ, DJ, and IJ also become more important in these circumstances?

Finally, we addressed the consequences of justice but did not uncover how justice is determined in the first place. Justice itself is endogenous and affected by other variables. More importantly, each form of justice may have its own unique determinants. For instance, IJ may be more affected by individual attributes such as work experience and educational background, while PJ may be more influenced by business needs and dyadic relations between alliance partners. Moreover, we verified our propositions using samples from a single country and could not report how our findings apply to SAs in other nations. Although the use of a single-country setting helps control some national-level factors that may affect the justice-cooperation link, the single-country setting could not cast light on how well the results hold in different types of economies, markets, societies, or cultures. Our effort is preliminary and calls for many additional investigations that will theorize and validate where, when, how, and why organizational justice nurtures cooperation in a boundary-spanning situation.
Footnotes

1. Co-production alliances in this study have their own operating entities, but they are not financially and legally independent companies. These alliances are generally less structurally coupled than equity joint ventures, and therefore it is interesting to see whether justice is less important in the former than in the latter, an issue to be discussed in the empirical portion of this chapter. For simplicity of analysis in the discussion and the tests, this study uses SAs that have only two parties.

2. Recently, Colguitt (2001) conceptualized organizational justice as a four-dimensional construct, including not only PJ, DJ and IJ but also informational justice. Since most elements of informational justice cannot be easily separated from interactions between boundary spanners from each party, this study did not separate informational justice from interactional justice.

3. For instance, the equation of IJ can be expressed as: \([IJ_1 + IJ_2]/2 \times R_{wg(IJ)}\). Adding the interparty agreement index \(R_{wg(IJ)}\) as the weight captures the perceptions that are common to both parties (e.g., \([4+5]/2 \times 0.90 = 4.05\) vs. \([3+6]/2 \times 0.70 = 3.15\]). Prior research suggests that commitment or cooperation is higher when both parties’ perceptions of justice are high than when one party perceives high justice but the other perceives low justice (Klein, Conn, Smith & Sorra, 2001). Collective perceptions of justice thus must capture this agreement. \(R_{wg(IJ)} = [1-(MS_{IJ}^2/\sigma_{eu}^2)]/\{[1-(MS_{IJ}^2/\sigma_{eu}^2)]+(MS_{IJ}^2/\sigma_{eu}^2)\}\), where \(MS_{IJ}^2\) is the mean inter-rater variance on the IJ items and \(\sigma_{eu}^2\) is the variance on the measurement scale (see James, Demaree and Wolf, 1984:88).

4. To avoid any possible common method variance, this study chose to use the archival data to measure alliance performance, rather than the subjective assessment from the survey (asking the respondents to report their satisfaction with alliance performance). We attempted to use market share as well but could not obtain this archival information despite our many efforts.

5. We caution that this result was obtained based on a small sample (only 36 in the subgroup of co-production alliances). Also, these co-production alliances, and the results about them, may not represent all kinds of non-equity-based cooperative alliances or networks. In our sample, co-production alliances have their own operating entities, although they are not financially and legally independent. Since many contractual alliances and cooperative networks do not have their own operating entity, further research should investigate how the three forms of justice play their roles individually and interactively in more loosely structured networks or alliances and how these roles systematically differ from those in equity joint ventures.
REFERENCES


FIGURE 1
A Theoretical Model of Justice and Performance in Strategic Alliances

Procedural Justice

Interact when expected outcomes are unfavorable

Distributive Justice

Interact through IJ’s reference to predict gain-sharing

Interactional Justice

Interact through IJ’s relational attachment

Strategic Alliance Performance
### TABLE 1
Descriptive Statistics and Pearson Correlation Matrix

*N = 127*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>St.D</th>
<th>1</th>
<th>2</th>
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<th>7</th>
<th>8</th>
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<td>.22**</td>
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<td>.22**</td>
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<td>4. Asset turnover</td>
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<td>.27***</td>
<td>.15*</td>
<td>.21**</td>
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<td>-.07</td>
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<td>.09</td>
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<td>7. SA type (equity)</td>
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<td>.03</td>
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<td>8. SA location</td>
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<td>.25***</td>
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<td>9 Industry growth</td>
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<td>3.82</td>
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<td>.06</td>
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<td>.22**</td>
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<td>.06</td>
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<td>.09</td>
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<td>.18*</td>
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<td>.08</td>
<td>.11</td>
<td>.07</td>
<td>.19*</td>
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*p < .05; ** p < .01; *** p < .001
TABLE 2  
Hierarchical Moderated Regression\(^1,2\)  
\(N = 127\)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Asset Turnover</th>
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<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td>Procedural justice (PJ)</td>
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</tr>
<tr>
<td>Distributive justice (DJ)</td>
<td>.17*</td>
</tr>
<tr>
<td>Interactional justice (IJ)</td>
<td>.24**</td>
</tr>
<tr>
<td>PJ x DJ</td>
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</tr>
<tr>
<td>IJ x PJ</td>
<td>.28***</td>
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<tr>
<td>IJ x DJ</td>
<td>.08</td>
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<tr>
<td>Control variables</td>
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<td>Goal difference</td>
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<td>Cultural distance</td>
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<td>SA type</td>
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<td>SA location</td>
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<td>SA size</td>
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</tr>
<tr>
<td>SA age</td>
<td>.15†</td>
</tr>
<tr>
<td>Model (F)</td>
<td>7.59**</td>
</tr>
<tr>
<td>(R^2)</td>
<td>.30</td>
</tr>
<tr>
<td>(\Delta R^2)</td>
<td>.14</td>
</tr>
<tr>
<td>Hierarchical (F)</td>
<td>9.77***</td>
</tr>
</tbody>
</table>

#1: The entries are standardized \(\beta\)s;  
#2: All interaction components are centered using the Aiken and West’s technique (1991:28-45);  
† < .10; * < .05; ** < .01; *** < .001
TABLE 3
Subgroup Hierarchical Regression\textsuperscript{1,2}

<table>
<thead>
<tr>
<th>Variables</th>
<th>Asset Turnover</th>
<th>Asset Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Goal Difference</td>
<td>Low Goal Difference</td>
</tr>
<tr>
<td></td>
<td>N=67</td>
<td>N=60</td>
</tr>
<tr>
<td></td>
<td>M1</td>
<td>M2</td>
</tr>
<tr>
<td></td>
<td>M5</td>
<td>M6</td>
</tr>
<tr>
<td>Procedural justice (PJ)</td>
<td>.35***</td>
<td>.30***</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Distributive justice (DJ)</td>
<td>.19*</td>
<td>.17†</td>
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<td></td>
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<tr>
<td>Interactional justice (IJ)</td>
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<td>.23**</td>
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<tr>
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<td></td>
<td></td>
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<tr>
<td>IJ x PJ</td>
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<td>.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IJ x DJ</td>
<td>.30***</td>
<td>.23**</td>
</tr>
<tr>
<td>Control variables</td>
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<td>Cultural distance</td>
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<tr>
<td>SA location</td>
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<td>.23**</td>
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<tr>
<td></td>
<td>.25***</td>
<td>.23**</td>
</tr>
<tr>
<td>Industry growth</td>
<td>.24**</td>
<td>.24**</td>
</tr>
<tr>
<td></td>
<td>.26***</td>
<td>.26***</td>
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<tr>
<td>SA size</td>
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<td>-.18*</td>
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<tr>
<td></td>
<td>-.21*</td>
<td>-.21*</td>
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<tr>
<td>SA age</td>
<td>.15†</td>
<td>.15†</td>
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<tr>
<td>Model F</td>
<td>11.4***</td>
<td>15.1***</td>
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<td></td>
<td>10.7***</td>
<td>13.7***</td>
</tr>
<tr>
<td>$R^2$</td>
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<td>.48</td>
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<tr>
<td></td>
<td>.32</td>
<td>.43</td>
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<tr>
<td>$\Delta R^2$</td>
<td>.14</td>
<td>.10</td>
</tr>
<tr>
<td>Hierarchical F</td>
<td>4.93*</td>
<td>2.97*</td>
</tr>
</tbody>
</table>

\textsuperscript{1}: The entries are standardized $\beta$s; \\
\textsuperscript{2}: All interaction components are centered using the Aiken and West’s technique (1991:28-45); \\
$\dagger < .10; * < .05; ** < .01; *** < .001$
FIGURE 1
Plotting the Interactions
Two-Way Interactions Between PJ and DJ in Different Groups by Goal Difference

I

II

0.5
1.0
1.5
2.0

L
H

L
H

PROCEDURAL JUSTICE
(High Goal Difference Group)

PROCEDURAL JUSTICE
(Low Goal Difference Group)

ASSET TURNOVER

High level DJ = mean + one standard deviation

Low level DJ = mean – one standard deviation
FIGURE 2
Plotting the Interactions
IJ Moderates the Link Between PJ/DJ and Asset Turnover

High level IJ = mean + one standard deviation
Low level IJ = mean – one standard deviation
APPENDIX 1: Major Survey Items

1. **Procedural Justice** (7-point Likert scale, from 1=not true at all to 7=very true)
   (1) The procedures used by the SA’s board members in their decision-making process are fair
   (2) The procedures used by two parties in negotiating, stipulating, and codifying the SA contract are fair
   (3) The procedures used by two parties in formulating and structuring the SA are fair
   (4) The procedures used by two parties in planning, organizing, and managing SA activities (i.e., strategic planning, autonomy allocation, and routine management) are fair
   (5) The procedures used to govern knowledge or resource sharing between two parties (i.e., knowledge transfer, innovation development, and resource contribution) are fair
   (6) The procedures of executing strategic decisions are clearly defined and performed consistently
   (7) The execution of the SA contract is administered and monitored fairly by both parties
   (8) The implementation of strategic decisions is administered and monitored fairly by both parties
   (*Fair means that the above procedures and the execution of these procedures are (i) transparent, adjustable and correctable; (ii) representative, unbiased and nondiscriminatory to each party; and (iii) accordant with contractual specifications)

2. **Distributive Justice** (7-point Likert scale, from 1=not true at all to 7=very true)
   (1) I think between-party sharing of rewards or returns generated from cooperation is fair in view of their contributed resources to the SA
   (2) I think between-party sharing of rewards or returns generated from cooperation is fair in view of their continued commitment to cooperation
   (3) I think between-party sharing of rewards or returns generated from cooperation reflects well the level of responsibility each party takes in building and managing the SA
   (4) I think between-party sharing of rewards or returns generated from cooperation reflects well the amount of effort each party puts into building and managing the SA
   (*Rewards or returns broadly include monetary forms such as profit and dividend and nonmonetary forms such as knowledge acquisition and reputation enhancement)

3. **Interactional Justice** (7-point Likert scale, from 1=not true at all to 7=very true)
   (1) During daily interactions, my counterpart (top manager from the other party) is honest in dealing with me
   (2) During daily interactions, my counterpart respects the importance of guanxi (interpersonal relations)
   (3) Whenever a conflict arises between my counterpart and myself, we always seek complete understanding of each other’s position and opinion in the first place
   (4) My counterpart and I always communicate openly and directly
   (5) My counterpart always provides me with timely feedback when I ask
   (6) In the process of making strategic decisions relating to alliance operations and management, my input is always respected

4. **Goal Differences** (5-point scale, from 5=to a very great extent and 1=not at all)
In the following areas, please give your opinion on the objectives each parent has in establishing this SA (Chinese parent in the 1st column and foreign parent in the 2nd column):
(1) Overcoming entry barriers to the local industry
(2) Generating short-term profits
(3) Reducing financial risks
(4) Reducing production costs
(5) Taking advantage of investment incentives offered by the host government
(6) Improving corporate reputation
(7) Gaining access to the partner firm’s technology, experience and skills
(8) Expanding market share in the host country
(9) Expanding market share in the export market

#1: The informants were asked to refer to the past three years as the time frame for answering the above survey questions;
#2: This item was omitted in the analysis due to its relatively low factor loading.
About the author: Yadong Luo (yadong@miami.edu) holds the Emery Findlay Distinguished Chair in Graduate Business Studies and is Professor of Management at the School of Business Administration, University of Miami. He received his Ph.D in strategic management and international business from Temple University. His research interests include global corporate strategy, global corporate governance, foreign direct investment, international joint ventures, and management in emerging economies.