Managing opportunism in international joint ventures: The role of structural and social mechanisms

CrossMark

Tahir Ali, Jorma Larimo*

University of Vaasa, Department of Marketing, Wolffintie 34, 65200 Vaasa, Finland

ABSTRACT

Building on transaction cost economics (TCE) and social exchange theory (SET), we develop an integrated framework in which reducing opportunism requires two sets of mechanisms: (1) structural mechanisms of symmetric dependence, symmetric equity share and resource complementarity, and (2) social mechanisms of trust, communication and cultural adaptation. The framework is tested empirically using web-survey data collected from 89 IJVs established by Nordic firms in Asia, Europe and America. Empirical data analysis based on structural equation modelling shows that TCE proposed mechanisms of symmetric dependence and resource complementarity, and SET proposed mechanisms of trust, communication and cultural adaptation reduce opportunism. Contrary to expectation, the structural mechanism of symmetric equity share does not reduce opportunism. In addition, interesting results are found related to interaction effects between social and structural mechanisms in relation to reducing opportunism.

© 2016 Published by Elsevier Ltd.

1. Introduction

International joint ventures (IJVs) are among the most prominent modes of international business today (Madhok, 1995; Mainela & Puhakka, 2008; Park & Harris, 2014). Yet IJVs have been reported as having a high rate of failure (Hsieh, Rodrigues, & Child, 2010; Kobernyuk, Stiles, & Ellson, 2014). This has led researchers to investigate the factors that enhance or impede their performance (see Ren, Gray, & Kim, 2009 for a review). In particular, inter-partner opportunism has been proposed in the literature as a major cause of unsatisfactory IJV performance, because it hampers inter-partner confidence, commitment and reciprocity; impairs collaborative effects and synergy creation; increases transaction costs; and impedes IJV evolution and growth by increasing uncertainty (Hennart & Zeng, 2005; Luo, 2007a). Researchers have identified various sources of inter-partner opportunism in IJVs. These sources include: weak property rights of invested resources in IJVs (Hennart & Zeng, 2005), external uncertainty, inter-partner goal disparity, resource misfit, cultural dissimilarity, bargaining asymmetry, and internal uncertainty (Luo, 2006), external uncertainty and inter-firm psychic distance (Katsikeas, Skarmeas, & Bello, 2009), inter-partner asymmetric dependence, payoff inequity, cultural diversity, goal

incompatibility and pressures for quick results (Das & Rahman, 2010). These investigations advance our understandings of the sources of inter-partner opportunism, however we have limited understanding of the mechanisms that reduce opportunism in IJVs (Hennart & Zeng, 2005).

The study of IJVs has been a prolific area of research, even though there are different interpretations of IJVs. Hennart (1993) points out that IJVs are joint hierarchy, and therefore require many structural factors to curb opportunism. Ouchi (1979) suggests that IJVs are 'clan-like' organizational forms that require many relational qualities to curb opportunism. Corresponding to these interpretations, two different research streams have emerged (see Hennart & Zeng, 2005 for a literature review). One stream, rooted in transaction cost economics (TCE), is mainly concerned with examining the underlying structural characteristics of IJV as an explanation for reducing opportunism in IJVs. For instance, Parkhe (1993) and Zhang and Rajagopalan (2002) empirically verify the important role of inter-partner dependence in curtailing opportunism. Hennart and Zeng's (2005) theoretical study proposes dependence and resource complementarity between IJV partners as potential solutions to opportunism. Luo (2007a) empirically validates the importance of contract and equity share between IJV partners in reducing opportunism. Das and Rahman's (2010) conceptual study suggests inter-partner equity share and dependence as structural solutions to opportunism. Hence, in this stream, the various structural characteristics of IJV are considered to be mechanisms that reduce opportunism in IJVs.

* Corresponding author.
E-mail addresses: tahir.ali@uwasa.fi (T. Ali), jorma.larimo@uwasa.fi (J. Larimo).

The other stream, rooted in social exchange theory (SET), is mainly concerned with examining the underlying social characteristics between IJV partners as an explanation for reducing opportunism in IJVs. For example, Wathne and Heide (2000) introduce the notion that inter-partner socialization efforts, which are based on cultural adaptation and trust, can be potential deterrents to opportunism along with monitoring and control. Kale, Singh, and Perlmutter (2000) empirically show that relational capital between partners, which is based on trust and interaction, deters opportunism. Deeds and Hill (1998) find significant evidence that a strong relationship between partners is a more effective deterrent of opportunistic behaviour than hostages or rigorous contractual arrangements. Hence, in this stream, the various social characteristics between IJV partner firms are considered as mechanisms that reduce opportunism in IJVs. Rarely have the two streams been combined in order to provide a comprehensive understanding of social and structural mechanisms that reduce opportunism in IJVs (Luo, 2007a). Further, a growing number of studies share the view that the economic structure of IJV exchange is socially embedded, and therefore social and structural mechanisms jointly improve IJV performance (e.g., Luo, 2002a, 2002b, 2008; Yan & Gray, 1994). These scholars have views that both social and structural mechanisms have some weaknesses and when used together complement each other's weaknesses and enhance IJV performance. However, prior research has not investigated the interactions between structural and social mechanisms in reducing opportunism. Hennart and Zeng (2005), Luo (2006, 2007a) and Jiang, Li, Gao, Bao, and Jiang (2013) maintain that future study is needed especially to investigate the interactions between structural and social mechanisms in reducing opportunism because understanding the way these mechanisms interact in curtailing opportunism is very important.

Thus, to provide further insights, the objective of our study is to combine the elements from the two research streams of TCE and SET in an attempt to gain understanding of the mechanisms that reduce opportunism in IJVs. We have carefully gone through the two research streams of TCE and SET in order to develop understanding of the mechanisms that reduce opportunism in IJVs. We identified three mechanisms grounded in TCE: namely, symmetric dependence, symmetric equity share and resource complementarity between IJV partners (Das & Rahman, 2010; Hennart & Zeng, 2005; Luo, 2007a; Parkhe, 1993; Zhang & Rajagopalan, 2002). These mechanisms are considered as key structural mechanisms that reduce opportunism in IJVs. On the other hand, we identified three mechanisms grounded in SET: namely, trust, communication and cultural adaptation between IJV partners (Deeds & Hill, 1998; Kale et al., 2000; Wathne & Heide, 2000). These mechanisms are considered as key social mechanisms that reduce opportunism in IJVs. The hypotheses developed in framework are tested using a sample of 89 IJVs established by Nordic firms in Asia, Europe and America.

A priori contribution of the present study is that it develops and tests a comprehensive framework of reducing opportunism that comprises three structural mechanisms of symmetric dependence, symmetric equity share and resource complementarity from TCE and three social mechanisms of trust, communication and cultural adaptation from SET. We consider this an important contribution because prior studies are fragmented, as they have mainly focused on either the structural or social mechanisms (e.g., Kale et al., 2000; Zhang & Rajagopalan, 2002) and have analysed limited number of mechanisms. Furthermore, a key feature of prior studies has been that they have analysed only the main effects of mechanisms on opportunism, but the interactions between social and structural mechanisms in their influence on the opportunism in IJVs have not been analysed. Our study extends the prior research on opportunism in IJVs by specifying how different structural (symmetric dependence, symmetric equity share and resource complementarity) and social mechanisms (trust, communication and cultural adaptation) interact in their influence on the opportunism in IJVs.

The remainder of this paper is organized as follows. In the next section, the theoretical background to the research is presented, along with the development of specific research hypotheses. This is followed by a description of the research methodology and results. After presenting the discussion and implications of the results, the paper concludes with some managerial implications, limitations and suggestions for further research.

2. Theoretical background and research hypotheses

2.1. Opportunism in IJVs

Opportunism is one of the central assumptions of TCE, where it is believed that there is risk of opportunism from economic actors whenever such behaviour is feasible and profitable. In Williamson (1985, p. 47), opportunism is defined as "self-interest seeking with guile", and it is manifested in acts like "incomplete or distorted disclosure of information, especially in calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse". In the same work, the author further argues that if the underlying attributes of the transaction, namely, asset specificity and uncertainty, are high for recurrent transactions, the risk of opportunism will be great enough to warrant replacing the market with a hierarchy. However, Hennart (1993, p. 531) articulates that when the output of agents becomes difficult to measure, the risk of opportunism will be great enough to warrant replacing the market with a hierarchy.

This topic of opportunistic behaviour has also been associated with participation in IJVs. While the formation of an IJV reduces the incentives of agents to behave opportunistically by giving them residual rights to the profits of the IJV, the problem is only partially solved because partners suffer only partial penalties for their opportunistic behaviour due to the nature of their partial ownership (Hennart & Zeng, 2005; Zeng, 1998). Therefore in IJVs, the risk of opportunistic behaviour of partner firms is considered as pertinent rather than the exception. In IJV literature, opportunism is defined as "an act or behaviour performed by a party to seek its own unilateral gains at the substantial expense of another party and/or the JV entity" (Luo, 2007b, p. 41), and it is manifested in acts like withholding critical information, misrepresenting facts, shirking obligations, failing to keep promises, exploiting the partner dependence, contributing less than promised in IJVs, and stealing partner contributions (Hennart & Zeng, 2005; Luo, 2007a).

Thus, TCE suggests that a partner firm in IJVs might pursue its own unilateral gains at the substantial expense of another partner and/or the JV entity (Luo, 2007b) and that the possibility of opportunism among IJV partners always exists (Zeng, 1998). Therefore, the risk of opportunism of IJV partner firms should be handled effectively to materialize the benefits of the IJVs (Hennart & Zeng, 2005)

2.2. Transaction cost economics and structural mechanisms to reduce opportunism in international joint ventures

According to TCE, IJVs are formed: (1) to bypass the inefficiencies of intermediate markets with respect to providing raw materials and components, tacit knowledge, loan capital and distribution systems; and (2) when there are high fixed and low marginal costs with greenfield investment, and when assets sought are an inseparable part of total assets held the by target firm (Brouthers & Hennart, 2007; Hennart, 1988). Theory suggests that while the formation of an IJV offers joint benefits to the partners, it

also makes it possible for one partner to obtain unilateral gains at the expense of other partner or the IJV entity (Hennart & Zeng, 2005; Luo, 2007b). To solve the dilemma, theory suggests that IJVs should be structured in ways that reduce the partner's opportunism in IJVs (Hennart & Zeng, 2005; Zeng, 1998). Three important structural mechanisms of the IJV that have received considerable attention in the TCE are: symmetric dependence, symmetric equity share, and resource complementarity between the IJV partners (Das & Rahman, 2010; Hennart & Zeng, 2005; Luo, 2007a; Parkhe, 1993; Zhang & Rajagopalan, 2002). In the following, we explore each of these structural mechanisms in their relation to opportunism and derive hypotheses.

2.2.1. Symmetric dependence

The formation of an IJV requires the partner firms to invest in site, physical, human and dedicated assets. Such specific assets are durable investments that have less value outside the IJV and thus are sunk costs (Williamson, 1985, p. 55). If both partners have equally invested specific assets to the IJV, then these specific assets can create symmetric dependence between IJV partners. Therefore, symmetric dependence between the IJV partners refers to the extent that each partner has contributed equal levels of specific assets to the IJV. The symmetric dependence between IJV partners makes it costly for either partner to consider cheating because both partners will have much to lose if the relationship ends prematurely (Das & Rahman, 2010; Hennart & Zeng, 2005). In other words, mutual dependence "equilibrates the opportunistic hazards" (Zeng, 1998, p. 49). Therefore, a symmetric dependence between IJV partners can create a self-enforcing mechanism that mitigates the partners' opportunism in IJVs.

The important role of symmetric dependence in reducing opportunism has been empirically supported. Parkhe (1993) analysed 111 and Zeng (1998) 49 IJVs established in the United States and both found that symmetric dependence between IJV partners reduces opportunism in IJVs. Further, Zhang and Rajagopalan (2002) looked at four Japanese IJVs established in China and found a negative impact of symmetric dependence on opportunism. Therefore, we hypothesize that:

H1. There is a negative relationship between the symmetric dependence between IJV partners and the perceived level of opportunistic behaviour.

2.2.2. Symmetric equity share

An important structural characteristic of IJV is the distribution of equity between IJV partner firms. Previous research suggests that the size of equity held by partner firms determines the extent to which "strategic decision making", "risks", and "profits" are shared between the partners in IJVs (e.g., Hsieh et al., 2010; Liu, Vredenburg, & Steel, 2014). There has been considerable debate about the relative merits of dominant versus equal equity share in IJVs (e.g., Beamish, 1985; Killing, 1982; Luo, 2007a; Ramaswamy, Gomes, & Veliyath, 1998). In IJVs with symmetric equity share, it is suggested that both partners have less scope for opportunism because both partners have equal ability to influence the strategic decisions (Hsieh et al., 2010; Luo, 2009). Therefore, symmetric ownership reduces opportunism from either partner.

Alternatively, it is said that in IJVs with asymmetric equity between partners, the minority partner having low potential loss and switching cost, and less decision making authority in the IJV, has greater incentive to be opportunistic (Hennart & Zeng, 2005; Liu et al., 2014). Contrary to that argument, Madhok (1995) and Bleeke and Ernst (1991) argue that a dominant partner having greater decision making authority has a greater incentive to be opportunistic by putting its own interest ahead of those of the IJV and partner firm. Altogether, these researchers believe that

asymmetric equity between the IJV partners leads to conflicts and opportunism that can arise from either partner having majority and minority equity. However, given the symmetric sharing of equity by both firms in an IJV, there is likely to be less opportunism since partners equally influence the decisions and can voice concerns regarding decisions that threaten their investments (Hsieh et al., 2010; Luo, 2009). Therefore we hypothesize that:

H2. There is a negative relationship between the symmetric equity share between IJV partners and the perceived level of opportunistic behaviour.

2.2.3. Resource complementarity

An important view in TCE is that IJVs are designed to allow partners to combine complementary inputs (Hennart & Zeng, 2005; Hennart, 1988). In such IJVs, which Hennart (1988) refers to as "link" IJVs, the type of knowledge that each partner contributes to the IJV is different. Indeed, Hennart (1988) argues that IJVs are formed when access to the complementary resources cannot be obtained through market transactions, and acquisition of firms owning them would entail significant management costs because the required resources are an inseparable part of the total assets held by the target firm. Hence, from the TCE perspective, the combination of complementary resources owned by different firms is considered as a primary motivation driving IJV formation.

Prior research that adopts a TCE lens also stresses the importance of resource complementarity in reducing opportunism in IJVs (Hennart & Zeng, 2005; Zhang & Rajagopalan, 2002). There are two aspects to this: no actual competitor and mutual necessity (Hennart & Zeng, 2005; Madhok, 1995). On one hand, complementarity determines that, while contributing different resources to the IJV, partners are not actual competitors. Therefore, the threat of opportunism will be less because partners are not actual competitors (Hennart & Zeng, 2005, p. 112). On the other hand is the issue of mutual necessity, wherein the different resources create bilateral dependence between IJV partners. When the outcome of the IJV depends on the unique resource contributions provided by the partners, then it is in the mutual self-interest and a common interest of partners to forbear from opportunism (Madhok, 1995; Nielsen, 2007). Empirically Zhang and Rajagopalan (2002) analysed Japanese IJVs in China and found that resource complementarity is a source of credible threat in IJVs that reduces inter-partner opportunism and enhances partners' pay-off from the IJV. Hence we hypothesize that:

H3. There is a negative relationship between the resource complementarity between IJV partners and the perceived level of opportunistic behaviour.

2.3. Social exchange theory and social mechanisms to reduce opportunism in international joint ventures

SET is a sociological theory which was initially developed to analyse people's social behaviour in terms of exchange of resources (Blau, 1964). The theory has greatly influenced the research on inter-firm alliances and joint ventures (e.g., Das & Teng, 2002; Deeds & Hill, 1998; Isidor, Schwens, Hornung, & Kabst, 2015; Kwon, 2008; Madhok, 1995). Social exchange has been defined by Blau (1964, p. 91) as "voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others". SET suggests that these voluntary exchanges (like IJVs) should be embedded in strong relational ties between partners. These relational ties not only deter opportunism between partners, but also lead to better IJV performance. Based on existing research on IJVs grounded in SET (e.g., Deeds & Hill, 1998; Kale

et al., 2000; Wathne & Heide, 2000), we identify three social mechanisms (i.e., trust, communication and cultural adaptation) underlying the development of strong relational ties between IJV partners that can curtail opportunism between IJV partners. In the following, we explore how each of these social mechanisms relates to opportunism and we derive hypotheses.

2.3.1. Trust

An important view in SET is that inter-partner trust is social glue that keeps the IJV partners together (Kwon, 2008). Inter-partner trust refers to the willingness of a partner firm to accept vulnerability towards another partner firm (i.e., to rely) in an IJV relationship based on the positive expectations/beliefs of the counterpart's reliability, fairness and goodwill (Dyer & Chu, 2011; Krishnan, Martin, & Noorderhaven, 2006). There is a broad consensus among trust researchers that trust is clearly a sociological phenomenon which primarily emerges among individuals. However, trust can also be established between organizations if the positive expectations of the intentions or behaviour of another [organization] are shared by a dominant coalition of the individuals in both organizations engaged in the collaborative transaction (i.e., an IJV) (Zaheer, McEvily, & Perrone, 1998, p.143).

Building on conceptualization of trust, we suggest that the existence of trust reduces opportunism between IJV partner firms. When one firm believes in the reliability, fairness and goodwill of the IJV partner firm, it expects that the partner firm: (a) carries out the functions in a way that is consistent with the agreement, (b) cooperates in good faith, and (c) considers the best possible achievement of both partners' goals. With such belief, the other partner's opportunism becomes of less concern because the other side will put their efforts into achieving both firms' objectives in the IJV (Krishnan et al., 2006). Kale et al. (2000) analysed 212 IJVs and Judge and Dooley (2006) examined 91 IJVs operating in the United States and both found that inter-partner trust reduces opportunism in IJVs. Therefore, we derive the following hypothesis:

H4. There is a negative relationship between inter-partner trust and perceived level of opportunistic behaviour.

2.3.2. Communication

Communication refers to the information exchanged between partners in an IJV relationship and is defined as "formal as well as informal sharing of meaningful and timely information between partners" (Anderson & Narus, 1990; p. 44). Building on SET, we suggest that communication enables the IJV partners to have better knowledge of each other's internal processes and external market conditions, reduces the information asymmetries between the IJV partners, and thereby reduces the opportunism between IJV partners (Morris & Cadogan, 2001).

The importance of communication for reducing opportunism has been empirically verified in prior research. Parkhe (1993), Deeds and Hill (1998), and Kale et al. (2000) analysed the IJVs established in the United States (respective sample sizes: 111/109/212) and confirmed the important role of communication in reducing opportunism between IJV partners. Therefore, we hypothesize that:

H5. There is a negative relationship between inter-partner communication and perceived level of opportunistic behaviour.

2.3.3. Cultural adaptation

IJVs are often formed between companies that have quite dissimilar cultural backgrounds, be they national or organizational. Cultural dissimilarity between IJV partners is frequently seen as a major cause of misunderstandings and conflicts, lack of information sharing and learning, opportunism and ultimately poor IJV

performance (e.g., Bener & Glaister, 2010; Das & Rahman, 2010; Luo, 2006). SET suggests that an IJV's success depends on the cultural adaptation between partners through efforts like inter-cultural awareness training programs, and encouraging informal contact (Parkhe, 1998).

Cultural adaptation refers to "a firm's awareness of cultural differences between it and its IJV partners, and effectively dealing with and managing these cultural differences" (Johnson, Cullen, Sakano, & Takenouchi, 1996b, p. 985). Wathne and Heide (2000) and Das and Teng (2001) suggest that cultural adaptation fosters similar values and a clan-like environment between IJV partners, promotes goal congruence, and thereby induces the IJV partners to refrain from engaging in opportunistic behaviour. Empirically, Deeds and Hill (1998) analysed 109 IJVs in the United States and confirmed the important role of inter-partner cultural adaptation in reducing opportunism. Therefore, we hypothesize that:

H6. There is a negative relationship between inter-partner cultural adaptation and perceived level of opportunistic behaviour.

2.3.4. Interaction between social and structural mechanisms

A growing number of studies share the view that the economic structure of IJV exchange is socially embedded, and together complement each other in the successful development of IJVs (e.g., Luo, 2002a, 2002b, 2008; Yan & Gray, 1994). Luo (2006, 2007a) suggests that there will be some additional or synergistic effect of using social and structural mechanisms together to curb the opportunism in IJVs. Without social mechanisms, structural mechanisms are insufficient to suppress opportunism because partners may not reach cooperative resolutions to conflicts, disputes and external uncertainty (Luo, Liu, Yang, Maksimov, & Hou, 2015). On the other hand, social mechanisms alone are insufficient to suppress opportunism because there are no guarantees that the other party will reciprocate the good behaviour (Liu, Luo, & Liu, 2009). Therefore, central to counter-opportunism in IJVs is the simultaneous use of both structural mechanisms and social mechanisms (Luo, 2007a). Empirically, Liu et al. (2009) analysed 225 manufacturer-distributor dyads in China and found that relational mechanisms (i.e., trust and relational norms) interact with structural mechanisms (i.e., contract and transaction specific investment) and together curb opportunism. However, the interactions between social and structural mechanisms in their influence on the opportunism in IJVs have so far not been examined. Based on our above discussion, we argue that social and structural mechanisms complement each other in reducing opportunism and hypothesize that:

H7. Social and structural mechanisms have a negative interaction effect on the perceived level of opportunism in IJVs.

In summary, the model developed in this study considers that three structural mechanisms from TCE, namely symmetric dependence, symmetric equity share, and resource complementarity reduce inter-partner opportunism in IJVs. Inter-partner opportunism between IJV partners is also reduced by three social mechanisms from SET, namely trust, communication, and cultural adaptation. Further, structural and social mechanisms interact with each other and together reduce inter-partner opportunism (see Fig. 1).

3. Methodology

3.1. Data collection

This study comprises of Nordic (Denmark, Finland, Norway and Sweden) firms' IJVs located in Asia, Europe and America. We created a sample of 464 equity IJVs made between 2000 and
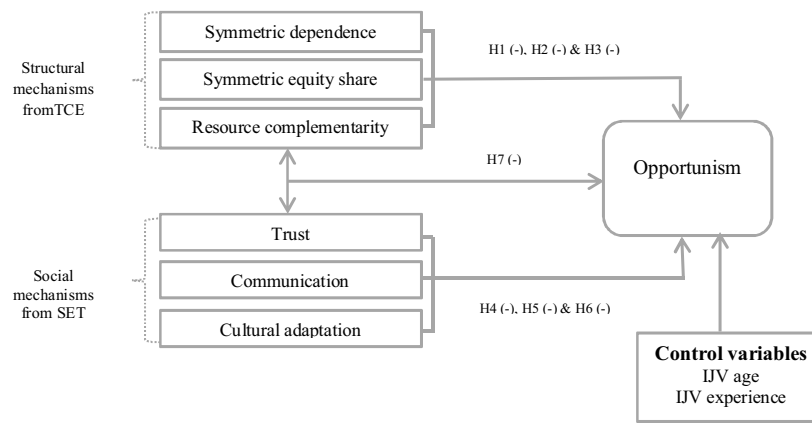
Fig. 1. Hypotheses and proposed model.

2011 from an internal FDI database. This database is built on published data on investments (stock exchange news, press releases, company websites, Thomson One and annual reports) of Nordic MNEs and has been updated continuously for the past three decades. While the database provides basic information about names of the Nordic firms, names of IJVs, location countries of IJVs and names of local partners, it does not contain information about the social and structural factors pertaining to the management of these IJVs. In order to obtain the requisite information, it was decided to collect primary data from key Nordic executives involved in the formation and management of their IJVs. These potential respondents' names and their emails were identified from company websites, annual reports, press releases and by directly contacting the HRM directors of the Nordic firms. Most of the potential respondents from Nordic firms were regional directors, country specific directors, product specific directors, vice presidents or chief executive officers. To find out whether the respondents of the questionnaire would understand the questions as presented, pre-testing was carried out with research group members. The wording and sequence of some questions were modified based on the feedback.

Prior research suggests that compared to mail survey, web survey allows access to large dispersed respondents easily, faster, cheaply, and it displays the data in numerical form in real time (Dillman, Smyth, & Christian, 2009). Therefore in Spring 2012, a web-based questionnaire was sent to 464 respondents asking for information on 464 IJVs. This was followed by a second email to non-respondents after three weeks. In total we received 89 responses, yielding a response rate of 19.11% (89 of 464).

To assess whether and to what extent our survey was subject to non-response bias, an independent samples *t*-test was performed to check the difference between early respondents (N = 48) and late respondents (N = 41), as suggested by Armstrong and Overton (1977). There were no significant differences between the early and late respondents in terms of firm size (p = 0.708) and industry (p = 0.548) of Nordic parents. Thus, non-response bias was not an issue. We also took ex-ante and ex-post steps to limit and assess the common method bias as suggested by Chang, van Witteloostuijn, and Eden (2010). In the ex-ante stage, we used the following two strategies. First respondents were assured of anonymity and confidentiality of the study. Second, we used the sequence of questions in the instrument so that a logical relationship between the constructs was not apparent, as we asked opportunism related questions in a different section. As an ex post strategy, we conducted Harman's one-factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) to assess the extent to which our data are negatively influenced by common method bias. The results of this test do not point to a single or general factor which would account for most of the variability in the data, and the largest factor only accounts for 34.8% of variance in the data. Therefore, common method bias is not an issue in our analysis.

3.2. The sample characteristics

The sample characteristics indicate that 89 IJVs of Nordic firms were operating in three regions (Asia—49; Europe—27; America—13). The time period of IJV formation ranged between 2000 and 2011, with 24 of the IJVs formed in 2000–2003, 40 in 2004–2007, and 25 in 2008–2011. Of the 89 IJVs, in 24 (26.96%) Nordic firms held minority ownership, in 19 (21.36%) equal ownership and in 46 (51.68%) dominant ownership. In 13 cases the Nordic parent firms had fewer than 500, in 23 cases from 500 to 5000, and in 53 cases over 5000 employees.

3.3. Measures

The items used to operationalize each construct were developed on the basis of existing literature (see Appendix A). We adapted 7 items (composite reliability 0.96) for the opportunism construct from Hsieh et al. (2010). Trust was measured using five items (composite reliability 0.97) based on the review of prior research on inter-organizational trust (e.g., Krishnan et al., 2006; Mohr & Puck, 2005; Morgan & Hunt, 1994; Muthusamy, White, & Carr, 2007). Communication was measured by adapting four items (composite reliability 0.97) from Young-Ybarra and Wiersema (1999). We drew from Johnson et al. (1996b) to develop our three items of the cultural adaptation scale (composite reliability 0.89).

In order to measure the symmetric ownership, both firms' ownership shares were transformed to a 5-point scale with 5 indicating if the equity difference between two partners is zero, 4 if it is 1–2%, 3 if it is 3–10%, 2 if it is 11–25%, and 1 if it is equal to or larger than 26%. Symmetric dependence represents the degree to which the partners have invested equivalent specific assets in the IJV. For measuring purposes, the symmetric dependence was divided into foreign firm dependence and local firm dependence. Foreign firm's dependence is the product of two questions: (a) how large is your firm's investment in the IJV; and (b) the degree to which your firm's investment in the IJV is sunk (Zeng, 1998). To measure the first question, the foreign firm's ownership share in the IJV was taken as a proxy for the size of investment in the IJV. The second question is measured by a single item from Reuer and Arino (2002) that asked the respondents to indicate their firm's difficulty in redeploying their resources (i.e. people and facilities) presently serving the IJV to other uses. The scale for both these

questions is from 1 = very low to 5 = very high. These two questions were collapsed into one to determine the dependence of the foreign partner.

Similarly, the local firm's dependence was calculated by asking the respondents to indicate the equity share and difficulty of redeploying resources by their IJV partner firm in the same manner as above. A calculation was made to determine the symmetric dependence by taking the absolute difference of the partners' dependence. Here, a zero indicated a perfectly symmetric dependence. A numerical example might be helpful here. Suppose a foreign firm is measured as follows: (1) the size of investment in IJV (3 out of 5); and (2) the difficulty in redeploying its resources outside the IJV (4 out of 5). Then the foreign firm's dependence would be: $3 \times 4 = 12$. Following the same steps, the dependence of the local firm can be determined. Suppose the value is also 12 for the local partner, then the difference between these values: 12–12 = 0, which represents the perfect symmetric dependence. Finally, our two item resource complementary scale (composite reliability 0.96) was based on the work by Donnell (2005). We also included the IJV age and IJV experience as control variables in our model because of their potential effect on opportunism. The IJV age was measured by using the number of years since the IJV was set up, and IJV experience was measured as the number of manufacturing IJVs in which the firm was involved before the formation of the current IJV (e.g., Mohr & Puck, 2005).

4. Analysis and results

4.1. Measure validation

We utilized PLS-SEM by employing SmartPLS to analyse the data (Ringle, Wende & Will, 2005). The following two features make PLS-SEM an appropriate tool of analysis for this study. Firstly, PLS-SEM is considered an appropriate method of analysis as compared to covariance-based structural equation modelling when investigating predictive research models that are in the early stages of theory development (Chin, 1998; Hair, Ringle, & Sarstedt, 2011). The objective of the current study is to explore the extent to which structural and social mechanisms reduce opportunism in IJVs. These structural mechanisms have roots in TCE and social mechanisms have roots in SET, and their combined role in reducing opportunism in an integrated research model has seldom been examined in prior research. Therefore, an important objective of the study is to identify the predictive power of the structural and social mechanisms on opportunism, thus making PLS-SEM an appropriate analysis tool. Secondly, PLS-SEM is considered more appropriate when dealing with small sample size (Hair et al., 2011). PLS-SEM exhibits higher statistical power than covariance-based SEM when used on complex models with limited sample size (Chin, 1998). This is especially relevant for this study, as our final sample size was 89 IJVs.

Although PLS-SEM estimates both measurement model and structural model simultaneously, we followed the procedure advocated by Hulland (1999) in evaluating models. The estimated model was analysed and interpreted in two stages: first the assessment and reliability of the measurement model, and then the testing of the structural model. We validated the measurement model by assessing the individual-item reliabilities, convergent and discriminant validity (Chin, 1998; Hair et al., 2011). The individual item reliabilities were first assessed by the loading values between the indicator and its latent variables.

All the indicators loaded above Gotz, Liehr-Gobbers, and Krafft's (2010) recommended level of 0.7 on their respective latent variables, indicating a high degree of individual item reliability. The construct reliability for each of the latent constructs was calculated by means of composite reliability. The composite

reliability for all the constructs was greater than the Gotz et al. (2010) recommended level of 0.6, thus indicating that the reliabilities of all the constructs were good (see Table 1).

To assess the convergent validity of the reflective block of the model, the average variance extracted (AVE) with a value higher than 0.5 has been recommended in the literature (Fornell & Larcker, 1981). An AVE of less than 0.5 is considered insufficient, as more variance is due to error variance than to indicator variance (Gotz et al., 2010). As can be seen from Table 2, all latent constructs comply with the recommended minimum level of 0.5. For that reason, all the latent constructs were found to be sound and satisfactorily valid. The literature on PLS-SEM (Fornell & Larcker, 1981; Gotz et al., 2010) suggests that the average variance extracted (AVE) also helps in assessing the discriminant validity of the study. Discriminant validity is proven if the square roots of the AVEs of the latent variables are larger than the correlations amongst the latent variables (Chin, 1998; Fornell & Larcker, 1981; Gotz et al., 2010). Table 2 demonstrates that the data passed this test too and therefore discriminant validity is assured.

4.2. Structural estimates

The main effects of the structural model are assessed by looking at R^2 (i.e. coefficient of determination) for the dependent variable, path loadings (i.e. standardized β), and significance levels (Gotz et al., 2010; Hair et al., 2011). The R^2 for opportunism in model 1 is 0.84, which suggests that the independent variables explain 84% of the variance in the dependent variable of opportunism. We used a bootstrapping method of sampling on the basis of 200 bootstrapping runs and generated t values (Chin, 1998). Table 3 indicates the results of the structural model.

Model 1 is used to examine the individual importance of social and structural mechanisms in reducing opportunism. Consistent with H1, symmetric dependence is negatively related to opportunism (β = −0.14; p < 0.05). The hypothesis H2, concerning the negative impact of symmetric equity share on opportunism, is significant but with reversed sign (β = 0.17; p < 0.01). Therefore,

Table 1
Individual item loadings and composite reliability.

Constructs	Items	Loadings	Composite reliability
Symmetric dependence	1	1	1
Symmetric ownership	1	1	1
Resource complementarity	2	0.955	0.96
		0.962	
Trust	1	0.907	0.97
	2	0.924	
	3	0.937	
	4	0.938	
	5	0.950	
Communication	1	0.974	0.97
	2	0.962	
	3	0.882	
	4	0.951	
Cultural adaptation	1	0.872	0.89
	2	0.832	
	3	0.861	
Opportunism	1	0.916	0.96
	2	0.904	
	3	0.937	
	4	0.897	
	5	0.892	
	6	0.808	
	7	0.774	

Table 2
Inter-construct correlations, AVE, and square roots of AVE along the diagonal.

Constructs	AVE	1	2	3	4	5	6	7	8	9
1. Symmetric dependence	1	1								
2. Symmetric equity share	1	0.43	1							
3. Resource complementarity	0.92	0.23	0.09	0.96						
4. Trust	0.87	0.17	0.07	0.67	0.93					
5. Communication	0.88	0.11	0.06	0.40	0.65	0.94				
6. Cultural adaptation	0.73	0.13	0.04	0.45	0.64	0.53	0.85			
7. Opportunism	0.77	−0.18	0.03	−0.80	−0.86	−0.74	−0.80	0.88		
8. IJV age	1	0.13	0.07	−0.06	0.01	0.07	−0.02	0.06	1	
9. IJV experience	1	−0.01	0.14	0.04	0.10	0.12	0.08	−0.02	0.02	1

H2 is not supported. In line with expectation, H3 is supported, showing that there is a negative relationship between resource complementarity and opportunism ($\beta = -0.22$; $p < 0.01$). Supportive findings for H4 ($\beta = -0.35$; $p < 0.01$) indicate that trust has a negative effect on opportunism. Hypothesis H5, concerning the negative impact of communication on opportunism, is also supported ($\beta = -0.15$; $p < 0.05$). The results for H6 ($\beta = -0.29$; $p < 0.01$) support the notion that cultural adaptation has a strong negative impact on opportunism. Finally, results do not support the significant impact of IJV age ($\beta = 0.06$; $p > 0.1$) and IJV experience ($\beta = 0.04$; $p > 0.1$) on opportunism.

Next, the indicators of social mechanisms and structural mechanisms were mean-centered and multiplied to obtain the interaction effects as Chin, Marcolin, and Newsted (2003) suggested (see model 2 for interaction effects). R^2 in model 2 is greater than R^2 value for model 1, indicating the greater effect of interaction between social and structural mechanisms in reducing opportunism. Especially, the results show that interaction of symmetric dependence with trust ($\beta = -0.13$; $p < 0.1$) and communication ($\beta = -0.12$; $p < 0.1$) in relation to opportunism is significant and negative, but interaction between symmetric dependence and cultural adaptation is not significant. The results further show that the interaction of symmetric equity share and trust ($\beta = -0.13$; $p < 0.1$) in relation to opportunism is significant and negative, but interaction of symmetric equity share with communication and cultural adaptation is not significant. Finally, the interaction of resource complementarity with trust ($\beta = -0.14$; $p < 0.05$) and communication ($\beta = -0.13$; $p < 0.1$) in relation to

opportunism is significant and negative, but interaction between resource complementarity and cultural adaptation is not significant. These results partially support H7.

5. Discussion and implications

On many fronts, our understanding of mechanisms that reduce opportunism in IJVs has been enriched by the work of innovative scholars in the areas of management and international business. This includes research involving structural mechanisms to reduce opportunism (e.g., Das & Rahman, 2010; Hennart & Zeng, 2005; Luo, 2007a; Parkhe, 1993; Zeng, 1998; Zhang & Rajagopalan, 2002) and social mechanisms to reduce opportunism (e.g., Deeds & Hill, 1998; Kale et al., 2000; Wathne & Heide, 2000). Yet the scholarly work on the mechanisms to reduce opportunism has been fragmented, in that prior empirical studies have mainly focused on either the structural or social mechanisms and have analysed limited number of mechanisms. Furthermore, prior empirical studies have not investigated the interactions between structural and social mechanisms in reducing opportunism. In this research, we sought to move beyond the conventional focus of prior scholarly work that either focused on structural or social mechanisms to reduce opportunism. Extending earlier work on the topic, we developed an integrated framework of reducing opportunism that comprises three structural mechanisms of symmetric dependence, symmetric equity share, and resource complementarity from TCE and three social mechanisms of trust, communication, and cultural adaptation from SET, and empirically

Table 3
PLS path analysis results (Standardized beta coefficients and t-values).

Model paths	Model 1	Model 2	Accept\Reject
H1: Symmetric dependence ⇒ Opportunism	−0.14 (2.25)[**]	−0.14 (2.01)[**]	Accept
H2: Symmetric equity share ⇒ Opportunism	0.17 (2.96)[***]	0.15 (2.19)[**]	Reject
H3: Resource complementarity ⇒ Opportunism	−0.22 (3.18)[***]	−0.21 (3.05)[***]	Accept
H4: Trust ⇒ Opportunism	−0.35 (3.43)[***]	−0.35 (3.21)[***]	Accept
H5: Communication ⇒ Opportunism	−0.15 (2.38)[**]	−0.19 (2.15)[**]	Accept
H6: Cultural adaptation ⇒ Opportunism	−0.29 (4.43)[***]	−0.28 (3.75)[***]	Accept
H7: Symmetric dependence × Trust ⇒ Opportunism		−0.13 (1.77)[*]	Accept
Symmetric dependence × Communication ⇒ Opportunism		−0.12 (1.69)[*]	Accept
Symmetric dependence × Cultural adaptation ⇒ Opportunism		−0.12 (0.962)	Reject
Symmetric equity share × Trust ⇒ Opportunism		−0.13 (1.71)[*]	Accept
Symmetric equity share × Communication ⇒ Opportunism		0.06 (0.59)	Reject
Symmetric equity share × Cultural adaptation ⇒ Opportunism		0.03 (0.25)	Reject
Resource complementarity × Trust ⇒ Opportunism		−0.14 (2.21)[**]	Accept
Resource complementarity × Communication ⇒ Opportunism		−0.13 (1.81)[*]	Accept
Resource complementarity × Cultural adaptation ⇒ Opportunism		−0.05 (0.41)	Reject
Control variables			
IJV age ⇒ Opportunism	0.06 (1.41)	0.03 (0.76)	Reject
IJV experience ⇒ Opportunism	0.04 (1.08)	0.03 (0.73)	Reject
Construct R^2	Opportunism = 0.84	Opportunism = 0.88	

[*] $p \leq 0.1$.
[**] $p \leq 0.05$.
[***] $p \leq 0.01$.

tested their main and interaction effects in reducing opportunism. Thus, we advance the early works of Deeds and Hill (1998), Hennart and Zeng (2005), Luo (2007a), Parkhe (1993), Zeng (1998), Zhang and Rajagopalan (2002), Kale et al. (2000) and Wathne and Heide (2000) in two specific ways: (1) by developing an integrated framework for reducing opportunism in which both the three structural mechanisms from TCE and the three social mechanisms from SET are incorporated, and (2) by empirically testing the interaction effects between structural and social mechanisms in their relation to opportunism in IJVs.

On the basis of analysis of 89 IJVs established by Nordic firms in Asia, Europe and America, several interesting results are discovered. First, among the structural mechanisms from TCE, symmetric dependence and resource complementarity reduce the opportunism in IJVs. These findings correspond to earlier research that has suggested that symmetric dependence (e.g., Hennart & Zeng, 2005; Parkhe, 1993; Zeng, 1998; Zhang & Rajagopalan, 2002), and resource complementarity (e.g., Hennart & Zeng, 2005; Zhang & Rajagopalan, 2002) are important IJV structural mechanisms for reducing opportunism in IJVs. Our findings therefore support the proposition these structural mechanisms are the source of credible inter-partner threat in IJVs, making partners forbear from opportunism. Unexpectedly, symmetric equity share does not reduce opportunism in IJVs. This is against the argument advanced by Luo (2009) and Hsieh et al. (2010) that with symmetric ownership share, both partners equally influence the IJV decisions and voice concerns regarding decisions threatening their interests, and therefore this minimizes opportunism. One possible explanation is that symmetric equity share makes the IJV partners spend more time and resources in building mutual consensus, reduces flexibility, and thereby promotes opportunism (Ramaswamy et al., 1998).

Secondly, among the social mechanisms from SET, trust, communication and cultural adaptation reduce opportunism in IJVs. These findings are consistent with earlier research which suggests trust (e.g., Judge & Dooley, 2006; Kale et al., 2000), communication (e.g., Deeds & Hill, 1998; Kale et al., 2000; Parkhe, 1993), and cultural adaptation (e.g., Das & Teng, 2001; Deeds & Hill, 1998; Wathne & Heide, 2000) all reduce opportunism in IJVs. Therefore, when there is high trust, good communication and greater cultural adaptation between the IJV partners, the level of opportunism will be very low. Thirdly, our findings partially support the complementary view towards structural and social mechanisms in reducing opportunism in IJVs. This view suggests that economic structure of IJV exchange is socially embedded, and therefore social and structural mechanisms complement each other in reducing opportunism (e.g., Liu et al., 2009; Luo 2006, 2007a; Luo et al., 2015). Specially, results show that symmetric dependence interacts with trust and communication in reducing opportunism, symmetric equity share interacts with trust in reducing opportunism, and resource complementarity interacts with trust and communication in reducing opportunism. Unexpectedly, interactions between three structural mechanisms (symmetric dependence, symmetric equity share and resource complementarity) and cultural adaptation are not significant in relation to opportunism. One possible explanation is that adapting the practices of other party hinders the parents firms to effectively use the structural mechanisms in controlling opportunism.

5.1. Managerial implications

Given the fact that inter-partner opportunism hampers the IJV performance, understanding the mechanisms that reduce the opportunism becomes crucially important for IJV managers. This study offers a number of suggestions for IJV managers to understand the importance of structural and social mechanisms

for reducing opportunism in IJVs. Firstly the negative impact of symmetric dependence on opportunism suggests to the managers that symmetric dependence between IJV partners makes it costly for both partners to consider cheating because both partners will have much to lose if the relationship ends prematurely. Therefore, IJV partners will have less incentive to incline towards opportunism. Secondly, the negative impact of resource complementarity on opportunism shows managers that when the outcome of the IJV depends on the unique complementary contributions of both partners, then it is in the mutual self-interest and a common interest of partners to forbear from opportunism.

Thirdly, the negative impact of trust on opportunism shows managers that if the partner firm is trustworthy, then the opportunistic behaviour from that partner becomes of less concern because the partner firm will put its efforts into achieving both firms' objectives in the IJV. Fourthly, the negative impact of communication on opportunism shows managers that the quality of communication reduces the information asymmetries between the IJV partners, enables the IJV partners to have better knowledge of each other's internal processes and external market conditions, and thereby reduces the scope of opportunism between IJV partners. Hence quality of communication reduces opportunism between IJV partner firms. Fifthly, our results suggest that cultural adaptation between IJV partners reduces the opportunism in IJVs. This is because cultural adaptation fosters similar values and a clan-like environment between IJV partners, promotes goal congruence, and thereby induces the IJV partners to refrain from engaging in opportunistic behaviour. Finally, if the firms seek to dispel opportunism, executives should consider using social and structural mechanisms simultaneously. These mechanisms complement each other in reducing opportunism. For example, our study shows that symmetric dependence interacts with trust and communication in reducing opportunism, symmetric equity share interacts with trust in reducing opportunism, and resource complementarity interacts with trust and communication in reducing opportunism. However, our study suggests managers that cultural adaptation is not beneficial when used together with other structural mechanisms, as adapting the practices of other party hinders the parent firms to effectively use the structural mechanisms in controlling opportunism.

5.2. Limitations and further research

As with any study, there are some research limitations that should be taken into consideration. Firstly, this study samples only Nordic firms' IJVs operating into Asia, Europe and America, so caution should be exercised in generalizing the findings to other countries or regions. Secondly, our data are cross-sectional in nature. Consequently, we used theory to predict a causal relationship, but alternative relationships might exist. For example, opportunism between IJV partners can also lead to the lack of trust between IJV partners (e.g., Silva, Bradley, & Sousa, 2012). Therefore, future research should be longitudinal in nature to test these causal assumptions. Thirdly, the study is confined to a single key informant of the Nordic parents of IJVs. Future research should collect data from multiple but different respondents for measuring the independent and dependent variables to minimize the common method bias. Fourthly, data was obtained from the responses of Nordic managers solely. Future studies should collect data from both parents of the IJV to avoid problems of unidirectional bias. Fifthly, we encourage the future research to develop more refined measures of symmetric dependence. Symmetric dependence may be more than each partner's size of specific assets in IJV relative to each other, and may include the issue of size of specific assets in IJV by each partner relative to the size of parent firms. Sixthly, future research should conduct case

studies to explore the relationships between cultural adaptation, structural mechanisms and opportunism in IJVs. Lastly, the study does not explore the role of contract which is another structural mechanism in IJVs. Future research should investigate its impact on opportunism. Furthermore, we encourage researchers to explore the different forms of opportunism (e.g., strong vs. weak; short-term vs. long-term), and their impact on IJV performance.

Appendix A.

Constructs under study

Constructs	Questions	Item source (s)
Trust	Please indicate your level of agreement with the following statements: (strongly disagree 1–5 strongly agree) (a) In our IJV, the partner firm can be relied on to move our joint project forward (b) In our IJV, we are confident that our partner firm will not take advantage of us (c) In our IJV, the partner firm is always ready and willing to offer us support beyond the IJV agreement (d) In our IJV, the partner considers our firm's welfare alongside its own while making important decisions (e) Based on experience in our IJV, we know that our partner can be completely trusted	Item a: Morgan and Hunt (1994) Item b: Krishnan et al. (2006) Item c: Muthusamy et al. (2007) Item d: Mohr and Puck (2005) Item e: Morgan and Hunt (1994)
Communication	Regarding communication between you and your IJV partner, please indicate your level of agreement with the following statements: (strongly disagree 1–5 strongly agree) (a) IJV partners always keep each other informed about events\changes that may affect other party or IJV (b) IJV partners promptly notify each other about relevant information that may affect other party or IJV (c) Exchange of information between IJV partners takes place frequently (d) IJV partners get clear information from each other that may affect the other party or IJV	Young-Ybarra and Wiersema (1999)
Cultural adaptation	Cultural adaptation (strongly disagree 1–5 strongly agree) (1) Our firm makes deliberate efforts to understand the ways our partner does things (2) Our firm makes necessary adjustments to the partner's way of doing things (3) Our firm makes special efforts to implement those customs and strategies in IJV with which partner firm agrees	Johnson, Cullen, and Sakano (1996a)
Resource complementarity	Resource complementarity (Very low 1–5 very high) 1. Extent to which resources and competencies brought by each partner to IJV are different? 2. Extent to which resources and competencies brought by each partner to IJV are complementary for accomplishing the IJV goals?	Donnell (2005)
Symmetric dependence	Items measuring dependence of foreign firm: (a) Foreign firm's size of investment in IJV (ownership share taken as proxy for the size of investment) [5–19% (1 = very low), 20–38 (2 = low), 39–57 (3 = average), 58–76 (4 = high), 77–95 (5 = very high)] (b) If the IJV ends in conflict, the difficulty your firm would have in redeploying your resources (i.e. people and facilities) presently serving the IJV to other uses would be (Very low 1–5 very high) Items measuring dependence of local firm: (a) Local firm's size of investment in IJV (ownership share taken as proxy for the size of investment) [5–19% (1 = very low), 20–38 (2 = low), 39–57 (3 = average), 58–76 (4 = high), 77–95 (5 = very high)] (b) If the IJV ends in conflict, the difficulty your partner firm would have in redeploying his resources (i.e. people and facilities) presently serving the IJV to other uses would be (Very low 1–5 very high) Symmetric dependence: Level of symmetric dependence between IJV partners (i.e. difference between dependence of local and foreign partner) [$\leq 3 = 5$, 4–8 = 4, 9–13 = 3, 14–18 = 2, 19–24 = 1]	Adopted and modified from Zeng (1998) and Reuer and Arino (2002)
Symmetric equity share	Ratio of equity differences between the IJV partners (5 = 0%, 4 = 1–2%, 3 = 3–10%, 2 = 11–25%, and 1 = equal or larger than 26%)	Developed for this study
Opportunism	With respect to your partner firm's behaviour in the present IJV, please indicate your level of agreement with the following statements: (strongly disagree 1–5 strongly agree) (a) Sometimes partner firm alters the facts slightly in order to get what they need from IJV (b) Partner firm has sometimes promised to do things without actually doing them later (c) Partner firm sometimes presents incomplete or distorted information to get their benefit (d) Sometimes partner firm fails to provide your firm\IJV with the support and resources that it is obliged to (e) Partner firm breaches formal or informal IJV agreement to get their benefit (f) Partner firm appropriates technological know-how which your firm provides to IJV (g) Partner firm supplies substandard/overpriced material or products to IJV	Hsieh et al. (2010)

References

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

Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research, 14*(1), 396–402.

Beamish, P. W. (1985). The characteristics of joint ventures in developed and developing countries. *Columbia Journal of World Business, 20*(3), 13–19.

Bener, M., & Glaister, K. W. (2010). Determinants of performance in international joint ventures. *Journal of Strategy and Management, 3*(3), 188–214.

Blau, P. M. (1964). *Exchange and power in social life.* New York: John Wiley and Sons.

Bleeke, J., & Ernst, D. (1991). The way to win in cross-border alliances. *Harvard Business Review, 69*(6), 127–135.

Brouthers, K. D., & Hennart, J.-F. (2007). Boundaries of the firm: insights from international entry mode research. *Journal of Management, 33*(3), 395–425.

Chang, S.-J., van Witteloostuijin, A., & Eden, L. (2010). From the Editors: common method variance in international business research. *Journal of International Business Studies, 41*, 178–184.

Chin, W. W. (1998). The partial least squares approach to structural equation modelling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336).New Jersey: Lawrence Erlbaum Associates.

Chin, W., Marcolin, B., & Newsted, P. (2003). A partial least squares latent variable modelling for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research, 14*, 189–217.

Das, T. K., & Rahman, N. (2010). Determinants of partner opportunism in strategic alliances: a conceptual framework. *Journal of Business Psychology, 25*, 55–74.

Das, T. K., & Teng, B.-S. (2001). Trust, control, and risk in strategic alliances: an integrated framework. *Organization Studies, 22*(2), 251–283.

Das, T. K., & Teng, B.-S. (2002). A social exchange theory of strategic alliances. In F. J. Contractor, & P. Lorange (Eds.), *Cooperative strategies and alliances* (pp. 439–460).Oxford: Elsevier Science Ltd..

Deeds, D. L., & Hill, C. W. L. (1998). An examination of opportunistic action within research alliances: evidence from the Biotechnology Industry. *Journal of Business Venturing, 14*, 141–163.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail and mixed-mode surveys: the tailored design method,* 3rd ed. New York: Wiley & Sons.

Donnell, E. A. O. (2005). A united framework for industrial buyer-seller relationships. *Doctoral dissertation.* Ohio: Kent State University Graduate School of Management.

Dyer, J. H., & Chu, W. (2011). The determinants of trust in supplier-automaker relationships in the US, Japan, and Korea. *Journal of International Business Studies, 42*(1), 10–27.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Gotz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares: concepts, methods, and applications* (pp. 691–711).New York: Springer.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–151.

Hennart, J.-F. (1988). A transaction costs theory of equity joint ventures. *Strategic Management Journal, 9*(4), 361–374.

Hennart, J.-F. (1993). Explaining the swollen middle: why most transactions are a mix of market and hierarchy. *Organization Science, 4*(4), 529–547.

Hennart, J.-F., & Zeng, M. (2005). Structural determinants of joint venture performance. *European Management Review, 2*(2), 105–115.

Hsieh, L. H. Y., Rodrigues, S. B., & Child, J. (2010). Risk perception and post-formation governance in international joint ventures in Taiwan: the perspective of the foreign partner. *Journal of International Management, 16*(3), 288–303.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal, 20*(2), 195–204.

Isidor, R., Schwens, C., Hornung, F., & Kabst, R. (2015). The impact of structural and attitudinal antecedents on the instability of international joint ventures: the mediating role of asymmetrical changes in commitment. *International Business Review, 24*, 298–310.

Jiang, X., Li, M., Gao, S., Bao, Y., & Jiang, F. (2013). Managing knowledge leakage in strategic alliances: the effects of trust and formal contracts. *Industrial Marketing Management, 42*, 983–991.

Johnson, J. L., Cullen, J. B., & Sakano, T. (1996a). Opportunistic tendencies in IJVs with the Japanese: the effects of culture, shared decision making, and relationship age. *The International Executive, 38*(1), 79–94.

Johnson, J. L., Cullen, J. B., Sakano, T., & Takenouchi, H. (1996b). Setting the stage for trust and strategic integration in Japanese-U.S. cooperative alliances. *Journal of International Business Studies, 27*(5), 981–1004.

Judge, W. Q., & Dooley, R. (2006). Strategic alliance outcomes: a transaction-cost economics perspective. *British Journal of Management, 17*, 23–37.

Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: building relational capital. *Strategic Management Journal, 21*(3), 217–237.

Katsikeas, C. S., Skarmeas, D., & Bello, D. C. (2009). Developing successful trust-based international exchange relationships. *Journal of International Business Studies, 40*(1), 132–155.

Killing, J. P. (1982). How to make a global joint venture work. *Harvard Business Review, 24*(3), 120–127.

Kobernyuk, E., Stiles, D., & Ellson, T. (2014). International joint ventures in Russia: cultures' influences on alliance success. *Journal of Business Research, 67*, 471–477.

Krishnan, R., Martin, X., & Noorderhaven, N. G. (2006). When does trust matter to alliance performance? *Academy of Management Journal, 49*(5), 894–917.

Kwon, Y.-C. (2008). Antecedents and consequences of international joint venture partnerships: a social exchange perspective. *International Business Review, 17*, 559–573.

Liu, Y., Luo, Y., & Liu, T. (2009). Governing buyer-supplier relationships through transactional and relational mechanisms: evidence from China. *Journal of Operations Management, 27*, 294–309.

Liu, X., Vredenburg, H., & Steel, P. (2014). A meta-analysis of factors leading to management control in international joint ventures. *Journal of International Management, 20*(2), 219–236.

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

Luo, Y. (2002b). Building trust in cross-cultural collaborations: toward a contingency perspective. *Journal of Management, 28*(5), 669–694.

Luo, Y. (2006). Opportunism in inter-firm exchanges in emerging markets. *Management and Organization Review, 2*(1), 121–147.

Luo, Y. (2007a). An integrated anti-opportunism system in international exchange. *Journal of International Business Studies, 38*(6), 855–877.

Luo, Y. (2007b). Are joint venture partners more opportunistic in a more volatile environment? *Strategic Management Journal, 28*(1), 39–60.

Luo, Y. (2008). Structuring interorganizational cooperation: the role of economic integration in strategic alliances. *Strategic Management Journal, 29*, 617–637.

Luo, Y. (2009). Are we on the same page? Justice agreement in international joint ventures. *Journal of World Business, 44*, 383–396.

Luo, Y., Liu, Y., Yang, Q., Maksimov, V., & Hou, J. (2015). Improving performance and reducing cost in buyer-supplier relationships: the role of justice in curtailing opportunism. *Journal of Business Research, 68*, 607–615.

Madhok, A. (1995). Opportunism and trust in joint venture relationships: an exploratory study and a model. *Scandinavian Journal of Management, 11*(1), 57–74.

Mainela, T., & Puhakka, V. (2008). Embeddedness and networking as drivers in developing an international joint venture. *Scandinavian Journal of Management, 24*, 17–32.

Mohr, A. T., & Puck, J. F. (2005). Managing functional diversity to improve the performance of international joint ventures. *Long Range Planning, 38*(2), 163–182.

Morgan, R., & Hunt, S. (1994). The commitment–trust theory in relationship marketing. *Journal of Marketing, 58*(3), 20–38.

Morris, B. G. A., & Cadogan, J. W. (2001). Partner symmetries, partner conflict and the quality of joint venture marketing strategy: an empirical investigation. *Journal of Marketing Management, 17*(1), 223–256.

Muthusamy, S. K., White, M. A., & Carr, A. (2007). An examination of the role of social exchanges in alliance performance. *Journal of Management Issues, 19*(1), 53–75.

Nielsen, B. B. (2007). Determining international strategic alliance performance: a multidimensional approach. *International Business Review, 16*, 337–361.

Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science, 25*(9), 833–848.

Park, J.-Y., & Harris, S. (2014). Microfoundations for learning within international joint ventures. *International Business Review, 23*, 490–503.

Parkhe, A. (1993). Strategic alliance structuring: a game theoretic and transaction cost examination of inter-firm cooperation. *Academy of Management Journal, 36* (4), 794–829.

Parkhe, A. (1998). Building trust in international alliances. *Journal of World Business, 33*(4), 417–437.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Ramaswamy, K., Gomes, L., & Veliyath, R. (1998). The performance correlates of ownership control: a study of U.S. and European MNE joint ventures in India. *International Business Review, 7*(4), 423–441.

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

Reuer, J. J., & Arino, A. (2002). Contractual renegotiations in strategic alliances. *Journal of Management, 28*(1), 47–68.

Ringle, C. M., Wende, S., & Will, A. (2005). *SmartPLS 2.0 (beta).* Hamburg: SmartPLS.

Silva, S. C., Bradley, F., & Sousa, C. M. P. (2012). Empirical test of the trust-performance link in an international alliances context. *International Business Review, 21*(2), 293–306.

Wathne, K. H., & Heide, J. B. (2000). Opportunism in inter-firm relationships: forms, outcomes, and solutions. *Journal of Marketing, 64*(4), 36–51.

Williamson, O. E. (1985). The economic institutions of capitalism: firms, markets. *Relational contracting.* New York: The Free Press.

Yan, A., & Gray, B. (1994). Bargaining power, management control, and performance in United States-China joint ventures: a comparative case study. *Academy of Management Journal, 37*(6), 1478–1517.

Young-Ybarra, C., & Wiersema, M. (1999). Strategic flexibility in information technology alliances: the influence of transaction cost economics and social exchange theory. *Organization Science, 10*(4), 439–459.

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of inter-organizational and interpersonal trust on performance. *Organization Sciences, 9*(2), 141–159.

Zeng, M. (1998). *Doctoral dissertation*. Urbana-Champaign: University of Illinois.

Zhang, Y., & Rajagopalan, N. (2002). Inter-partner credible threat in international joint ventures: an infinitely repeated prisoner's dilemma model. *Journal of International Business Studies, 33*(3), 457–478.