

# Interdependency in joint ventures: the relationship between dependence asymmetry and performance

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## Abstract

This paper reports the results of a survey on joint venture collaborations. It focuses on the relations between the level and intensity of conflict, trust and norms of exchange, and ultimately the performance of a joint venture, in case of dependency asymmetry between the partners. In management literature, the relative dependency position of the partners is often indicated as an important antecedent of conflict. In a survey of 78 Dutch companies in joint ventures, we investigated these relationships in depth. Contrary to expectations, we did not find a relationship between the relative dependency of the partners, conflict and performance. The potential threat of conflict seems to be mediated by the norms of exchange shared by the partners. We therefore tentatively conclude that the best way to manage the dependency position in a JV might be to invest time and effort in discussing the norms of exchange up-front, which will help the partners develop a trusting relationship..

*Keywords: joint ventures, dependency asymmetry, performance, conflict, trust, norms of exchange*

## 1. Introduction

The joint venture has become a strategic alternative of increasing importance in today's highly competitive markets. Participating in a joint venture enables a firm to bring in expertise and resources from other companies and remain strategically flexible (Harrigan 1986). Despite this strategic importance, it proves extremely difficult to manage the interdependence relationships in joint ventures. This is illustrated by the high failure rate, which is approaching 50% (Cullen et al. 1995). Researchers cite low profitability, erosion of complementarity and/or strategic objectives, and cultural differences as reasons for attrition (Contractor and Lorange 1988). In business practices, companies often try to gain as much control over the joint venture as possible. However, as there are at least two companies involved in a joint venture, companies often have to share control with their partner. This often results in a 50-50 equity joint venture. An even more important aspect than equity distribution may be the distribution of the dependence positions between the partners.

In management literature, the relative dependency position of the partners in a co-operation is often indicated as an important antecedent of conflict, trust and ultimately performance. Kumar et al. (1995) indicate that as a firm's dependence on its partner increases, conflict and the partner's use of coercion increases. Anderson and Weitz (1989) provide empirical evidence that asymmetric dependency relationships are more dysfunctional, and less

stable than symmetric relationships. Asymmetric dependency influences inter-firm trust, which has been identified as critical in the development of long-term relationships (Dwyer et al. 1987, Kumar et al. 1995). Given the importance of interdependence asymmetry and its possible effect on the joint venture performance, in this survey of 78 Dutch companies we explored how perception of dependence asymmetry affects performance.

## 2. Theoretical framework and research hypotheses

### Joint ventures, interdependency and conflict

In the present study, a joint venture is defined as a discrete entity created by two or more legally distinct organisations, each of which contributes less than 100 percent of its assets and actively participates, beyond a mere investment role, in the joint venture's decision making (Geringer 1988: 4). Social exchange theory suggests that individuals and firms engage in exchange because they expect to be rewarded (Blau 1964). It follows that a firm will seek to build a relationship with others when the firm perceives a need for resources and support from other organisations (Pfeffer and Salancik 1978). With the initiation of the exchange, interdependence relations are created. According to Contractor and Lorange (1988: 6), a joint venture is a co-operative arrangement with a high level of organisational interdependence. If the level of interdependence is too low,

the joint venture is unlikely to survive difficult times. Ongoing viability of the joint venture rests on the continuing mutual dependence of the partners (Powell 1990), for many joint ventures pursue complementarity as a primary rationale for the JV, where each partner focuses on its core competencies (e.g. Hamel et al. 1989). That is, each partner contributes certain resources that the other partner does not have, and, in combination, these complimentary resources are likely to create value. However, this may lead to asymmetry in the relationship, which requires integration. Many researchers have concluded that conflict is inherent to any form of relationship (Bucklin and Sengupta 1993, Johnson et al. 1993) and/or is due to the inherent interdependencies between the partners (Mohr and Spekman 1994). The sources of conflict may range from day-to-day activities to more strategic matters (Hyder 1988). Conflicts in joint ventures may arise when a partner perceives that the behaviour of the other partner prevents or impedes it from achieving its goals (Stern and El-Ansary 1992). To understand the effect of interdependence asymmetry on conflict, we draw on bilateral deterrence theory and conflict spiral theory (Bacharach and Lawler 1981). Bilateral deterrence theory asserts that increasing interdependence asymmetry is associated with higher levels of aggression and conflict by both parties, although based on different motives (Cook and Emerson 1978). As the interdependency becomes more asymmetric, the more powerful partner has less motivation to avoid conflict. Retaliation becomes less likely and less damaging, because the firm can inflict proportionally more serious damage on the dependent partner than it would suffer in return. Increasing interdependence asymmetry reduces the structural impediments that inhibit the more powerful firm's opportunistic behaviour and self-serving exercises of power. Also, the dependent partner is more inclined to engage in conflict. Because the relatively dependent partner may expect to be exploited, it is more likely to engage in a pre-emptive strike or rebellion against the more powerful partner (Kumar et al. 1995). The dependent partner might try to decrease its dependent position (a strategy of making free, Nootboom 1994), which might be in conflict with the objectives of the partner and/or the joint venture (Kemp and Ghauri 1998). Thus, the bilateral deterrence theory suggests that both the more powerful partner and its weaker partner are increasingly likely to engage in conflict as the relationship becomes more asymmetric. Therefore it is expected that:

H1: As the interdependence asymmetry in a joint venture increases, the level of conflict will increase.

### **Interdependency, trust and norms of exchange**

In the social psychology and distribution channel literature, there seems to be a consensus that trust encompasses two essential elements: trust in the partners' credibility and trust in the partners' benevolence (Ganesan 1994, Geyskens and Steenkamp 1995, Kumar et al. 1995). Credibility can be defined as the belief that the partner stands by its word, fulfils promised role obligations and is sincere (Ganesan 1994, Geyskens and Steenkamp 1995), and is related to the perception of the partner's prior behaviour. Benevolence is defined as the belief that one's partner is interested in the firm's welfare and will not take unexpected actions which will negatively impact the firm (Anderson 1990, Anderson and Narus 1990, Andaleeb 1992, Ganesan 1994). A benevolent partner is motivated by a concern for the well being of the relationship itself and will not improve its own welfare at the expense of its partner's interest (Geyskens and Steenkamp 1995).

The need for trust between partners in a joint venture has been identified as an important element for a long-term joint venture relationship (Parkhe 1993, Inkpen and Birkenshaw 1994, Madhok 1995). Trust provides parties the possibility of governing risks in transactions. According to Powell (1990), trust is important because it reduces uncertainty, making complex transactions easier to execute. A high level of trust between partners is conducive to co-operative behaviour, whereas a low level of trust leads to competitive behaviour (Dabholkar et al. 1994). Trusting relationships are especially important in the ambiguous situations that are often characteristic of joint ventures. According to Powell (1990), and Hakansson and Johansson (1988), trust leads to a more rapid flow of information exchange and a higher level of open communication. Trust will create a perceived supportive climate (Geyskens and Steenkamp 1995). Based on Kumar et al. (1995), we posit that trust will emerge in a joint venture relationship when there is bilateral convergence, that is, when the interdependence structure is such that the interests of the partners are convergent. In an asymmetric relationship, it is likely that the interests of the partners diverge. The powerful partner does not need to cultivate its partner's trust. Anderson and Weitz (1989) provided evidence that in asymmetric interdependence relationships, the relationships are less trusting than in symmetric relationships. In a meta-analysis about trust, Geyskens et al. (1998) found that, on average, interdependence asymmetry had a negative effect on trust. Therefore we pose:

H2: As interdependence asymmetry in a joint venture increases, the level of trust will decrease.

The level of trust is positively related to the norms of exchange, the agreements, stated explicitly or implicitly, about the expected behaviour of the partner that are shared by the decision-makers in the JV. According to Dwyer et al. (1987), norms of exchange will be the ground rules for future exchanges and can serve as a general protective device against deviant behaviour of the partner (Stinchcombe 1986). Norms of exchange can be seen as a mutual investment in the relationship, and they therefore increase the exit barrier. There is evidence that norms of exchange are a multidimensional construct in the sense that each dimension may relate to particular kinds of behaviour. Heide and John (1992) have concentrated on three dimensions: flexibility, information exchange and solidarity. Flexibility is defined as a bilateral agreement regarding the parties' willingness to make adaptations as circumstances change (Heide and John 1992). The partners are willing to accept smooth alterations in practices and policies in the light of unforeseen or changing conditions. Information exchange is defined as a bilateral agreement that the parties will proactively and voluntarily provide information useful to their partner (Heide and John 1992). Thus, exchange of information refers to the nature and timeliness of information sharing by the exchange partners and is seen as a necessary precondition for a successful joint venture relationship (Inkpen and Birkenshaw 1994). The level of trust is influenced by the norms of exchange. If the partners share their ideas and expectations about the JV, their positions and behaviour become more predictable for each other. If the level of norms of exchange is high, a company will assume that the behaviour of the partner is in the interest of the joint venture as a whole and not only in the interest of the partner's own company. We therefore hypothesise:

H3: If the level of the norms of exchange increases, the level of trust will increase, as well.

### **Trust, norms of exchange, conflict and performance**

In their meta-analysis on trust, Geyskens et al. (1998) provide evidence for a strong and negative effect of trust on conflict. Madhok (1995) argued that building trust could be seen as the creation of a stock of goodwill from which joint venture partners can draw when the need arises. Trust increases the tolerance for conflict and makes conflict less intense. Trust reduces friction, and it decreases the likelihood that disagreements will be perceived as conflicts. If the level

of trust is high, conflicts are handled constructively at an early phase. In such a situation, conflict can even have a positive effect on performance, i.e. it keeps the co-operation lively and focused on opportunity-seeking. Also Andaleeb (1992) and Hakansson and Johanson (1988) found that relationships characterised by a high level of trust lead to a low level of (perceived) conflict. This suggests a negative relationship between trust and conflict<sup>1</sup>. We expect that:

H4: If the level of trust increases, the level of conflict will decrease.

We posit that in a relationship characterised by a high level of norms of exchange, conflicts will not be very intense. The partners know that they both have the intention to solve the "conflict" in a rational way that will be satisfactory and fair for both partners. The partners will not perceive the differences in opinion as conflicts. Discussions about the differences in opinion are used to enhance the performance of the joint venture and the partners. The partners understand each other's behaviour and positions (Kaufmann and Stern 1988). In a joint venture with a low level of norms of exchange, partners do not have that flexible attitude and might not express solidarity with each other. They might be willing to engage in a more serious conflict to defend their own position. Therefore we hypothesise:

H5: If the level of norms of exchange increases, the level of conflict will decrease.

Norms of exchange will have a positive effect on joint venture performance. For an effective collaboration, flexibility is necessary to react to changing conditions (Lorange and Probst 1987, Madhok 1995). A high level of flexibility allows ongoing planning and continuous adjustments of obligations between the partners (Boyle et al. 1992) The expectation of getting all known and relevant information on an ongoing basis enables the partners to cope with the vulnerability associated with transferring decision-making control to the partner (Killing 1983, Yan and Gray 1994, Glaister and Buckley 1998). Higher norms of exchange may also result in lower monitoring and administration costs, and may therefore increase the economic performance. We hypothesise:

H6: There is a positive relationship between norms of exchange and the joint venture overall performance.

<sup>1</sup>The reader should keep in mind that the relationships in our model are recursive: the level of conflict may affect trust, while performance may affect the level of conflict.

The effect of conflict between the partners on joint venture performance has been widely investigated and, almost without exception, found to be negative<sup>2</sup>. Conflict makes co-operation difficult, and without co-operation, the achievement of the goals would be nearly impossible (Johnson et al. 1993). In a joint venture with much conflict, the partners will focus more on closely monitoring the relationship, because each partner is afraid that its interests are not (or not fully) taken into account. Also, the conflicts have to be resolved. This costs precious management time. Thus, the costs of the co-operation increase when there is conflict. As a result, the economic performance of the joint venture will decrease and the benefits (revenues minus costs) for the partners will be lower (Bucklin and Sengupta 1993). Conflict will also have a negative effect on the satisfaction of the partner (Cullen et al. 1995). Conflict erodes satisfaction because participants in the joint venture may be unable to keep up morale and function effectively on a day-to-day basis in such a dysfunctional situation (Johnson et al. 1993). We expect that:

H7: If conflict in a joint venture relationship increases, the joint venture overall performance will decrease.

Figure 1 shows the overall conceptual model of the hypothesised relationships between interdependency, trust, norms of exchange, conflict and performance.

<sup>2</sup> Sometimes, a positive effect between conflict and performance is hypothesised. In this perspective, conflicts can be seen as a way to communicate and visualise the stakes of the different partners. The ways conflicts are solved are very important in this context.

<sup>3</sup> In contrast to the sources, some JVs were not founded, or the JV turned out to be another form of cooperation (e.g. co-marketing agreement). Several JVs did not meet our sampling criteria (more than two partners or founded outside the research period). In some cases the parent company did not exist anymore. In other cases the company was not willing to co-operate in the study.

### 3. Research design and measures

#### Data collection

Data collection proceeded in three phases. First, we developed a sampling frame of JVs consisting of a Dutch company and a Dutch or foreign partner (80% of the JVs consist of two partners, Jagersma and Bell 1992) that were founded from 1989 to 1995. Questionnaires were sent to the Dutch partners of the JVs because of time, and access constraints. The data base was gained primarily from announcements of starting JVs in a Dutch financial newspaper, *Het Financieele Dagblad*, annual reports of Dutch companies registered at the Dutch stock exchange, and the mergers and takeovers disk ("Fusie en Overname disk") of Delwel (1993, 1994). This process resulted in a sample of 319 JVs with 393 Dutch partners. Second, the companies were contacted to check the information and to obtain the name of an executive in charge of the JV at issue. After screening these JVs and contacting the parent companies, the sample was decreased to 242 eligible Dutch JV partners, to whom a survey questionnaire was sent<sup>3</sup>. A reminder was sent to non-respondents and finally 95 executives responded (a response rate of 39%). Eighteen questionnaires were not useable because data were missing, or the company filled out only one questionnaire for more than one JV. The strategic importance companies attribute to JVs is demonstrated by the fact that some companies founded over 20 JVs (!). Eventually, 78 useable responses (32%) remained. The answers of early and late respondents were compared to investigate whether the late questionnaires could be considered to reflect, to some extent, also the judgements of non-respondents (Oppenheim 1966). We found no significant difference ( $p < .05$ ) between early and late respondents for any of our constructs, which suggests that non-response bias was not a (great) problem.

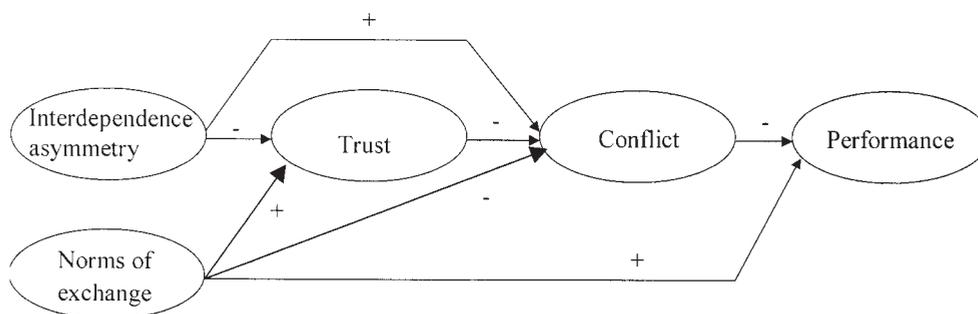


Figure 1. Conceptual model.

## Research measures

According to Andaleeb (1995), two factors create interdependence asymmetry: 1) the importance or criticality of resources provided by the source firm, and 2) the number of alternative sources available to the target firm of the needed resources. The resource needs dimension was measured by listing nine possible resource contributions by the partners (based on Contractor and Lorange 1988). The respondents were asked to assess the importance of each individual resource contribution to the success of the JV and to estimate the relative contribution of each partner for each resource contribution. By multiplying the importance of the contribution with the relative contributions of the partners and equally weighting each type of resource contribution, a score was constructed for the overall contribution of the partners. The availability of the alternatives refers to the number and attractiveness of possible alternative partners (Heide and John (1988) and Ganesan (1994)). It is measured by three items (a high score implies few alternatives). To get an indication of the partners' position, we also asked if the partner had alternatives for the focal company. By subtracting the focal companies' score from the partners' score, we got an indication of the relative dependency position. Both dimensions were equally weighted to get an overall score for interdependence asymmetry. We took the absolute value of this score to get a score for the balance in the relationship.

The conflict measure is based on Habib (1987). He distinguishes two dimensions, frequency of conflict and the intensity of conflict. We used 7 items. By multiplying the two dimensions we got an overall score for conflict.

Our definition of trust encompasses two dimensions: credibility and benevolence. The scale for measuring credibility was based on Kumar et al. (1995) and Ganesan (1994). For measuring benevolence, we used the scale of Kumar et al. (1995). For measuring the trust concept, it was decided to equally weight the scores of credibility and benevolence, in order to get an overall score on the level of trust. A high score on this construct implies a high level of trust between the partners.

We define norms of exchange as agreements, stated explicitly or implicitly, about JV behaviour that are shared by the decision-makers. Three dimensions measure norms of exchange: flexibility, information exchange and solidarity (based on Heide and John 1992). Each dimension is equally weighted in order to get an overall score. A high score on this construct implies a high level of norms of exchange.

We define performance as the extent to which the objectives are achieved. Our measure of performance encompasses financial as well as operational measures (Cullen et al. 1995). The measure addressed whether the JV met or exceeded expectations concerning profitability, growth, market penetration, and overall performance. An overall score on JV performance was gained by taking the mean of the item scores, resulting in an overall score on performance ranging from 1 (poor performance) to 5 (good performance). For the operationalisation of the variables, the reader is referred to table 1.

## Data analysis

We followed a two-step approach in analysing our data (Anderson and Gerbing 1988, 1992, Fornell and Yi 1992). In the first step, we tested the validity and reliability of the constructs (see Steenkamp and Van Trijp (1991) for the procedure). This analysis involved the measures of trust (benevolence and credibility), norms of exchange and performance. Interdependence and conflict were not included in this analysis because they were conceptualised as formative indicators or multidimensional composite indices (Bollen and Lennox 1991, Kumar et al. 1995). Based on the formative properties of these measures, conventional validation methods based on association are not appropriate (Bollen and Lennox 1991). In the second step of the analysis, the structural model was tested.

## 4. Results

The majority of the JVs were formed with partners from within the EU (60%), followed by the USA (15%) and South-east Asia (12%). The motivations to start the JVs were, amongst others, market access and local knowledge (58%), risk reduction (26%), and economies of scale (20%). 60% of the responding companies are in manufacturing, 24% in services and 16% in other sectors. 60 joint ventures (77%) were still in existence at the time of the survey, while 18 joint ventures (23%) had been terminated. The average JV duration at the time of the study was 3.2 years. Table 1 shows the means, standard deviations, and correlation between the different variables.

To test the structural model, Lisrel 8 was used (Jöreskog and Sörbom 1996). We used the Maximum Likelihood (ML) estimation procedure with the covariance matrix as input matrix<sup>4</sup>. The model is presented in Figure 2. The results

<sup>4</sup> ML estimations were used, although WLS estimations are more appropriate for ordinal scales. However, WLS estimations require a larger sample size than was used in the present study. If the sample size is small, the assumption of multi-normality holds, and if there are minor skewness and kurtosis (not exceeded | 1 |, as in our case), ML estimators can be used (Bollen 1989: 432).

**Table 1. Operationalisation of variables.**

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1 *Interdependence asymmetry*

*Resource needs (9 items)*

Importance of resource contribution for the success of the JV (5-point response format, 1 = completely unimportant, 5 = very important), and the relative contribution of the partner in the success of the JV (5-point response format, -2 = entirely by partner, 0 = equal, 2 = entirely by own company), concerning:

- Market access; - Knowledge of local market; - Technology; - Access to capital; - Access to distribution channels; - Access to raw materials; - Access to human resources; - Local identity; - Contact with government; - Management know-how

*Availability of alternatives (3 items)*

5-point response format, 1= completely disagree, 5= completely agree, concerning:

- It is difficult to replace our partner; - We have many alternative ways of replacing our partner (reverse code); - We are dependent on our partner

2 *Conflict (7 items)*

Frequency (5-point response format, 1= never, 5= constantly) and intensity (5-point response format, 1= very low, 5= very high) of conflict, concerning:

- Strategic policy of JV; - Day-to-day policy; - Agreements between partners; - Performance measures; - Role and function of partners; - Interpretation of contract; - Distribution of advantages and disadvantages (know-how, financial)

3 *Trust*

*Credibility (4 items)*

5-point response format, 1= completely disagree, 5= completely agree, concerning:

- We can count on our partner being honest; - Our partner always keeps promises; - We accept explanations that seem unlikely, because we are sure that our partner is telling the truth; - Our partner provides information that later turns out to be incorrect (reverse code).

*Benevolence (3 items)*

5-point response format, 1= completely disagree, 5= completely agree, concerning:

- Our partner understands our problems; - When taking decisions about the joint venture, our partner takes the consequences for our company into account; - We can count on our partner's support in matters that are important to our company.

CFA results: two factor model,  $\chi^2(12)=19.46$ ,  $p=.08$ , AGFI=.87, NNFI=.95, CFI=.97

Cronbach  $\alpha$  (credibility) = .79, Cronbach  $\alpha$  (benevolence) = .83

4 *Norms of exchange (6 items)*

5-point response format, 1= completely disagree, 5= completely agree, concerning:

- The partners have a flexible approach; - Adjustments in the relationship are possible in order to react to changed circumstances; - The other party is provided with all information that may be of interest to it; - Information is also exchanged informally and not only on the basis of a predetermined agreement; - Solving problems within the joint venture is seen as a joint responsibility; - Both partners work for improvements that benefit the joint venture and do not only concentrate on their own advantage.

CFA results  $\chi^2(9)=15.95$ ,  $p>.05$ , AGFI=.86, NNFI=.96, CFI=.94

Cronbach  $\alpha$  = .89

5 *Performance (3 items)*

5-point response format, 1= completely disagree, 5= completely agree, concerning:

- The joint venture is more profitable than expected; - The joint venture has shown less growth potential than expected; - In general, we regard the joint venture as successful; - The joint venture's products have not achieved the intended market share (reverse code).

CFA results:  $\chi^2(1)=.05$ ,  $p=.82$ , AGFI=.99, NNFI=1.03, CFI=1.00, based on the standardised residuals, item 2 was deleted, loading of one item set to 1

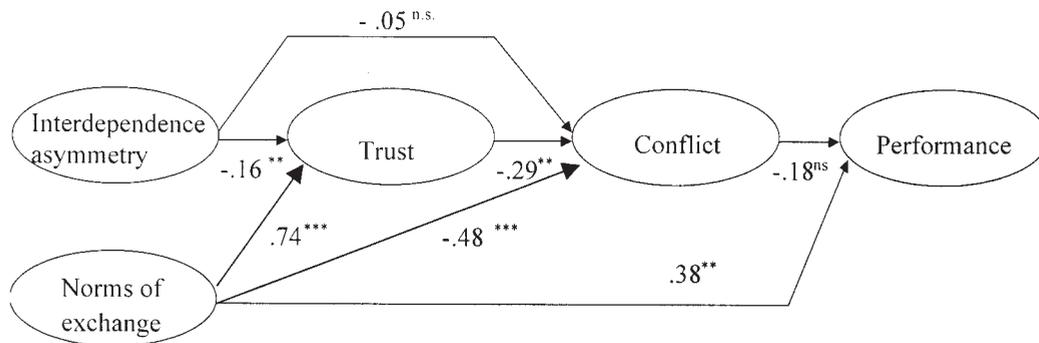
Cronbach  $\alpha$  = .85

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**Table 2. Descriptive statistics and correlation matrix.**

Variables	mean	std	1	2	3	4	5
1 Interdependence asymmetry	1.66	1.29	1.00				
2 Conflict	6.37	3.90	.04	1.00			
3 Trust	3.39	.86	-.21*	-.64***	1.00		
4 Norms of exchange	3.61	.85	-.08	-.70***	.75***	1.00	
5 Performance	3.07	1.08	-.04	-.45***	.40***	.51***	1.00

\*p<.10, \*\* p<.05, \*\*\* p<.01



$\chi^2=2.88, DF=2, p=.24, AGFI=.89, NFI=.98, NNFI=0.97, RMR=.02$

\*p<.10; \*\*p<.05; \*\*\*p<.01

**Figure 2. Structural model (standardized coefficients).**

suggest that the model fits the data very well. The model has a statistically non-significant chi-square; 2.88 df = 2 (p = .24). The overall model fit indices exceeds .90.

Hypothesis 1 concerns the effect of dependence on conflict. We expected that a greater dependency asymmetry would result in more conflict. However, the results do not support this relationship. The second hypothesis involves the effect of dependency on trust. The statistically significant estimate of  $-.16$  (p<.05) suggests support for this hypothesis. Thus, if there is more dependence asymmetry, this will result in less trust. The data also support hypothesis 3, which suggests that an increase in the norms of exchange will lead to an increase in the level of trust. With an estimate of  $.74$  (p<.01), this is a very strong relationship. In hypotheses 4 and 5, we stated that a high level of trust and of norms of exchange will lead to less conflict. The data support these hypotheses. The estimates of  $-.29$  for the trust-conflict relation and  $-.48$  for the norms-conflict relationship are both significant at p<.05. Hypothesis 6, which states that an increase in the level of norms of exchange will increase the performance of the partners, is also supported by this study. The estimate

of  $.38$  (p<.05) is statistically significant. Finally, hypothesis 7 concerns the negative effect of conflict on the joint venture performance. This relationship is not supported by the data, although we find a negative, but not significant, relationship of  $-.18$ .

## 5. Discussion and conclusions

In this study, we tested a model that describes the effect of dependence asymmetry on joint venture performance. In this model, we focused on the effect of interdependency on conflict and the co-operation between the partners (measured by the level of trust and norms of exchange) and the effect of these concepts on the performance of the joint venture. We found evidence that norms of exchange are very important for JV success. If the level of norms of exchange is high this will lead to better performance and lower levels of conflict. Contrary to our expectation, we found no direct significant relationship between dependence asymmetry and conflict. Indirectly, dependence asymmetry influences conflict by the concepts of trust and norms of exchange. This result might substantiate the intuitive idea

that in a trusting relationship, increasing asymmetry does not necessarily coincide with increasing levels of conflict. In a relationship with a high level of trust, conflict will be solved in an early phase and in a way that satisfies both partners. An example is given in one of the cases described by the authors (1998). The non-significant association between interdependence and conflict implies that the bilateral deterrence theory for explaining the dependence-conflict relationship might not be correct. It might be necessary to adjust the argument by integrating the mediating effect of the norms of exchange. Especially in asymmetric dependency relationships it might be essential to spend time at the start sharing ideas and expectations about the JV, making the positions and behaviour of the partners more predictable.

## 6. Limitations and further research

Though this study addresses dependence issues and relationship aspects of JVs to identify the antecedents of performance, the findings should be evaluated in the light of the following limitations. First, the study used cross-sectional data, thus preventing the investigation of the dynamic effects of interdependence, conflict, trust, norms of exchange, and performance. Based on literature, we formulated the hypotheses. However, if a JV is very successful (good performance), the partners might become more dependent on the JV and their partners in the JV. Good performance also creates an atmosphere in which trust can develop. Proof of this causal relationship requires a longitudinal research design. Further research along this line is therefore encouraged. Second, as in most joint venture studies, our information was obtained from only one side of the JV. While some variables in the study were bilateral, the data collected from only one partner did not capture all aspects of the relationship. However, some prior research studies (see e.g. Geringer and Hebert 1991 and Cullen et al. 1995) suggest that there is a relatively high level of consensus among key executives of the two partners. So, on the global level of the analyses there is no reason to assume that this limitation will have distorted the results. Third, the interdependence - conflict - performance relationship proved to be more complex than formulated in our hypothesis. It might be necessary to incorporate the level of total interdependence or moderating variables, such as methods of conflict resolution, goal similarity of the partner or institutionalisation of the goals. It is also important to consider the influence of the punitive capabilities based on dependence versus the actual use of punitive actions (Kumar et al. 1998). Fourth, we used a sample of Dutch companies, which might limit the generalisation of our conclusions. Further research is

encouraged to replicate the research in a different setting. Finally, further research is encouraged on the relationship between interdependence, the different stages of conflict and conflict resolution. Possible mediating variables such as trust should be taken into account.

## 7. Management implications

Despite these limitations, the results of this study give rise to some interesting generalisations. One of the most striking results is that, in contrast to expectations, the performance of a JV as perceived by the responsible executive is not necessarily negatively influenced by dependency asymmetry between the partners. This is interesting, as most managers are reluctant to start a JV with a dependent partner (see also Omta and Van Rossum 1999) because they presume that conflicts may easily arise with such a partner. Based on our findings, we tentatively conclude that managers need not expect serious conflicts, even when they enter an asymmetric dependency JV relationship. The level of relative dependency does not seem to influence the level of conflict, at least not to a high extent. Also the level of conflict may not necessarily influence the performance of the JV negatively. For the potential threat of conflict is mediated by the norms of exchange shared by the partners. We therefore suggest that the best way to manage the dependency position in a JV might be to invest time and effort in discussing the norms of exchange up-front, which will help the partners develop a trusting relationship.

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