THE EFFECT OF BARGAINING POWER ON JOINT VENTURE PERFORMANCE

Ron Kemp

Som-theme B  Market and interactions between firms

ABSTRACT
This article reports the results of an empirical study focusing on the relationship between the relative bargaining power of partners in an IJV, the division of control between the partners, the level of trust, and the performance of the IJV. In this study, we combined the structural and the behavioural approaches towards IJV management and evaluated their respective effect on IJV performance. Survey research was used to collect data. Research evidence indicated that the division of control was, to a large extent, explained by the relative resource contributions of the partners and the stakes the partners have in the IJV. Trust was influenced by the availability of alternatives. The performance of the IJV was influenced more by trust than by control and its dimensions. This indicates that companies should not solely concentrate on control, but should focus more on trust and the relationship with the partner.

* P.O. Box 800, 9700 AV Groningen, the Netherlands, tel: +31 50 3637237, fax: +31 50 3633850  email R.G.M.Kemp@BDK.RUG.NL

The author would like to thank Pervez Ghauri and Hans Kasper for their helpful comments and Stefan Leenen for his research assistance during this project.
INTRODUCTION
Over the past two decades there has been a substantial increase in the formation of Joint Ventures (JVs) and Strategic Alliances. This is in contrast to management preference in the past for maintaining autonomy and control and doing business alone if possible (Contractor & Lorange 1988). Although JVs are becoming increasingly more important for attaining competitive as well as strategic objectives, they still have a reputation for being difficult to manage. The importance of managing JVs is reflected in the extensive literature on this topic, which has focused primarily on ex ante structuring of JVs (see Parkhe 1993 for a review). The underlying premise of several studies (see e.g., Contractor and Lorange 1988, Geringer & Hebert 1989) is that choosing the right partner and using (ownership) control are critical determinants of JV success. This represents the structural perspective of JVs. Recently, there has been more interest in mechanisms and concepts, like trust and flexibility, that are important for the ex post maintenance of the JV or the behavioural approach (see e.g., Parkhe 1993, Madhok 1995).

The major purposes of this paper are to combine the two streams of JV literature (behavioural and structural approach) and investigate how they relate to the performance of a JV. By combining these two approaches, it is possible to evaluate the importance of each approach in an integral manner. In other words, the central research questions of this paper are: how do dimensions of bargaining power influence the division of control and level of trust, and how important is trust and (or versus) control for explaining the performance of the JV? We have developed a model to evaluate performance in JVs. In this model, the bargaining power, control, trust, and performance are integrated. It is based on the interpartner bargaining perspective on JVs as described by Harrigan (1986) and Yan and Gray (1994), in which the partners co-operate and compete simultaneously in the JV. The relative bargaining power of the partners shapes the pattern of control and
trust that a JV adopts. In addition, trust and control are hypothesised to be critical factors that determine performance. In earlier studies, research findings on the relationship between control and performance showed mixed results (see Geringer & Hebert 1989 for a review). With this study, we hope to get a clearer picture of how bargaining power influences the division of control and the level of trust and, consequently, their effect on the perceived performance of the joint venture.

As stated, we have adopted a bargaining perspective to explain the distribution of control between the JV partners. It is suggested that the relative bargaining power of partners is a critical variable in determining the division of control between the partners (Harrigan 1986, Blodgett 1991 and Yan & Gray 1994).

**Bargaining Power**

Bargaining power refers to a bargainer’s ability to favourably change the ‘bargaining set’ to win accommodations from the other party and influence the outcome of a negotiation (Yan & Gray 1994). According to Hamel (1991: 100): ‘Bargaining power is a function of who needs whom the most’. In a JV, each partner contributes resources and skills that serve as input for the joint venture and, therefore, each partner possesses a degree of bargaining power. As a result, both partners are dependent on the other’s contribution and effort for the success of the JV. The relative power of one partner resides implicitly in the subordination of the other.

The bargaining theory (Bacharach & Lawler 1981) and the resource dependence theory (Pfeffer & Salancik 1978) can explain bargaining power. The bargaining theory states that the stakes of the bargainers in a negotiation and the availability of alternatives influence their bargaining power. Yan and Gray (1994) use the term ‘context-based bargaining power’ to identify these stakes and alternatives in the bargaining power. A stake is a bargainer’s level of dependence on a negotiation relationship and on its outcomes. When a partner is very dependent on these
negotiations, his bargaining power is low. Thus, stakes are negatively related to bargaining power.

The alternatives available to negotiators specify the extent to which they can choose different arrangements for achieving the same goals sought in the negotiation (Harrigan 1986). The bargaining partner who has more alternatives is more powerful because he can threaten to walk away from the current bargaining in order to achieve his objective.

The resource dependence theory suggests that the possession of or control over critical resources constitutes bargaining power. Yan and Gray (1994) have used the term ‘resource-based bargaining power’. If a company contributes more critical resources to the joint venture, this partner will be more powerful than the other partner (Harrigan 1986). A partner gains bargaining power if the joint venture depends heavily on the resources it contributes that are ‘costly or impossible for other partners to replace’ and critical to the joint venture’s success (Yan & Gray 1994). In this study, we will focus on the effect of the three dimensions of bargaining power: stakes, alternatives and resource-based bargaining power.

Control

Control refers to the process by which a partner of a JV influences the other partner to behave in a certain way through the use of power, authority, and a wide range of bureaucratic, cultural, and informal mechanisms (Geringer & Hebert 1989: 236/237). The importance of control to a certain partner depends mainly on the strategic role or mission of the JV for that partner. The greater the strategic importance, the more that partner wants to control the JV (Root 1988).

The extent of control identifies which partner makes the larger number of strategic and operational decisions for the JV (Killing 1983).

A major cause for dissatisfaction with the management of JVs is that a dual hierarchy, arising as a result of shared ownership, results in a high potential for
conflict (Madhok 1995). This can interfere with the actual operations of the JV, and ineffectiveness and uncertainty can arise. One approach towards overcoming the difficulties in managing JVs suggests that paying attention to the JV’s social relations, such as trust, is as important as ownership control (Parkhe 1993, Madhok 1995).

**Trust**

The social dimension in which a relationship is embedded is important for the success of that relationship. Forcing decisions by means of formal control/power would be a short-term victory and might threaten the joint venture in the long run (Killing 1983). Trust is often considered to be a very important ingredient of managing relationships. We define trust as the willingness to rely on a partner in whom one has confidence (Moorman et al. 1992). This definition of trust reflects two distinct components: credibility and benevolence. Trust based on a partner’s expertise and reliability focuses on the objective credibility of a partner (Ganesan 1994). This credibility is based on the extent to which partner A believes that partner B has the required expertise to perform the job effectively and reliably. Benevolence focuses on the motives and intentions of the partner. A benevolent JV 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 (Kumar et al. 1995). This perception of benevolence induces behaviour in the interest of the JV relationship and reduces the need for monitoring (Madhok 1995). It is often argued that trust can replace hierarchical governance, accomplishing interfirm organisational objectives when ownership-based control is neither strategically viable nor economically feasible (Parkhe 1993, Madhok 1995).

**Performance**

Performance and performance measurement have received a lot of attention in JV literature. A major issue that is subject to considerable debate concerns the appropriate methods to be used when measuring JV performance (Beamish &
Delios 1997b). In summarising prior empirical JV research, Geringer and Hebert (1991) point out that early studies relied on a variety of financial indicators, such as profitability, growth, and cost position. Other studies have used objective measures, like survival of the JV, its duration, and instability of the JV ownership (Killing 1983, Beamish & Delios 1997b). Killing (1983) noted that financial and objective measures may fail to adequately reflect the extent to which a JV has achieved its short- and long-term objectives. It is possible that a JV operates in a context where objective and financial performance measures suggest that the venture is performing poorly, while the JV has been meeting or exceeding the parent company’s objectives (Geringer & Hebert 1991). Therefore, they have suggested that a subjective performance measurement has to be taken into account, as well.

**THE MODEL**

In this section, we shall present a model that integrates the concepts of bargaining power, management control, trust and performance. The proposed conceptual model is displayed in Figure 1.

Prior research has attempted to articulate the relationship between the bargaining power of the partners and the level of control they exercise (Yan & Gray 1994). Killing (1983) reported that the partner’s respective contributions shaped the control structure of the JVs. Root (1988) stated that the importance of control to a given partner depends on the strategic role of the JV for that partner. The greater the significance of an arrangement for the growth and profitability of a partner (or the strategic importance), the more that partner wants to control the JV. To get more control, a firm can make the JV or the partner more dependent on the availability of the firm’s proprietary resources that would be costly or impossible
for the partner to replace. In other words, a company should improve its bargaining position. If the importance of a certain contribution or resource is high, then the partner that contributes this resource will have more (resource-based) bargaining power and can claim more control as a result. There is a negative relationship between the stakes of bargaining power and control. If the stakes are high, a company will be dependent on the joint venture and, as a result, can claim little control. When a company has many alternatives to get access to a certain asset or contribution, it is less dependent on one particular party. As a result, the company has relatively more bargaining power and can claim relatively more control.

Based on this prior research and the discussion of the three concepts of bargaining power and control, we argue that the relative bargaining power of the focal company influences the focal company’s level of control. Specifically, we hypothesize:

*Hypothesis 1a:* The more resource-based bargaining power the focal company has, the more control the focal company has.

*Hypothesis 1b:* The more bargaining power the focal company has based on alternatives, the more control the focal company has.

*Hypothesis 1c:* The higher the stakes of the joint venture relationship for the focal company, the lower control the focal company has.

In a relationship where one partner is powerful, the powerful partner does not need to cultivate its partner’s trust (Kumar et al. 1995). It can use its power to obtain its partner’s co-operation. The risks of the powerful company are greater if it provides relatively more resources; it has more to lose. Its perception of trustworthiness of its partner will be relatively low. If it has more bargaining power based on alternatives, it has the possibility of changing to an alternative partner. It does not have to invest in trust building. If the stakes in the joint venture relationship of the focal company are high, it is important for the focal company to have a good
relationship with its partner and, therefore, it has an incentive to develop trust. Anderson and Weitz (1989) provided evidence that in asymmetric power relationships, the relationships are less trusting than in symmetric relationships. In an asymmetric power relationship, the fear of exploitation will be higher (Bucklin & Sengupta 1993); thus, the partners will focus more on monitoring their partner’s behaviour and input for possible signs of exploitation. Also, the dependent partner is unlikely to trust, because such sentiments render it more vulnerable to its partner’s opportunism. As the power asymmetry increases, conditions become more aversive to the development of trust (Kumar et al. 1995).

Hypothesis 2a: The more resource-based bargaining power the focal company has, the lower its trust in the partner.

Hypothesis 2b: The more bargaining power the focal company has based on alternatives, the lower its trust in the partner.

Hypothesis 2c: The higher the stakes of the joint venture relationship for the focal company, the higher its trust in the partner.

The control-performance relationship has received relatively little attention in the literature, and the studies that have been done show contradictory results (see Geringer & Hebert 1989 for a review). According to Killing (1983), a critical determinant of JV performance appears to be the control exercised by parents over a JV’s activities. He asserted that, among his three JV categories, dominant-parent JVs are more likely to be successful, at least compared with shared-management JVs. Based on a transaction cost perspective, he argued that since the presence of two parents constitutes the major management difficulty in JVs, dominant-parent JVs, in which the venture activities are dominated by a single parent, will be easier to manage and, consequently, will be more successful. Dominant-parent JVs are a mechanism for reducing the risks associated with co-ordination, potential conflicts,
and, consequently, for minimising transaction costs and stabilising the JV (Geringer & Hebert 1989).

Hypothesis 3: A JV controlled by one of the partners results in higher performance.

In interviews with JV managers and managers from the parent companies, we have often heard opinions such as: "The most important factor in the success of our JV is trust between the partners.” The direction of the relationship has generally been put forward as trust leading to performance (Harrigan 1986), although Yan and Gray (1994) suggested that performance may also have a feedback effect on trust. The rationale for the trust-to-performance relationship is that trust ensures a sound and co-operative working relationship between the partners. Trust influences performance in three ways. First, it reduces the perception of risk associated with the behaviour of the other partner. Second, it increases the confidence of the focal partner that short-term inequities will be resolved over a longer period. Third, it reduces the transaction costs in a joint venture relationship, because of lower monitoring costs. The higher the level of trust, the more efficient the JV will be in transforming an input of co-operation into a collaborative output (Buckley & Casson 1988). Thus, in the long run, partnership trust can have important positive JV performance and efficiency implications (Parkhe 1993).

Hypothesis 4: There is a positive relationship between trust and performance.

Yan and Gray (1994) suggested that trust can have a moderating effect on the control-performance relationship. In a JV that is characterised by a high level of trust, partners do not focus strictly on control. There is no need for direct monitoring. By developing trust, partners invest in the relationship and create a collaborative atmosphere. They will behave in such a way that they will not harm this atmosphere. Therefore, trust may counterbalance the temptation and fear of
opportunism, thereby lowering the need for direct control. Thus, a high level of trust will result in a lower effect of control on performance.

**Hypothesis 5:** The relationship between control and performance is negatively influenced by the level of trust.

**METHOD**

**Research setting and data collection**

The data for this study were obtained through a questionnaire. We used three selection criteria to construct our research sample: time period, parent nationality, and number of participants.

The first criterion was an attempt to capture the recent growth of JVs (Beamish & Delios 1997a). JVs that were founded during the period from 1989-1994 were selected. By looking at the foundation date, we also included JVs that were terminated at the time of our study. Furthermore, it was easier to identify the ‘right’ respondents. Most respondents approached were involved in the JV for the whole period and knowledgeable about the developments in the JV relationship.

The second criterion allowed us to focus on the Dutch partners of the JV. Questionnaires were sent only to the Dutch partner(s) of the JV because of time, funding, and access constraints. Finally, we concentrated on (Dutch) JVs with only two partners, since a majority (80%) of the JVs are between two partners (Jagersma & Bell 1992). It can be expected that JVs with more than two partners will face other problems. Also, prior research has primarily focused on two-partner JVs (see e.g., Geringer & Hebert 1991, Yan & Gray 1995, Glaister & Buckley 1998). Taken together, these three criteria generated a domain of inquiry that was both relevant and significant and that met the needs of this research.

Data collection proceeded in three phases. First, we developed a sampling frame of JVs that were founded. This data was gained primarily from announcements of starting JVs in *Het Financieele Dagblad*, annual reports of Dutch companies.
registered at the Dutch stock exchange, and the *Fusie and 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 each firm that was likely to be able to complete the survey for the particular JV. Third, after screening these JVs and contacting the parent companies, the sample was decreased to 242 Dutch JV partners, to whom we sent the questionnaire\(^1\). A reminder was sent to non-respondents and finally 95 executives responded, which is a response rate of 39%. Eighteen responses were not usable because data were missing, the JV involved more than two partners, or the JV was formed outside of our research time period, leaving 77 usable responses (32%). This response rate significantly exceeded the 9-24 percent range reported in similar published studies (e.g., Cullen et al. 1995). Possible non-response bias was examined by comparing early and late respondents. 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 problem.

The majority of the joint ventures were formed with partners from Europe (47), followed by America (12) and Asia (9). A total of 47 focal companies are in the manufacturing sector, 19 in services and 12 in other sectors (e.g., non-profit). For the sample as a whole, 60 joint ventures were still in existence at the moment of the survey, while 18 joint ventures had been terminated. The average JV duration was 3.2 years.

**Measures**

Multi-item scales were used to operationalise the independent and dependent variables. All the measures used in the study are listed in the Appendix.

**Bargaining power**

To measure bargaining power, we made a distinction between resource-based bargaining power and context-based bargaining power (Yan & Gray 1994). Resource-based bargaining power was measured by listing 9 possible resource
contributions by the partners (based on Contractor & Lorange 1988). The respondents were asked to assess the importance of each resource contribution for the success of the JV and to estimate the relative contribution of each partner. By multiplying the importance of the contribution by the relative contributions of the partners and equally weighting each type of resource contribution, a score was constructed for the overall relative contribution of the partners. A positive score on the resource-based bargaining power scale means that the focal company is powerful and a negative score means that the focal company is dependent.

Context-based bargaining power was measured by two dimensions. The stakes of bargaining power were measured by two items and were based on the sales and profit approach used in the distribution literature (Kumar et al 1998). We asked the respondent to give an indication of the importance of the JV for the focal company, as well as an assessment of the partner’s position (a high score implies great importance). By subtracting the focal company’s score from the partner’s score, we got an indication of the relative importance of the JV. A positive score on the stakes construct implies that the JV is relatively more important for the partner than for the focal company. Thus, a positive score implies that the focal company has more bargaining power.

The availability of the alternatives refers to the number and attractiveness of alternative partners a party may have and is based on Heide and John (1988) and Ganesan (1994). It is measured by three items (a high score implies few alternatives). We asked for the availability of the alternative partners for the focal company as well, to give an indication of the partners’ position. By subtracting the focal companies’ scores from the partners’ scores, we got an indication of the relative bargaining power. A negative score on this construct implies that the focal company has relatively few alternatives and, therefore, is relatively dependent. A positive score implies that the focal company has relatively many alternatives and, as a consequence, is relatively powerful.
For measuring control, the respondents were asked to assess the extent of joint decision making for a list of ten issues in the management of the JV (five strategic and five operational issues). This scale was based on the scale of Cullen et al. (1995). The different items were weighted equally to get an overall score for control.

Our definition of trust encompasses two essential dimensions: credibility and benevolence. The scale for measuring credibility was based on Kumar et al. (1995) and Ganesan (1994). For benevolence we used the scale of Kumar et al. (1995). For measuring the concept of trust, 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.

Our perceptual 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 (financial) market share (operational) and overall success. An overall score on JV performance was gained by taking the mean of the items scores, resulting in an overall score on performance ranging from 1 (poor performance) to 5 (good performance).

**Data Analysis**

Data analysis proceeded in two steps. In the first step, the procedure to evaluate the validity and reliability of the constructs, as described by Steenkamp and Van Trijp (1991), was followed. We started by testing each construct for unidimensionality by performing an exploratory factor analysis. Then, we looked at the item-total correlation and the Cronbach alphas of the unidimensional constructs to see whether the reliability was satisfactory. We concluded this step with confirmatory factor analysis (CFA) using LISREL 8 with maximum likelihood estimation (Jöreskog & Sörbom 1996). We used the covariance matrix as input matrix. The CFA involved the measures of trust (benevolence and credibility) and performance. Bargaining power and control were not included in the CFA, because they were conceptualised...
as formative indicators or multidimensional composite indices (Bollen & Lennox 1991, Kumar et al. 1995). Based on the formative properties of these measures, conventional validation methods based on association are not appropriate. The results of the reliability and validity tests are summarised in the appendix.

In the second step of the analysis, the hypotheses were tested using regression analysis. The hypotheses were tested by estimating the subsequent regression equation for each of our independent variables (control, trust and performance).

**RESEARCH FINDINGS**

Table 1 shows the means, standard deviation and correlations between the dependent and independent variables. To test the hypotheses, we used the ordinary least square procedure; the aptness of the hypothesised model for the data was tested by an analysis of residuals.

***************
Put Table 1 about here
****************

Table 2 summarises the results of the OLS regression analysis of the three independent dimensions of bargaining power, the dimensions of control and trust. The regression equations are significant, at least at the 0.05 level, except for strategic control. We can also see that total control is significantly related only to resource-based bargaining power (H1a). The context-based bargaining power dimensions have the expected signs but are not significant. We have to reject H1b and H1c. To find an explanation for this lack of support, we divide control into operational and strategic control. Strategic control is not influenced by either resource- or context-based bargaining power. Operational control, however, is influenced by resource-based bargaining power and the stakes of the joint venture for the partners (at the 5% level). We might conclude that there is a different relationship between bargaining power and strategic and operational control. The division of strategic control is not influenced by the relative bargaining power of
the partners. When entering a joint venture, the partners expect that they will have to share control over strategic issues despite their relative bargaining power. Bargaining power has, however, a direct effect on the division of operational control. Both the contributed resources and the stakes of the joint venture influence the division of operational control. If a company has strong bargaining power, it can also claim strong operational control.

Put Table 2 about here

We have found support for H2a and H2b. This implies that trust is influenced by the bargaining power based on alternatives and the contributed resources of the partners. If the focal company has more alternatives, it does not need to cultivate its partner’s trust. The same holds for bargaining power based on the contributions of the partners. We have to reject H2c.

H 3 states that a joint venture that is dominated by one partner will perform better

Trust is hypothesised to positively influence performance (H4) and mitigate the effects of control on performance (H5). To test for this effect, we constructed an interaction term by multiplying trust and control. Table 3 shows the results of the regression analysis of control and trust on performance. Individual beta coefficients do support H 4, indicating that trust has a significant impact on performance. H 3 and H 5 are not supported. Furthermore, a distinction between operational and strategic control does not have any influence on the results. Therefore, trust is a more important indicator of performance than control (β = .68, p < .01).

Put Table 3 about here
The primary objective of our study was to address the concerns of Yan and Gray (1994) that insufficient empirical attention has been paid to combinations of several important concepts in the joint venture literature, especially bargaining power, control, trust, and performance. In this study, we combined the structural with the behavioural perspective of JV management. We tried to find evidence for our model, which is an extension of the Yan & Gray model. The latter, however, was based on qualitative data, while in our study, an initial empirical effort was made to use more quantitative data based on a sample of Dutch joint ventures. Hypothesis testing yielded (partial) support for our hypotheses. First of all, we found partial support for the relationship between bargaining power and control. In particular, resource-based bargaining power seemed to be a good predictor of several dimensions of control, as well as the level of trust. This is in line with the findings of Root (1988) and Blodgett (1991), who stated that contributions of resources are good predictors of control. Bargaining power based on stakes influences operational control. Relatively high stakes imply relatively low bargaining power and, consequently, relatively low operational control. These findings might imply that control is more internally oriented (stakes and resources). Bargaining power based on alternatives is more related to trust. Thus, the level of trust is partially based on an external perspective (i.e., the availability of alternatives).

We did not find support for the control-performance hypotheses. This finding contradicts a widely held assumption that suggests bargaining power or ownership is necessary for effective control of a firm’s partner, implying that their performance depends on the focal company’s ownership control. Our findings might imply that direct control is not that important for the performance of the joint venture.
Finally, recent research on joint ventures has stressed a need for understanding behavioural and social dynamics in joint ventures. One such dimension is the degree of trust that exists between the partners in a joint venture, which might become a functional substitute for hierarchical control, such as ownership control. This study builds on the behavioural approach of interorganisational governance by examining the role of trust in combination with control on the performance of the joint venture. The empirical results of this study suggest that trust in a relationship might be a better indicator of performance than control. Therefore, more informal mechanisms of control, i.e., behavioural aspects like trust, might be more important than formal and structural mechanisms like equity or the extent of control.

**MANAGEMENT IMPLICATIONS**

There are three significant implications of the study’s findings. First, the division of control is basically explained by the relative contribution of each partner and the importance of that contribution for the success of the joint venture and the availability of alternatives. This implies that there is a focus on the competitive needs of the joint venture itself, i.e., the resources the joint venture needs to survive in its environment and whether or not there are alternatives that can contribute to these resources. During the negotiations, the companies in the joint venture look at one another’s relative strengths and also focus on the existence of possible alternatives. Therefore, the result of the negotiations (i.e., the division of control) is based on the importance of the relative contributions and the possible alternatives.

Second, there is a clear distinction between operational and strategic control. Although these two concepts are strongly correlated (ρ = 0.63), they are two separate concepts. The division of strategic control is not explained by the relative bargaining power. It seems that the division of strategic control is decided upon before the real negotiations start. When companies start talking about a joint
venture, they know that they have to share strategic control. There might also be other aspects that explain the division of strategic control. Operational control is explained by the relative contributions of the partners and the stakes. This might imply that a company has to use a different negotiation strategy with respect to operational and strategic control.

Third, the results suggest that individual firm objectives in a partnership and the performance goals can be met without a strict focus on formal mechanisms of control and ownership control. In fact, attempts at formal control of the JV might have an adverse impact on JV performance if these attempts have a negative effect on trust. Thus, firms should rely more on social interactions and trust, rather than formal control mechanisms, to maintain their JV and enhance the performance of the JV.

**LIMITATIONS AND FUTURE RESEARCH**

Though this study addresses behavioural issues and structural aspects of JVs to identify the antecedents of performance, the findings should be evaluated in the light of the following limitations. First of all, the study used cross-sectional data, thus preceding an explanation of the dynamic effects of bargaining power, control, trust and performance. This becomes particularly crucial because two-way causal linkages have been suggested in the literature between, for example, control and performance. Similarly, the trust-performance relationship could be reciprocal; that is, trust leads to performance, but improved performance may also build trust.

Second, our results were based on information obtained from only one side of the JV. We attempted to obtain data from both partners; however, it was, for example, very difficult or not possible to identify the key informant of the (foreign) partner. Since some variables in the study were bilateral, data collection from only one partner did not capture all aspects of the relationship, and the findings should be interpreted accordingly. Future research is encouraged that uses responses from both partners of the JV.
Third, the control-performance relationship proved to be more complex than formulated in our hypothesis. Future research should be undertaken to better understand this relationship. It might be necessary to incorporate intervening or moderating variables like the nationality of the partner or institutionalisation of the goals as Yan & Gray (1994) suggested. Also the level of control might have an impact on the desired level of control.
REFERENCES

Appendix: Measures

Resource-based bargaining power:
Contribution importance (1= completely unimportant, 5= very important)
Relative contribution (-2 = entirely partner, 0 = equal, 2= entirely own company)
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

Alternatives: (1= completely disagree, 5= completely agree)
It is difficult to replace our partner.
We have many alternative ways of replacing our partner.(r)
We are dependent on our partner.

Stakes: (1= completely disagree, 5= completely agree)
The joint venture makes a considerable contribution to profits
The joint venture makes a considerable contribution to sales

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

Trust (credibility): (1= completely disagree, 5= completely agree) $\alpha=.79$
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. (r)

**Trust (benevolence):** (1= completely disagree, 5= completely agree) $\alpha=.83$

Our partner has an understanding of our problems.

When making 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.

**Extent of control:** Who makes the following decisions; (1= completely partner, 3= equal, 5= completely own company)

- Development of the organisational structure
- Planning and budgeting
- Personnel policy of the management
- Personnel policy of the implementing staff
- Interpretation of the co-operation agreement
- Changes in the co-operation agreement
- Strategic policy
- Day-to-day policy
- Distribution of profit
- Agreements between the joint venture and the partners

**Performance** (1= completely disagree, 5= completely agree) $\alpha=.85$

Based on the standardised residuals, item 2 was deleted, loading of one item set to 1

CFA results: $\chi^2(1)=.05$, $p=.82$, AGFI=.99, NNFI=1.03, CFI=1.00

The joint venture is more profitable than expected.

The joint venture has shown less growth potential than expected. (r)

In general, we regard the joint venture as successful.

The joint venture’s products have not achieved the intended market share. (r)

(r) = reverse code
<table>
<thead>
<tr>
<th>Variables</th>
<th>MEAN</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RESOURCE-BASED</td>
<td>1.07</td>
<td>2.69</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ALTERNATIVES</td>
<td>.30</td>
<td>1.07</td>
<td>.25**</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 STAKES</td>
<td>.38</td>
<td>1.22</td>
<td>.10</td>
<td>.19*</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 CONTROL</td>
<td>3.23</td>
<td>0.65</td>
<td>.37***</td>
<td>.15</td>
<td>-.12</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 OPERAT. CONTROL</td>
<td>3.31</td>
<td>0.99</td>
<td>.41***</td>
<td>.14</td>
<td>-.19*</td>
<td>.97***</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 STRAT. CONTROL</td>
<td>3.16</td>
<td>0.44</td>
<td>.17</td>
<td>.13</td>
<td>.06</td>
<td>.81***</td>
<td>.63***</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 TRUST</td>
<td>3.40</td>
<td>0.85</td>
<td>-.29**</td>
<td>-.36***</td>
<td>-.12</td>
<td>.11</td>
<td>.11</td>
<td>.07</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>8 PERFORMANCE</td>
<td>3.35</td>
<td>1.00</td>
<td>-.16</td>
<td>-.24**</td>
<td>-.05</td>
<td>.08</td>
<td>.08</td>
<td>.06</td>
<td>.68***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* Table 1: Correlation matrix

* p < .10  ** p < .05  *** p < .01
Table 2: Results of regression analysis for control and trust

<table>
<thead>
<tr>
<th></th>
<th>total control</th>
<th>operat. control</th>
<th>strat. control</th>
<th>trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource-based barg. power</td>
<td>.36***</td>
<td>.42***</td>
<td>.14</td>
<td>-.21*</td>
</tr>
<tr>
<td>Context-based barg. power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>alternatives</td>
<td>.09</td>
<td>.08</td>
<td>.09</td>
<td>-.30***</td>
</tr>
<tr>
<td>stakes</td>
<td>-.17</td>
<td>-.24**</td>
<td>.03</td>
<td>-.04</td>
</tr>
<tr>
<td>R²</td>
<td>.17</td>
<td>.23</td>
<td>.04</td>
<td>.17</td>
</tr>
<tr>
<td>adj R²</td>
<td>.13</td>
<td>.20</td>
<td>.00</td>
<td>.14</td>
</tr>
<tr>
<td>F</td>
<td>4.87***</td>
<td>7.18***</td>
<td>.97</td>
<td>5.09***</td>
</tr>
</tbody>
</table>

* Entries represent standardised regression coefficients.
* * p < .10  ** p < .05  *** p < .01
Table 3: Results of regression analysis for performance

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>Operational control</td>
<td></td>
<td>.04</td>
</tr>
<tr>
<td>Strategic control</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.68***</td>
<td>.67***</td>
</tr>
<tr>
<td>Control * Trust</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>Operational control * Trust</td>
<td></td>
<td>.02</td>
</tr>
<tr>
<td>Strategic control * Trust</td>
<td></td>
<td>-.04</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.46</td>
<td>.46</td>
</tr>
<tr>
<td>adj $R^2$</td>
<td>.44</td>
<td>.43</td>
</tr>
<tr>
<td>F</td>
<td>20.52***</td>
<td>12.21***</td>
</tr>
</tbody>
</table>

*Entries represent standardised regression coefficients.

*p<.10  ** p < .05  *** p < .01
Figure 1: Conceptual model factors influencing performance

(Based on Yan & Gray (1994))
ENDNOTES

1 Some joint ventures were never founded, not international, the parent company did not exist anymore, the company was not willing to cooperate, or the company filled in only one questionnaire (some companies founded more than 20 joint ventures in this period).

2 In our study, we shall make a distinction between these two dimensions of control.

3 Although WLS estimations should be used for ordinal scales, we used ML estimators. WLS requires a large sample size. If the sample size is small (as in our case), the assumption of multinormality holds, and if there are minor skewness and kurtosis (not exceeded |1|), ML estimators can be used (Bollen 1989: 432).

4 To test these hypotheses, we had to adjust the control scale in such a way that dominance would be clear. We subtracted 3 (the value for shared control) and took the absolute value. Shared control is represented by a score of zero, total dominance of one of the partners by a score of 2.

5 The concepts were mean centered to reduce multicollinearity (Jaccard et al. 1991).