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THE EFFECT OF REPUTATION ON THE DECISION TO JOINT VENTURE

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This paper focuses on the impact that reputation has on the decision to proceed with a strategic alliance. Employing reputation constructs adapted from the Fortune *Corporate Reputation Survey, we manipulated a target firm's reputation in an experimental design. The subjects were placed in the role of CEO of the partner firm and asked whether they would engage in the alliance. Findings indicate that (1) reputation is a multidimensional construct, (2) the personal information-processing characteristics of the decision-maker mediate the reputation effect and may suppress the reputation information, (3) subjects may compensate weaker elements of reputation for stronger ones when making decisions, (4) product and management reputation are the most important factors, and (5) reputation is a factor affecting the decision regardless of whether the proposed target is a supplier or a competitor.* © 1997 by John Wiley & Sons, Ltd.

A positive reputation indicates that an organization is highly esteemed, worthy or meritorious; it implies a good name and high regard (*Webster's Third New International Dictionary*, 1961). A firm's reputation is an intangible element of its business strategy. With it the firm may signal its competitive intentions. For example, a reputation for retaliation inhibits rivalry (Caves and Porter, 1977). A positive reputation is a strategic factor that can be employed to earn above-average profit (Barney, 1986). A firm's reputation influences trust, and that leads to alliances and other inter-organizational relationships (Oliver, 1988). The reputations of new firms and their founders, including favorable beliefs, trust, and psychological commitment, are assets that serve as the foundation of the entrepreneurial 'honeymoon' (Fichman and Levinthal, 1991). Reputation-building activities are, therefore, strategically important for potential target firms in these incomplete information settings (Weigelt and Camerer, 1988).

The purpose of this paper is to build and test a model of alliance formation that focuses on target firm reputation, and to look at the dimensionality of the reputation construct. The model has three components, incorporating the direct effect of reputation, the status of the alliance partner as a competitor or supplier, and the individual characteristics of the decision-maker. The first component is the main effect of reputation on the joint venture decision. Although it seems clear that a positive reputation is an unalloyed asset, there are a number of previously unexam-

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ined issues here: Which elements of a firm's reputation are most salient to the alliance partner? Which are necessary, which sufficient? And, what are the combinatorial properties of reputational information regarding the propensity to form a joint venture? For example, a firm might have an excellent reputation for financial stability, yet its products may be seen as noninnovative and of below-average quality. Can a clean balance sheet offset the weak product situation in the minds of an alliance partner?

The second component concerns the position of the target firm in the production chain. It has been noted that it is strategically risky for enterprises to engage in alliances directly with competitors (Bresser and Harl, 1986; Nielsen, 1988; Bresser, 1988). The question of whether a competitor can be trusted enters into the model. A competitor firm's reputation for integrity and trust may influence its attractiveness as a partner. We test the effect that this has on the decision by manipulating the target firm's relationship (supplier or competitor) with the partnering firm.

The third component concerns the individual characteristics of the decision-maker. The content of a firm's reputation is information. This information is often incomplete, and a firm's reputation with a specific decision-maker may be based on second-hand information. Each decision-maker will process this reputational content according to the individual's proclivities for handling such ambiguous information. Therefore, if we view a firm's reputation as a mental map, individual differences in the map reader's tendencies and biases will influence the decision to enter into an alliance based upon the target's reputation. We incorporate the effects that the psychological content of the information has on the joint venture strategic decision (Bateman and Zeithaml, 1989).

The model can contribute to research investigating reputation and strategic alliances and to practitioners considering alliances as part of a strategic initiative. For researchers, the unidimensionality of corporate reputation found in prior research (see, for example, Fombrun and Shanley, 1990) has led to a recent wave of analytical approaches to address a halo effect in corporate reputation as measured by the *Fortune* survey (Brown and Perry, 1994; Fryxell and Wang, 1994). The halo effect and common method variance based on the data-gathering technique have been identified, but little has been offered to expand the notion of reputation as a multidimensional construct. This study takes an alternative perspective to the post hoc analytical approach. If reputation is multidimensional, researchers should be able to manipulate dimensions independently in a decision-making framework. Once validity for the multidimensionality of reputation has been established through this manipulation, further field and lab research may be undertaken to measure and evaluate this important construct.

For practitioners, the use of alliances has become a common tactic to achieve strategic objectives (Harrigan, 1986; *Fortune*, 1992). To engage in these relationships, though, a firm must provide an attractive combination of assets to a potential partner. By understanding how potential partners value intangible assets such as reputation, and how the decision-maker's characteristics may affect the decision to engage in an alliance, a company may be able to better position itself as an attractive partner. Companies such as Corning have built a core competence based on an ability to successfully engage in alliances (*Fortune*, 1992). Thus, research investigating the role reputation and dimensions of reputation play in alliance decisions is managerially relevant.

THEORETICAL DEVELOPMENT

The role of reputation

The reputation construct is an important component in four theoretical models of management and organization: resource-based theory, game theory, transaction cost theory, and theories of organizational effectiveness. In each of these models, a positive reputation can be shown to increase the desirability of the target firm as a strategic alliance partner.

Resource-based theory

Within the resource-based theory of the firm (Penrose, 1959; Wernerfelt, 1984), reputation is seen as one of the key asset bases (Grant, 1991). A reputation can be valuable (Hall, 1992), rare, hard to duplicate (Mahoney and Pandian, 1992) and nonsubstitutable, thus providing the firm with a sustainable competitive advantage. A firm's reputation can, therefore, be a source of rent and profit (Barney, 1991). A superior reputation can act as a barrier to imitation. In a recent survey

of top executives, several aspects of reputation (firm and product) were rated the top contributors to firm performance (Hall, 1992).

Game theory

A strategic alliance can be analyzed from a game theory perspective (Dollinger, 1990). Forming an alliance adds value and transforms a zero-sum game into a positive-sum one. In order for the game to result in the total maximum utility over the length of the relationship, firms must be able to predict what the other will do. One cue as to the target's game behavior is reputation (Weigelt and Camerer, 1988). Partners infer from positive reputations that the target is not going to defect and lower the collective pay-offs. A positive reputation also encourages future game playing. If an alliance partner were to covet a short-term gain by defecting, and in an end game scenario be immune to retaliation, its reputation for future games and alliances would be diminished.

Transaction cost economics

When the issue is strategic alliance partner choice, a positive reputation can reduce transaction costs. Firms with strong positive and negative reputations are more visible; they are likely to receive more media coverage than firms with no reputations. Therefore, the searching costs for an acceptable partner firm are lower. Also, the implication of a positive reputation is that the target firm can be monitored and evaluated more easily because it is more visible and its performance more public.

As with game theory, the threat of opportunism by the target firm is reduced by virtue of the target's positive reputation. Even if opportunistic behavior takes place during the alliance, the decision-maker is somewhat protected from the negative consequences because a consensus high-reputation firm was originally picked. The recontracting problem (each side in the alliance is potentially in the position of a monopolist or monopsonist) is also ameliorated by the desire to maintain their hard-earned reputation over a long period of time.

The effectiveness literature

In the previous three models, firm reputation is viewed as an independent variable, a contributor to firm performance. But a firm's reputation is also a measure of its effectiveness, a dependent variable. It may be a function of financial performance, product quality, management effectiveness or some combination of factors that appeal to a firm's multiple constituencies (Tsui, 1984). Accountability to external constituents is viewed as the hallmark of a positive reputation (Gaertner and Ramnarayan, 1983). Fombrun and Shanley (1990), in their work on the *Fortune* Corporate Reputation Survey data base, used reputation in this way.

This discussion illustrates the potential benefits of a positive reputation. It is a resource for a firm, and potentially desirable to partners; a positive reputation reduces the perceived likelihood of defection in a game-theoretic perspective; it reduces transaction costs for the partner; and it is an indicator of the firm's overall effectiveness. It is reasonable to expect, then, that a partner with a positive reputation would be more desirable than one with a poor reputation. Thus, we propose:

> *Hypothesis 1: A decision-maker's propensity to engage in a joint venture is increased by the positive reputation of the target firm.*

This hypothesis is made more interesting by the potential to manipulate dimensions of the partner firm's reputation. One of the difficulties with the reputation construct is that although it seems to be comprised of several fundamental and independent dimensions, there is a halo effect that masks this multidimensionality (Fombrun and Shanley, 1990; Brown and Perry, 1994). For example, Rao (1994), in a study of the auto industry, found that high-visibility events, such as winning product quality certification contests, improved the company's reputation which subsequently improved effectiveness in other areas. Similarly, Johnson (1993) found CEO reputation to be sensitive to stock returns and accounting earnings. In this case the halo is from company-to-individual reputation instead of from company-to-company element. Although it appears that reputation consists of multiple dimensions, it is frequently either measured in a unidimensional fashion as noted above in the Rao (1994) and Fombrun and Shanley (1990) examples, or the potential for the halo, spillover and compensatory

effects are ignored by researchers and the market. In this paper, we attempt to 'tease out' the effects of several dimensions of reputation that have been used or alluded to in the literature.

Supplier vs. competitor partners

The second component of our model concerns the target firm's position in the production chain, namely the potential differences between a supplier or competitor firm. Direct contacts and alliances with noncompeting firms (conjugate alliances) include long-term purchasing contracts with suppliers and customers and joint R&D projects. For example, a joint R&D effort enables a manufacturer to test the operating characteristics of a supplier's materials (for a fee) and reports back to the supplier how the material holds up under various real operating conditions (a gain for the supplier).

Direct contact and an alliance with a competitor is called a confederate alliance (Astley and Fombrun, 1983). Partnering among competitive technology firms offers the potential to create entry barriers and may prevent their suppliers from flexing power. In Hagedoorn's study (1993), market access and structure was the most frequently mentioned reason for engaging in a confederate alliance. Other often-cited and researched reasons include rapid access to new technology and markets, organizational learning, and improving customer–supplier relationships (Forrest, 1990; Hagedoorn, 1993; Hamel, Doz and Prahalad, 1989). Thus, alliances between technology firms become a mechanism for cost containment and the strategic control of competitive drivers.

Engaging in an alliance, however, is not without risk. An alliance with a competitor means taking the risk of revealing proprietary technology (Bresser, 1988; Bresser and Harl, 1986). There is still the risk of defection (from game theory). And not only technology is in jeopardy. Organizational skills and systems can be transferred to the competitor through diffusion and social learning. Important human resources can be lured away to work for the competitor. The competitor can attempt to piggyback the alliance into additional financial resources which could be used to attack the partner at a later point. So there is a trade-off when partnering with a competitor, and it is not clear, *a priori*, whether the costs outweigh the benefits. The competitor–supplier manipulation is included in the experiment, but without a hypothesis regarding the outcomes in our experiment.

Decision-maker cognitive characteristics

The target firm's reputation is received as information. This information possesses elements of uncertainty, ambiguity and risk. The decision-maker's ability to process this reputational information and his tolerance for this uncertainty and risk will vary among individuals. Information interacts with cognitive characteristics within the person to produce the frame for the decision. Some cognitive characteristics may serve to magnify or enhance the reputational information; others may serve to suppress the content received.

Tolerance of ambiguity refers to the tendency of an individual to view situations which are uncertain, potentially without solutions, and novel as desirable (Budner, 1962). Scenarios in which information is conflicting, and interconnections complex and novel are avoided by persons with low tolerance of ambiguity. A mix of positive and negative reputation factors has the potential to create problems that do not have apparent solutions; mixed reputation increases the ambiguity of the decision environment. In the application proposed here, tolerance of ambiguity functions as a mediator between the reputation of the target firm and the final decision to form an alliance. The cognitive characteristic is hypothesized to act as a suppressor of the negative information. Reputation is the main effect and the decision to engage in the alliance is the criterion. Therefore the following hypothesis is proposed:

> *Hypothesis 2: Tolerance of ambiguity will interact with firm reputation to predict alliance approval. High tolerance of ambiguity subjects will be more likely to suppress mixed and negative information regarding target firm reputations, and therefore more likely to approve the alliance.*

While an individual with high tolerance of ambiguity might not feel discomfort in processing discordant reputational information, that individual might feel the lack of 'latitude of managerial discretion' needed to make the joint venture decision (Hambrick and Finklestein, 1987). There

are a number of forces that have been argued to influence managerial discretion. Among these are the aspiration level of the manager, the commitment level, tolerance of ambiguity and locus of control (Hambrick and Finklestein, 1987: 373). Locus of control refers to an individual's beliefs that outcomes stem from internal or external factors (Rotter, 1966). If a decision-maker is internal in his locus of control, he might be inclined to increase the domains and possible courses of action available to him. Conversely, if an individual is external in his locus of control, he perceives that his discretion to make decisions is limited by factors, entities, or other individuals (Hambrick and Finklestein, 1987). Miller, Kets de Vries and Toulouse (1982) found that senior executives varied significantly on their locus of control orientation. Thus, a decision-maker with an internal locus of control may feel that there is sufficient discretion to proceed with the alliance, even in a mixed or negative reputation scenario. Therefore, internal LOC mediates the reputation → alliance decision by suppressing the negative information. Once again, reputation is the main effect and alliance behavior is the criterion.

This leads us to the third hypothesis:

Hypothesis 3: Locus of control will interact with firm reputation to predict alliance approval. Internals (high locus of control) subjects will be more likely to suppress mixed and negative information regarding target firm reputations, and therefore more likely to approve the alliance.

To summarize, we are testing a model of alliance behavior that incorporates three major components: target firm reputation, decision-maker characteristics, and target firm position in the production chain. In this model, reputation is construed as the primary factor affecting the decision to partner in a joint venture or similar alliance. We anticipate that there may be a difference in the propensity to engage in the joint venture depending upon whether the target firm is a competitor of or supplier to the partnering firm. Lastly, because a firm's reputation might contain discordant and conflicting information, we hypothesize an interaction between the cognitive characteristics of the decision-maker and the content of the reputation information.

METHODS

Subjects

The subjects for this experiment were 170 MBA and Executive MBA students at a large public university. The subjects' mean age was 28 years old. Nearly half of the subjects were finance/accounting majors, with the balance of the majority made up by marketing, management, and operations. The mean number of years of industry experience was 4.3; only 22 subjects had less than 2 years of industry experience. This experience was in a wide variety of industries, spanning banking and financial services, consulting, health care, government, and other industries. Functional responsibilities closely paralleled the chosen majors, with the majority of subjects in finance and accounting (31%), sales and marketing (18%), production (13%), and general management (8%). Nearly 90 percent of the subjects were born in the U.S.A. Seventy-three percent of the subjects were male.

Task familiarity

In using student subjects, the issues of task familiarity and generalizability come into question (Sears, 1986; Gordon, Slade, and Schmitt, 1986; Fromkin and Streufert, 1983). In this experiment, the concern is tempered by the use of MBA and Executive MBA students. As indicated above, the mean age and experience reflect a reasonable degree of familiarity with organizational processes. Although the subjects certainly are not seasoned in the choice of strategic alliance partners, they are very familiar with the process of selecting suppliers or dealing with customers, as suggested by their range of functional responsibilities. Moreover, their work experience levels and presence in an advance education program should make them aware of the criteria for making such decisions as alliance partners. Additionally, the use of student subjects to capture the effect of individual characteristics on decision-making is well founded in decision-making research.

In a postexperiment set of questions, we asked subjects to rank order their preferences for alliance types. The joint venture was the most preferred type, followed by acquisition/merger, licensing agreements and comarketing arrangements. The rank order was significant (Kendall's coefficient of concordance $W = 0.18$, $p < 0.001$).

Preference may be inferred to suggest task familiarity. Subjects would be likely to choose as their top preference an alliance type that they were familiar with and understood. Thus, we suggest that task familiarity, a critical boundary variable, is moderate-to-high from a cognitive standpoint, moderate from a practical standpoint, and sufficient for this experiment.

Task

The experiment involved a joint venture decision based on a joint venture reported in the *Wall Street Journal*. The facts presented in the newspaper article were rewritten, with actual company names disguised, and a scenario developed to indicate that the joint venture had not yet occurred, but was just about to occur. Subjects were asked to assume the role of CEO, and were given the scenario describing a potential joint venture. The target was described as the only company remaining under consideration following a screening of potential partners. Substantial benefits to the subject's company were indicated. The scenario stated that the partner firm projected it would save 'hundreds of millions of dollars over the next 5 years' by implementing the joint venture rather than assuming the cost of new facilities. In addition, the scenario indicated that the agreement would enable the partner firm 'to decrease new product development time.' The scenario description can be found in Appendix 1. The rationale for the alliance encompasses literature-derived reasons for technologically oriented alliances and joint ventures (Hagedoorn, 1993; Geringer, 1988; Harrigan, 1986). The explicit benefits were held constant regardless of the target's reputation; thus, the pay-off in financial terms was a constant, with the partner reputation and status as supplier or competitor the only sources of variance for subjects.

Manipulation

The experimental design created two groups: one group was cast in the role of joint venturing with a competitor, and one group was cast in the role of joint venturing with a supplier. Within each group, the product quality, management quality, and financial reputations of the target firm of the joint venture were manipulated into positive or negative conditions, based on a one-paragraph description of each dimension. Each subject received treatments simultaneously on each dimension of the three reputation factors; the positive or negative treatments were varied and randomized such that approximately 20 subjects received each of the eight possible combinations of treatments. The manipulation of the reputation variables is reproduced in Appendix 2. The experiment was administered in a mandatory second year MBA class and Executive MBA management class. Treatments were completely randomized between and within each class. All subjects were read the same instructions regarding the assignment, which took approximately 30 minutes to complete.

Measures

Following the scenario description, subjects were asked to answer a number of questions about the venture possibility. The first question and principal dependent variable for analysis was a decision as to whether to form the venture or not. The question read: 'Based on the description, would you proceed with the strategic alliance? (Circle One) Yes No.' Fifty-five respondents indicated they would proceed with the alliance and the remaining 115 respondents indicated that they would not proceed. Analysis of the demographics indicated no systematic difference within the sample. Contingency analysis yielded χ^2 values of 3.67 by major; 6.90 by functional area of work experience; 29.70 for industry; 6.90 for national origin; 0.003 for gender; and 1.64 for marital status. ANOVA *F*s for mean differences were 0.015 for GPA, 1.77 for years in industry, and 0.24 for age. None of these results were statistically significant.

Tolerance of ambiguity was measured using the 16-item scale developed and validated by Budner (1962). Scale reliability for this study was 0.7062. Locus of control was measured using the 16-item scale developed and validated by Spector (1988). This scale is different from the Rotter (1966) scale in that its items are directly relevant for work-related behavior and is therefore a more specific scale than the Rotter instrument. The reliability for this study was 0.8061. Both scale reliabilities are sufficiently high to accept the instruments *a priori*. The simple correlation coefficient between tolerance of ambiguity (TA) and locus of control (LOC) was 0.34 ($p < 0.01$).

Manipulation check

A manipulation check was performed on the multidimensional reputation variable with ANOVA using a scale assessing each dimension of reputation (1 = strongly disagree, 7 = strongly agree that reputation is 'excellent'). This confirmed that the reputation dimensions were appropriately understood by the subjects. Results are shown in Table 1. In each case, the mean response of the validity scale was significantly higher when the manipulation on that dimension was positive. For example, respondents indicated that the quality of management was excellent only when the manipulation was positive ($F = 55.787$, $p = 0.000$).

An intriguing result of the experimental manipulation is the suggestion of spillover effects between reputation dimensions. Table 1 captures these spillover effects among the reputation descriptions. This occurred even though the reputations were manipulated independently, and the descriptions of the target firm's reputations did not refer to any of the other descriptions. For example, when all of the target firm's reputational descriptions were presented in a positive manner, the subjects rated them above 6 on the 7-point scale of excellence (Table 1, column 1). However, when financial reputation was presented as negative (column 2), product reputation went up and management reputation went down. Similar patterns are found in this table and additional remarks about this will appear in the Discussion section.

RESULTS

Loglinear models were developed to test the relationship between the manipulations and the decision to engage in the joint venture. As reported earlier, the dependent variable was a *Yes/No* decision. When the response variable is dichotomous with multiple predictors, one appropriate technique is logit modeling. In this type of statistical analysis, the frequency of the response is used to create multiple crosstab tables and the significance of the model is dependent on whether the model fits well as determined by maximum likelihood estimators to compute a chi-square statistic. A good model should show no significant difference between the response categories overall. Any significant difference will then be evident in certain predictor variables. This modeling approach is suitable to experimental situations in which there are only two choices: go or no go.

Reputation effects

In loglinear models, average cell size must be at least five observations (Demaris, 1992). Therefore, our average cell size of 11 is sufficient to produce reliable and stable results. The manipulations were coded into one variable with eight states that represented all of the combinations of the three variables in two possible states. This new variable was then used to create an unsaturated logit model to assess the role of reputation in the decision to joint venture. As Table 2 indicates, the model showed significant differences between the groups (likeliness ratio $\chi = 39.659$,

Table 1. Reputation ratings for the eight scenarios

	Manipulation checks								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	All positive	Management/product positive	Management/finance positive	Product/finance positive	Management positive	Product positive	Finance positive	All negative	*F*
Quality of management	6.21	5.68	5.85	2.41	4.86	1.48	1.71	1.30	55.787***
Financial reputation	6.11	1.95	6.30	5.95	1.43	1.48	5.81	1.65	103.872***
Quality of product	6.05	6.41	1.70	6.14	1.48	6.38	1.52	1.52	157.804***

***$p < 0.001$.

Table 2. Propensity irrespective of integration form

Response	Manipulation (management/product/finance)	Observed	Expected	Adj. residual
No group	+/+/+	9.00	14.37	−2.643
	+/+/−	5.00	14.37	
	+/−/+	12.00	14.37	
	−/+/+	15.00	14.37	
	+/−/−	20.00	14.37	
	−/+/−	17.00	14.37	
	−/−/+	18.00	14.37	
	−/−/−	19.00	14.37	
Yes Group	+/+/+	10.00	6.88	
	+/+/−	17.00	6.88	4.128
	+/−/+	8.00	6.88	
	−/+/+	7.00	6.88	
	+/−/−	1.00	6.88	−2.395
	−/+/−	4.00	6.88	
	−/−/+	4.00	6.88	
	−/−/−	4.00	6.88	

Likeliness ratio $\chi^2 = 39.659$; $p = 0.000$

$p = 0.000$). In logit, adjusted residuals above the absolute value of 1.96 indicate a significant ($p < 0.05$) contribution to the grouping variable. The sign indicates the direction of the relationship with respect to the grouping variable (Demaris, 1992; Knoke and Burke, 1980). The adjusted residuals for each manipulation indicated that three manipulations were significantly out of the expected range. In the 'no' group, the 'all positive' reputation caused the observed rejections of the alliance to be smaller than expected. In the 'yes' group, the manipulation that was positive for management and product and negative for finance had more acceptances than expected. And the positive management reputation coupled with negative product and financial reputation was associated with fewer acceptances than expected. Within the 'no' group, rejections decreased as the manipulated reputation became more positive. Also, within the 'yes' group, acceptances decreased as the manipulated reputation was more negative. Thus, Hypothesis 1 regarding the overall effect of reputation on the joint venture decision is accepted.

Supplier–competitor effects

Since the literature suggests that joint ventures may be used either to moderate industry drivers or control costs, we tested a 'no difference' hypothesis involving the supplier and competitor treatment groups. An unsaturated logit model was tested. As Table 3 indicates, there was no significant difference between the observed and the expected occurrence of the competitor and supplier treatments (likelihood ratio $\chi^2 = 0.15683$, $p = 0.692$).

TA and LOC effects

The roles of LOC and TA were tested using logistic regression with an interaction between the cognitive variable and the reputation factor. Logistic regression can be used when the dependent variable is dichotomous and the predictors are continuous or interval in nature. If one of the

Table 3. Supplier–competitor impact on joint venture decision

Response	Relationship	Observed	Expected	Adj. residual
No	Competitor	56.00	54.79	0.396
	Supplier	59.00	60.21	
Yes	Competitor	25.00	26.21	−0.396
	Supplier	30.00	28.79	

Likelihood ratio $\chi^2 = 0.15683$; $p = 0.692$

Table 4. Logistic regression interaction of tolerance of ambiguity and reputation on the joint venture decision

Reputation effect (Management/ product/finance)	Parameter (B)	Wald statistic
+/+/+	−0.0122	3.5691***
+/+/−	−0.0334	19.2296***
+/−/+	−0.0048	0.5709
−/+/+	+0.0019	0.0858
+/−/−	+0.0289	5.1296*
−/+/−	+0.0057	0.6318
−/−/+	−0.0095	1.6620
−/−/−	+0.8673	16.6786***

***$p < 0.001$; *$p < 0.05$

predictors is a categorical variable, the model can be built in a manner equivalent to a dummy regression. This was the approach used here. The eight possible combinations of manipulations were constructed as an interaction with the interval LOC and TA scales. In this analysis, the 'all negative' combination was the reference manipulation. As Tables 4 and 5 indicate, both tolerance of ambiguity (−2 log likelihood = 169.47, $p = 0.2179$; goodness of fit $\chi^2 = 164.38$, $p = 0.31$) and locus of control (−2 log likelihood = 171.359, $p = 0.24$; goodness of fit $\chi^2 = 164.86$, $p = 0.3588$) have an interaction with the overall reputation effects on the joint venture decision.

For the tolerance of ambiguity interaction (Table 4), the parameters were significant in four cases: (1) when all elements of reputation were positive (Wald = 3.5691, $p < 0.001$), (2) when management/product was positive (Wald = 19.2296, $p < 0.001$), (3) when management only was positive (Wald = 5.2196, $p < 0.05$), and (4) when all reputation elements were negative (Wald = 16.6786, $p < 0.001$). In order to interpret these findings, one needs to examine the sign on the parameter.

The first two significant conditions show that when TA was high and the reputation treatments either all positive or mostly positive, the subjects were actually more likely to reject the alliance. That is, the high TA suppressed the positive information. The last two significant conditions show that when TA was high and the reputation treatments either all negative or mostly negative, the subjects were more likely to accept the alliance. These last two findings are in accordance with Hypothesis 2 which anticipated that negative information would be suppressed, but the first two are not. So although we can accept the hypothesis that an interaction occurs, the nature of the interaction is for the cognitive characteristic to suppress both the most positive and the most negative information.

Table 5. Logistic regression interaction of locus of control and reputation on the joint venture decision

Reputation effect (management/ product/finance)	Parameter (B)	Wald statistic
+/+/+	−0.0162	6.1815**
+/+/−	−0.0291	17.7551***
+/−/+	−0.0078	1.4671
−/+/+	+0.0021	0.1136
+/−/−	+0.0305	4.9165*
−/+/−	+0.0062	0.7501
−/−/+	−0.0088	1.4254
−/−/−	+0.9245	17.9972***

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

The pattern of interaction between LOC and reputation (Table 5) parallels the TA ones. An interaction between LOC and the reputation treatment occurs in four conditions: (1) when reputation is all positive (Wald = 6.1815, $p < 0.01$), (2) when management and product are positive but finance is negative (Wald = 17.7551, $p < 0.001$), (3) when management is positive but product and finance are negative (Wald = 4.9165, $p < 0.05$), and (4) when all reputation treatments are negative (Wald = 17.9972, $p < 0.001$).

In the first two significant interactions, the high-LOC subjects (internals) were more likely to reject the alliance when faced with the positive reputation treatments. Again the cognitive characteristic suppressed the most positive information. In the last two significant interactions, the internals were more likely to accept the alliance when the reputation was all negative or mostly negative. Here the cognitive characteristic suppressed the negative information, as expected. Therefore, we cannot accept Hypotheses 2 and 3 in their current form. A more accurate hypothesis would have stated that high-TA individuals and internals were more likely to suppress *both* the most positive and most negative reputation information to decide the alliance issue.

DISCUSSION

The objective of this study was to examine the impact that reputation has on the formation of a strategic alliance. We modified the reputation constructs adapted from the *Fortune* Corporate Reputation Survey, and manipulated a target firm's reputation in an experimental design. The design had three major components: the effect of reputation, the effect of the target's position in the production chain, and the information-processing characteristics of the decision-maker.

There were five major findings in this experimental study of the effect of reputation on alliance partner choice. First, firm reputation counts. It is an important resource and is capable of attracting other resources in the form of an alliance partner. The better a firm's reputation, the more likely it is to be targeted for joint venture activity and, we believe, similar interorganizational relationships. In fact, Michelet (1992) found that in cross-border alliances reputation contributed to success in the local markets.

However, from the managerial point of view, no benefit is without cost. So the reputation-building activities of a firm also come with a cost. These costs can take three forms. First, there are the out-of-pocket costs of maintaining public relations, corporate affairs, and communications offices. For a large firm these may be trivial compared to total turnover or profits, but for a smaller company, looking to attract a partner, this may represent a substantial amount.

Second, there is the extra cost of 'doing good' itself. Improved quality has a cost, in labor (e.g., training and compensation) and capital (e.g., investment and inspections). Companies have gone overboard in the past by focusing only on the quality variable. A number of Baldrige Award winners have had difficult financial problems. Third, there is the opportunity cost of not engaging in activities that have the potential to go wrong. Managers may be risk averse enough without the extra burden of maintaining a pristine reputation in all activities. If companies focus too much on what the rest of the world thinks of it, it may miss legitimate and highly profitable opportunities because of the risk of damaging its reputation. So although the results here indicate that a good reputation is a valuable asset, we recognize that it is not the only asset in the company's portfolio.

The study showed that the cognitive characteristics of the decision-makers influenced the result of the experiment. People who were more tolerant of ambiguity were more likely to discount and suppress negative information regarding the target's reputation and proceed with the alliance. And surprisingly, they were more likely to suppress the most positive reputation information as well. The latter result requires explanation. We may speculate that the high-TA subjects, comfortable with uncertain and risky situations, imputed risk where none was explicitly stated to exist. The positive target reputation combined with the description of high profitability if the alliance was approved seemed too good to be true to these subjects. They suppressed the positive information and the lack of ambiguity made them uncomfortable. Thus the higher tendency to reject the alliance.

Similarly, we may speculate that the high internals were suspicious of something that sounded too good to be true. These individuals are used to attributing success to personal factors, not the environmental conditions as received in the experiment. Thus, when faced with positive information, they had a higher tendency to reject the alliance, imposing their own will and framework on the situation. The parallels between the TA and LOC results may be due to the moderate positive correlation (0.34) between the two variables.

Next, we found that a firm's reputation is perceived as multidimensional. In this experiment we differentiated between three components of reputation: product quality and innovation, management integrity, and financial soundness. Although a factor analysis of the *Fortune* survey data indicated a unidimensional variable (Fombrun and Shanley, 1990), we were able to induce combinations of three dimensions in the mental maps of the subjects. The evidence for this multidimensionality (beyond the forcing that we did by the design) is found in the manipulation checks reported in Table 1. Here, we found that by 'damaging' one part of the firm's reputation, we by no means damaged the entire reputation. When one component of the organization's reputation was 'ruined' by the manipulation, the others were not equally affected. This indicates that the subjects were able to separate the different components of reputation.

In fact, in certain cases a decrease in the

reputation of one component led to an attributed increase in the reputation of another component. For example, in column 2 of Table 1, we see that when we 'ruined' the financial reputation of the target firm, the management reputation also went down, but not very much. This is a simple spillover and to be expected. The presence of the spillover in no way detracts from the validity of the manipulations, which are still strong and consistent. But the same manipulation caused the product reputation to rise, from its baseline in column 1 of 6.05 to its high of 6.41. The subjects have introduced a notion of *compensating reputation*. The mental maps of the target firm created by the manipulations indicate that, in this example, a firm with a poor financial reputation that still produces high-quality products is being given even more credit for that quality than when the financial activities of the firm are in order.

We can speculate that, in this case, the subjects perceive that the problems that the firm is having in the financial areas are associated with its commitment to higher product quality. Of course the experimental manipulation made no such claim. But subjects, just like customers, try to make sense of the world. And it seems to make sense that if the company is experiencing financial difficulties and its products are of high quality, that the two might be directly related.

The same effect can be seen from the other end of Table 1. The baseline for negative managerial reputation (column 8) is 1.30. But when both product quality and financial soundness are high, the managerial reputation rating goes up to 2.41. Again, the map created by the manipulations indicates that the subject compensates for the strong product and financial reputations by raising the perceived rating of the 'ruined' managerial one. These combinations of perceptual movement, spillover effects and compensating reputations deserve additional study.

The important implication of this result is that managers can focus attention on different parts of their reputation and even compensate in one area for deficiencies in another. The exception seems to be with the product reputation. When the product reputation is negative, there seems to be less ability to compensate for other reputation attributes. This is explained in the next section. We can integrate this conclusion with the previous one concerning the costs of maintaining and communicating reputation and see that the firm faces an objective function of maximizing its reputation, constrained by cost factors and combinatorial effects. Again, this deserves additional inquiry.

Fourth, we found that the 'product by management' interaction was the most powerful effect. When both the product and management reputation are positive (regardless of the financial reputation) the target firm's probability of being chosen for the alliance was greatly increased. Thus, it seemed to be somewhat less important that the financial reputation was positive. This has been borne out in the IBM–Lotus situation as well as in other alliances and ventures: if the product quality is beyond question, the earnings and stock market shortfalls are less important. Of course, these results and this particular ordering are heavily influenced by the demand characteristics of the task: choice of a manufacturing partner for a joint venture. In a situation where the task is more financially driven, the order might change. However, for the small and medium-size manufacturer whose fortunes depend on joint venture and alliance activity, the implication is clear. It is more important to spend and invest in product quality and innovation than it is to keep a 'clean and tidy' balance sheet. For all firms there is often a trade-off between maintaining product momentum and financial soundness, at least in the short run. This study provides evidence that when the strategy entails attracting an alliance partner, a firm should choose investment in product reputation.

The last finding was the relative unimportance to the decision-maker of the position of the target in the production chain. There were no differences in the chances of being chosen as partner between the supplier and competitor groups. But, even though our data suggest that the propensity to form an alliance was not affected by position in the production chain, under different circumstances, with a different scenario, the motivational characteristics might prove salient.

CONCLUSION

This study provides confirmation for research which has suggested that reputation is a multidimensional construct. While the dimensions are interrelated, they may be manipulated independently in an experimental setting to influence a

strategic decision. In fact, the data even suggest a hierarchy of relationships between the dimensions of target reputation and the decision to proceed with an alliance, with product quality most important, management second, and financial reputation the least important dimension. This finding is contrary to studies based on the *Fortune* data, which suggest that the reputation halo effect is based primarily on financial performance. Thus, while the overall importance and effect of a positive reputation are supported, the more interesting finding relates to the complexities and interrelationships between the dimensions and the importance of product quality. Individual decision-maker characteristics further complicate these relationships. These issues deserve more study in a field setting.

For managers, the results affirm the importance of a positive reputation. 'Being good' may not be good enough if it is not communicated and if the communication does not adhere to the firm's reputation. A firm needs a proactive strategy to build and promote its visibility and reputation. The ideas of compensating reputation and spillover effects, though, would suggest that there are trade-offs involved in reputation-building with potential consequences for being selected as an alliance partner. Second, understanding the cognitive characteristics of the decision-maker may yield insight into the likelihood of an alliance taking place or being expanded in an uncertain environment. Finally, decision-makers may be less reluctant to partner with a competitor than executives believe. Aligning with competitors should not be dismissed *a priori* due to concerns about a potential negative reaction from the partner. The results suggest that while concerns about loss of trade secrets and other related elements may be of greater concern in these confederate relationships, decision-makers remain willing to engage despite these concerns.

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APPENDIX 1

Scenario outline

You are the CEO of the Acme Computer Company. Your firm has been evaluating other firms for a possible joint venture, and your staff has screened out all the potential partners, save one, Niche Manufacturing. Niche is a much smaller company than yours and Niche management has already agreed, in principle, to the pact. The immediate issue facing you is to make the final decision and to establish some of the parameters of the alliance.

A brief description of the situation is provided below. After reading the scenario, please answer the questions that follow.

The Acme Company is considering a technology sharing agreement with the Niche Manufacturing Company that will enable Acme to cut its costs by turning over to Niche responsibility for its semiconductor manufacturing. Over the course of the agreement it is proposed that Acme will spend between $10 and $50 million to help Niche implement the new arrangement.

Niche has in the past been a strong competitor/supplier of Acme's in various markets.*
INSERT NICHE REPUTATION HERE (see Appendix 2)

Chip manufacturing is expensive and is growing more so all the time. As electronic devices on the chips shrink, it becomes more difficult to keep the manufacturing facilities clean enough so that specks of dust don't render the chips useless. Acme, which has been cutting costs whenever possible, says the agreement will save it hundreds of millions of dollars over the next 5 years by avoiding the cost of the new fabrication facilities. Acme will also be cutting between 100 and 250 jobs as part of the proposed agreement.

You believe that the agreement will enable your firm, Acme, to decrease new product development time. Acme will continue to work on semiconductor techniques, such as chip packaging and design, which it will contribute to the arrangement with Niche. The agreement also gives Niche access to new semiconductor manu-

* Competitor/supplier manipulation.

facturing technology much sooner than it might ordinarily obtain. It is estimated that you will need to commit between 30 and 70 highly skilled technical people to collaborate with Niche on the project.

Such cost-cutting efforts as this one proposed with Niche have begun to pay off for Acme. After three poor years, Acme reported a surprisingly strong fourth quarter profit of $80.5 million, or 31¢ per share; even though revenue dropped 16 percent to $2.46 billion.

APPENDIX 2

Management

The Niche Manufacturing Company is known for the high quality of its top managers and their integrity. The executives of the firm display concern for their community and are known as responsive to environmental concerns. They have a reputation for being able to attract, develop and keep talented people.

The quality of the top managers of Niche Manufacturing and their integrity is suspect. The executives display little concern for their community and are known to be unresponsive to environmental issues. Niche does not have a reputation for being able to attract, develop and keep talented people.

Financial

The Niche Manufacturing Company is also known for its financial soundness. It has consistently provided investors with excellent returns and has proved to be a very valuable long-term investment. It has a reputation for efficient and effective use of corporate assets.

The financial soundness of Niche Manufacturing is suspect. It has consistently provided investors with below-average returns and has not proved to be a very valuable long-term investment. It does not have a reputation for efficient and effective use of corporate assets.

Product/service quality

The Niche Manufacturing Company is also respected for the high quality of its products and services. Customers believe that the firm's reputation for value, quality products at a reasonable price, is among the best in the industry. It has a reputation for developing innovative products.

The Niche Manufacturing Company's products and services are reputed to be below industry standards. Customers believe that the firm's reputation for value, quality products at a reasonable price, is among the worst in the industry. It does not have a reputation for developing innovative products.