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Managing Marketing Relationships Through Qualification and Incentives

Kenneth H. Wathne and Jan B. Heide

To protect relationship investments, suppliers should focus on qualification programs that align partner goals. While reseller incentives offer short-term protection, they do not reduce the potential for partner exploitation of incremental investments.

Report Summary

Developing close relationships with customers and other trading partners offers unique opportunities to create superior value and gain competitive advantage. However, the practical barriers to developing such relationships are often considerable, and evidence shows that firms frequently fail in these efforts. For example, one recent report finds that 50% of interfirm alliances break down prematurely and that significant financial damage is inflicted on both parties in the process.

Here, authors Heide and Wathne examine (1) how firms use deliberate partner selection or qualification and incentives to support dedicated-relationship investments and (2) what effect those dedicated-relationship investments have on both the potential for partner exploitation and the cost of managing the relationship. They test their hypotheses using a longitudinal survey of supplier-reseller relationships.

Overall, the results show that suppliers can use qualification efforts and reseller incentives both

to protect an initial stock of relationship assets and to secure continued investment over time. However, the results also indicate that the accumulation of assets over time may be associated with negative outcomes. Importantly, those outcomes can be managed through appropriate qualification efforts; that is, resources allocated to qualification continue to pay off over a relationship's life cycle.

In contrast, efforts to preempt negative outcomes by creating incentives do not have a parallel effect. In fact, incentives have a clear time-dependent or static property, and firms that rely on incentives to protect new relationship assets are likely to experience relationship problems.

In general, Wathne and Heide show that relationship management strategies differ dramatically in their ability to protect incremental investments. This suggests that firms must be discriminating in their choice of relationship management tools. ■

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Introduction

Relationship management, that is, the suite of activities designed to promote close relations with trading partners, is increasingly being recognized as an integral component of firms' marketing strategies. While earlier models of strategy emphasized competitive interaction (e.g., Porter 1980, 1985) and specifically advocated strategies based on keeping exchange partners at arm's length, emerging perspectives emphasize the development of cooperative, long-term relationships (Ghosh and John 1999). Indeed, both industry analysts and academic researchers have suggested that a firm's overall success depends crucially on relationship management initiatives (e.g., Corsten and Kumar 2005; Liker and Choi 2004; Narayandas 2005). As recently noted by Kaplan and Norton (2003), "Organizations must establish relationships that allow them to maintain close contact with their trading partners over the long run. Recognizing this new reality and dealing with it proactively is the single most important dimension of enterprise strategy" (p. 1).

Reflecting this emerging consensus, a sizeable literature has emerged on topics such as relationship marketing (Morgan and Hunt 1994), customer and supplier relationship management (CRM/SRM), and supply chain management (Wathne and Heide 2004). Within this literature, a number of studies have relied on the so-called new institutional economics to explain the shift from competitive to cooperative interfirm relationships. In particular, transaction cost theory has been extensively used (Geyskens, Steenkamp, and Kumar 2006; Rindfleisch and Heide 1997). (Also see Appendix 1 for a glossary of terms used throughout.)

Specific investments are the key explanatory variable in transaction cost theory. As discussed by Williamson (1985, 1996), such investments are tailored to a particular relationship and have reduced value outside of it. For instance, distributors often invest in training to service the products of particular manufacturers (Anderson

1985; Heide and John 1988). Similarly, manufacturers invest in specialized human and physical assets to support individual resellers (Ganesan 1994; Subramani and Venkatraman 2003). In original equipment manufacturer (OEM)-supplier relationships, OEMs commonly invest in tools, equipment, operating procedures, and systems that are customized to the requirements of a particular supplier (Bensaou and Anderson 1999; Stump and Heide 1996).

Relationship investments are of considerable interest to marketers for two particular reasons. First, they can be used as a sign of commitment to a relationship (Anderson and Weitz 1992). For instance, Gulati, Khanna, and Nohria (1994) describe how alliance partners often make dedicated investments at the beginning of a relationship to signal their cooperative intentions, hoping that the partner will reciprocate. Second, because such assets are tailored to a particular relationship, they have the potential to create substantial relationship value (Parkhe 1993; Rokkan, Heide, and Wathne 2003); companies across industries are investing in integrating and customizing their supply chains in order to improve both customer responsiveness and cost-efficiency (e.g., Corsten and Kumar 2005).

Unfortunately, in spite of the important role that dedicated investments may play in a relationship, major questions remain unanswered. In particular, questions remain regarding those investments' dynamic properties and effects.¹ We focus on two categories of questions. First, we explore the pattern by which relationship investments accumulate over time. To the extent that relationship investments have value-creating properties, as suggested above, it is crucial to determine how a stock of dedicated assets is both established and augmented over time. Second, we examine the effects of dedicated investments made over time on key relationship outcomes. Here, we draw on Grayson and Ambler (1999) and Anderson and Jap's (2005) notion of relationship "dark sides" to (1) explore whether assets that accumulate over

time expose an investor to a higher risk of partner exploitation² and increased relationship management costs,³ and (2) determine the specific strategies that firms can use to protect their incremental investments.

Theoretical Framework

Relationship investments and governance mechanisms

As noted earlier, while dedicated investments offer considerable potential benefits, they also involve considerable risk. Since such investments can't be easily redeployed in other relationships, they allow the "recipient" to make opportunistic demands at the expense of the "investor" (Williamson 1985). Under such a scenario, the investor can either remain in the focal relationship and face increased transaction costs, or leave the relationship and pay the costs of switching to a new partner.

Extant research suggests that firms can deploy governance mechanisms to protect their relationship-specific investments. In general, these mechanisms fall into two categories (Eisenhardt 1985; Ouchi 1979): initial efforts to select appropriate exchange partners and incentives to discourage opportunistic behavior.

In practice, formal qualification programs are one approach to the first strategy—selecting appropriate exchange partners. For instance, a supplier may use a formal qualification program to evaluate resellers' physical premises, financial strength, business philosophy, and reputation. In addition, qualification programs may serve bonding or socialization purposes by exposing prospective resellers to a supplier's business philosophy (Wathne and Heide 2004). Companies such as Xerox, Dell, and Home Depot, for example, all rely extensively on partner qualification as a general strategy. Ultimately, to the extent that the parties' goals become aligned through such a process, the likelihood of subsequent relationship problems is greatly reduced.

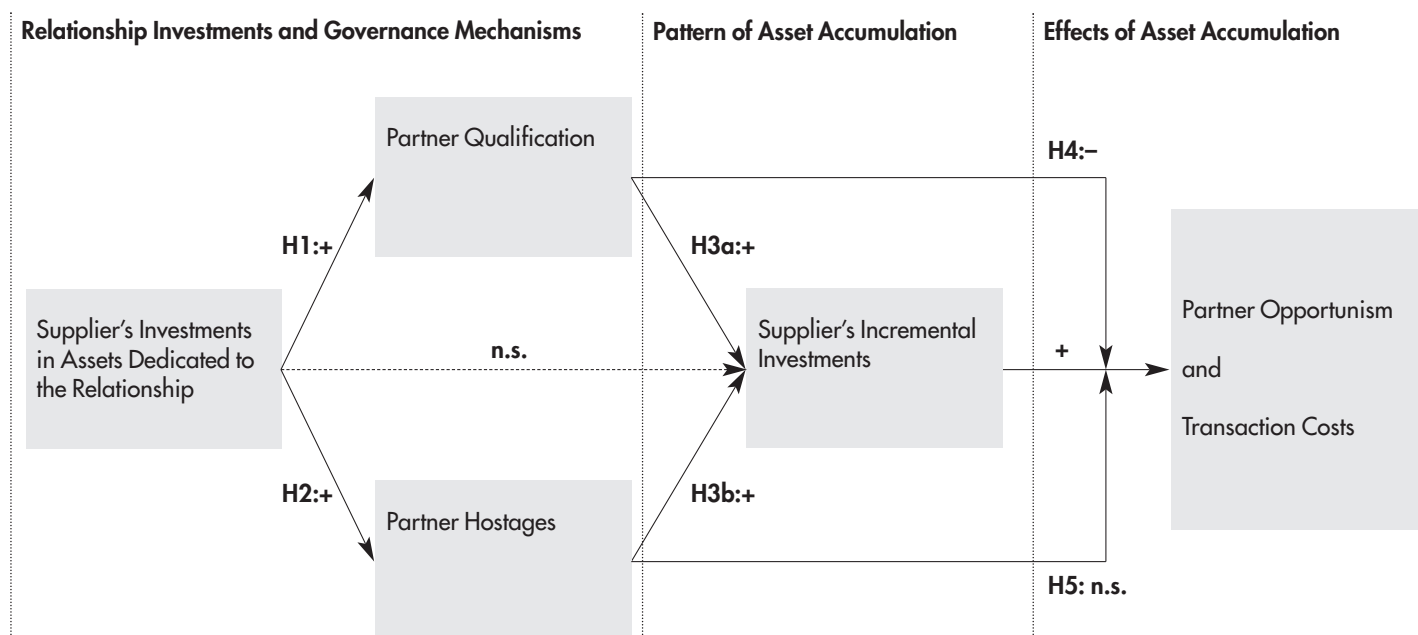
Consider the specific effects of partner qualification in the context of a given supplier-reseller relationship. Recall that specific investments make a supplier vulnerable to reseller exploitation and to ongoing transaction costs. However, the greater the supplier's reliance on ex ante qualification, the greater the likelihood that the supplier will have identified a reseller that is able and motivated to support the supplier's goals and that will refrain from opportunistic actions. Heide and John (1990) and Stump and Heide (1996) showed that firms that make specific investments in relationships with trading partners also increase their partner qualification efforts. As a baseline hypothesis, we expect to replicate these empirical findings. Specifically, we expect to find a positive relationship between a firm's investments in specific assets and partner qualification efforts. Stated formally:

H1: A firm's investments in relationship-specific assets will increase its partner qualification efforts.

The second general strategy for securing dedicated investments is to craft incentives that directly discourage opportunistic behavior. Firms can accomplish this by taking a "hostage" from the exchange partner (Williamson 1983) in the form of dedicated assets. For instance, franchised dealers are typically required to make significant investments in training, equipment, and processes tailored to selling and servicing a particular supplier's product line.⁴ This investment serves to commit a reseller to the supplier relationship in question and discourages behaviors that could lead to relationship termination.

Palay (1985) and Stump and Heide (1996) found that firms that make relationship-specific investments also take hostages from their trading partners. Our second baseline hypothesis aims to replicate these findings. Specifically, we expect to find a positive relationship between a firm's specific investments and partner hostages in the form of dedicated assets. Stated formally:

Figure 1
Conceptual Framework and Research Hypotheses



H2: A firm's investments in relationship-specific assets will increase its reliance on partner hostages in the form of dedicated assets. The expected positive relationships between a firm's specific investments and partner qualification efforts and hostages are shown in Figure 1.

In the following, we build on the above discussion and hypotheses by exploring the manner in which an initial stock of relationship assets accumulates over time and the specific effects of those assets on relationship outcomes. We consider each in turn.

Pattern of asset accumulation

Given the importance of dedicated-relationship assets, firms have a strong incentive to augment the initial stock. However, firms are unlikely to make additional investments unless the new assets can be protected.

In principle, as described above, firms can rely on both partner qualification efforts and hostages to safeguard specific investments. Our next prediction is that firms that have initially deployed such strategies will be in a position to

make incremental investments in relationship assets. Stated formally:

H3a: A firm's reliance on partner qualification will promote continued investments in relationship-specific assets.

H3b: A firm's reliance on partner hostages will promote continued investments in relationship-specific assets.

Hypotheses 3a and 3b are shown in Figure 1. As shown, our intention is to examine whether the original relationship strategies that are deployed (i.e., at Time 1) to protect an initial stock of assets also motivate asset accumulation (i.e., at Time 2). From a technical standpoint, and based on transaction cost logic, we expect the two strategies to completely mediate the relationship between the original (Time 1) and incremental investments (Time 2). In other words, we don't expect a firm's original investments *in themselves* to motivate continued investment.⁵ Rather, incremental investments are only expected to follow from the specific relationship management strategies that are deployed.

Effects of incremental investments on relationship outcomes

Next, we consider the ability of the original governance mechanisms (qualification and hostages) to protect additions to the initial asset base. Recent work in marketing suggests that as relationships develop, new investments may be exposed to increased risks of exploitation. As a result, investors may be faced with increasing relationship management costs (Anderson and Jap 2005; Grayson and Ambler 1999). For instance, Grayson and Ambler (1999) show that older relationships frequently acquire a dark side, in the sense that initial cooperative sentiments are replaced by exploitative ones. Similarly, Anderson and Jap (2005) cite fieldwork that documents that over time, close relationships are vulnerable to showing a dark side.

Why may this be the case? Consider again the risks associated with investing in relationship-dedicated assets. As we discussed earlier, to the extent that dedicated assets cannot be readily modified for use in other relationships, they effectively lock in the investor. When a company continues to invest, the commitment to the relationship increases, and the only way for the investor to get a return on the *new* assets is to remain in the relationship. Unfortunately, however, new assets also pose an exploitation risk. Everything else equal, when a firm continues to invest in dedicated assets, it *increases* the receiver's opportunity to make demands.

The above observations raise an important question, namely, whether a firm can make incremental investments in productive assets while at the same time keeping the dark side at bay. In the following, we consider the ability of each of the two relationship strategies discussed earlier to safeguard a firm's incremental investments.

Partner Qualification as an Ongoing

Management Device. As discussed earlier, a firm may seek to solve potential relationship problems by using qualification programs to select appropriate exchange partners. To the

extent that such programs also serve bonding or socialization purposes, their effectiveness as means of managing a relationship may actually increase over time. We therefore hypothesize that:

H4: Incremental investments in relationship-dedicated assets (at Time 2) will increase partner opportunism and transaction costs for lower levels of partner qualification efforts and decrease partner opportunism and transaction costs for higher levels of partner qualification efforts.

In technical terms, Hypothesis 4 involves a positive main effect of specific investments (at Time 2) on partner opportunism and transaction costs and a negative interaction effect between investments and partner qualification. Note that this prediction involves a nonmonotonic effect of incremental specific investments on opportunism and transaction costs over the range of partner qualification. More specifically, for lower levels of partner qualification efforts, we expect incremental investments to increase opportunism and transaction costs, reflecting the safeguarding problems that specific investments produce (Williamson 1985), whereas for higher levels of partner qualification, we predict that incremental investments will decrease opportunism and transaction costs, reflecting the possibility that appropriately safeguarded investments may serve to strengthen a relationship. Notice that it is the *original* relationship management efforts that create this particular effect, which pertains to *new* relationship assets.

Hostages as an Ongoing Management

Device. Consider next the effect of incentive structures based on reseller hostages. Because such investments commit the reseller, they serve to align the resellers' incentives with those of the supplier.

Importantly, however, incentive schemes may possess limitations (Casson 1991). Consider the perspective of the reseller. When a reseller first provides a supplier with a hostage (i.e., by in-

vesting in dedicated assets), it discourages the reseller from engaging in behaviors that could lead to relationship termination and a subsequent asset loss. Importantly, however, as the relationship matures, the reseller will begin to recoup the value of the assets, and the benefits of the relationship with the supplier are reduced. In essence, as time passes, the reseller becomes less dependent on the relationship's continuation, and the original restraint on reseller opportunism is diminished.

Given this, consider the likely effect of a supplier's incremental investments in relationship-specific assets. When the supplier continues to invest, it increases the reseller's exploitation potential, and it imposes increased transaction costs on the supplier. In combination with the reseller's reduced dependence on the continuation of the relationship, the supplier's renewed commitment to the relationship is likely to further increase the risk of reseller exploitation. In effect, the combination of time (which reduces the reseller's own payoffs) and the supplier's new investments (which increase the supplier's risk) effectively brings the relationship outside of the original "self-enforcing range" (Klein 1996). Based on the above logic, we propose the following hypothesis:

H5: Incremental investments in relationship-dedicated assets (at Time 2) will increase partner opportunism and transaction costs regardless of the level (low or high) of partner hostages at Time 1.

In essence, Hypothesis 5 points to the limitation of hostage taking as ongoing relationship management device. In contrast with qualification, which (as per H4) has the ability to safeguard incremental investments, hostages deployed at Time 1 are not expected to dampen the exploitation risk that new relationship investments create at Time 2.

Research Method

Empirical context and data collection

The study was conducted in a business-to-business setting. Specifically, we studied resale channels involving relationships between manufacturers (suppliers) of building materials (e.g., doors, windows, frames, stairs, and roofing products) and their independent distributors (customers).

Given the documented lack of secondary measures for the focal constructs (Dahlstrom and Nygaard 1999; Rindfleisch and Heide 1997), data were collected through a longitudinal field study design. We measured supplier investments in relationship-dedicated assets, partner qualification efforts, and hostages at Time 1, as in previous research, and supplier incremental investments, opportunism, and transaction costs at Time 2. Given our focus on the supplier's decisions (including the decision to invest in specific assets), we obtained our data from the supplier side of the relationship (Scheer, Kumar, and Steenkamp 2003).

We included a three-year lag so that we could be sure of seeing the full effects of the supplier's investments and relationship management efforts at Time 2.⁶ In addition to allowing us to examine the relationships between ex ante conditions (supplier investments, qualification efforts, and hostages), and ex post outcomes (supplier's continued investments, partner opportunism, and transaction costs), the temporal separation in measurement between the independent and dependent variables reduced a potential method bias that might stem from measuring both sets of variables at the same time within the same survey instrument. Podsakoff et al. (2003) refer to these as "measurement context effects."

The sampling frame was a national mailing list of managers of independent suppliers. Initially, we drew a random sample of 1,300 names from the list. We contacted each manager by tele-

phone; this presurvey phone contact enabled us to locate 550 managers who both met Campbell's (1955) informant criteria (i.e., they were knowledgeable and willing to communicate with the researcher) and who worked in companies judged appropriate for the study. Each key informant who agreed to participate in the study was mailed a questionnaire packet. In addition, to maximize response rates and also to ensure a sufficiently large pool of informants at Time 2, we offered each informant the opportunity to complete the questionnaire in a telephone interview that paralleled the survey instrument, consistent with the recommendation by Yu and Cooper (1983).

We asked the managers to select and describe their firm's relationship with the third-largest customer of a particular product (in terms of annual dollar sales). This was done in order to avoid the risk of self-selection and to ensure that the relationships were important enough to be salient to the informants (Anderson and Narus 1990).

In total, 342 questionnaires were completed at Time 1 (62% of the 550). To assess whether there were any systematic differences between the questionnaires administered by telephone ($N = 129$) and mail ($N = 213$), we tested the null hypothesis of no mean differences between the groups with respect to our study variables. No significant differences were found between the two groups on any of the variables. We also compared our sample of suppliers with the initial sampling frame with respect to demographics such as company size and annual revenue and found no significant differences.

Three years later, we contacted the same companies for a second wave of data collection. At this stage, 24% of the original participants could not be reached or refused to participate in the second round. We provided the remaining participants with the name of the customer and the product from the first wave of data collection and ended up with a final sample of 105 matched questionnaires across times 1 and 2

(31% of the 342), for an overall response rate of 19% (of the 550 companies judged appropriate for the study). Our response rates compare very favorably with those of other studies of interfirm relationships (e.g., Rindfleisch and Moorman 2001). Again, we tested whether there were systematic differences between the questionnaires administered by telephone ($N = 38$) and mail ($N = 67$), and we also compared the final sample of suppliers with the initial sampling frame with respect to firm demographics. No significant differences were found. Finally, we compared the final sample of suppliers that participated in both waves to those that only participated in the first wave with respect to our study variables and found no significant differences.

While we took steps to ensure that only proper key informants were selected, we also administered a formal check as part of the questionnaire (Kumar, Stern, and Anderson 1993). Based on this test, which employed a 7-point knowledge scale, three companies were eliminated at Time 1. The average knowledge score for the remaining cases was 6.5 (s.d. = .75).

One of the challenges with collecting data from the same company at two different points in time is attrition related to informant turnover. To deal with this potential threat, we subjected each new informant to a telephone assessment to verify the established criteria. In addition, each survey that was sent out to a new informant included a post hoc check on the focal informant's knowledge about the specific nature of the relationship over the last three years. Only one case had to be eliminated based on this check. The average knowledge score was 6.1 (s.d. = 1.14), which indicates that the informants were highly qualified to report on their firms' relationships.

Measures

All of the key variables were measured using multi-item reflective scales. Appendix 2 lists the specific items, response formats, and key descriptive statistics.

Table 1
Correlation Matrix

Construct	PO2	TC2	SI2	PQ1	PH1	SI1	SR	PR
Partner opportunism t_2 (PO2)	1.0							
Transaction costs t_2 (TC2)	.53**	1.0						
Supplier incremental investments t_2 (SI2)	.29**	.22*	1.0					
Partner qualification efforts (PQ1)	.07	-.01	.44**	1.0				
Partner hostages (PH1)	.16	.14	.37**	.28**	1.0			
Supplier-specific investments (SI1)	.06	.12	.26**	.27**	.45**	1.0		
Supplier replaceability (SR)	.04	-.08	.14	.21*	.04	.13	1.0	
Partner replaceability (PR)	.08	.17	.21*	.13	.30**	.26**	-.01	1.0

* $p < .05$ (two-tailed), ** $p < .01$ (two-tailed)

Partner Opportunism. This scale describes the extent to which the customer engages in “self-interest-seeking with guile,” as per Williamson’s conceptual definition (1975, p. 6). The six items were derived in part from the ones used by John (1984) and Gundlach, Achrol, and Mentzer (1995) and adapted to the context at hand.

Transaction Costs. This scale captures the ex post bargaining, monitoring, and maladaptation costs incurred by the supplier in the relationship with the customer. The items were derived from the ones used by Dahlstrom and Nygaard (1999) and Buvik and John (2000) and adapted to the context at hand.

Supplier Investments in Relationship-Specific Assets (Time 1 and Time 2). These scales describe the investments the supplier made that were dedicated to the relationship with the focal customer. The first scale measures investments at Time 1, while the second scale measures incremental investments over the following three years. The items were based on the ones used by Rokkan, Heide, and Wathne (2003).

Partner Qualification Efforts. This scale describes the qualification efforts that the supplier undertook when the relationship was first established to verify the customer’s ability and motivation in key areas (Stump and Heide

1996). The items were based on the ones used by Wathne and Heide (2004).

Partner Hostages. This scale describes the specific investments made by the customer in the relationship with the focal supplier (at Time 1). The items were based on the ones used by Rokkan, Heide, and Wathne (2003).

Control Variables. In addition to the focal theoretical variables, we also included two control variables that were designed to capture the relationship’s power structure. Specifically, we included a measure of each party’s dependence on the other, as indicated by the *replaceability* of each for the product in question (Heide and John 1988).

Construct Validity. We assessed all the scales for unidimensionality, reliability, and validity. First, each item set was evaluated on the bases of item-to-total correlations and exploratory factor analysis. Next, we evaluated the psychometric properties of all of the scales simultaneously in a single confirmatory factor analysis⁷ (CFA) using LISREL 8.7 (Jöreskog et al. 2001). All of the scales performed very well based on a standard set of tests (e.g., Fornell and Larcker 1981; Gerbing and Anderson 1988). The correlation matrix for the variable set is presented in Table 1.

Table 2
Path Model

Hypotheses	Hypothesized paths	<i>t</i> -value
H1	Relationship-specific assets → Partner qualification	3.58***
H2	Relationship-specific assets → Partner hostages	7.11***
H3a	Partner qualification → Incremental investments	4.31***
H3b	Partner hostages → Incremental investments	3.40***
	Relationship-specific assets → Incremental investments	.79

* $p < .10$ (one-tailed test), ** $p < .05$ (one-tailed test), *** $p < .01$ (one-tailed test)

Hypotheses Tests and Results

All of the hypotheses were tested using latent variable scores in LISREL 8.7 (Jöreskog et al. 2001). Hypotheses 1–3 were tested in a path model, with partner qualification and partner hostages serving as mediators between the supplier's initial investments (at Time 1) and continued investments at Time 2. The fit indices (RMSEA = .07, IFI = .98, CFI = .98) suggest that the hypothesized model provides a good fit to the data (Bollen 1989; Browne and Cudeck 1992). Table 2 contains the parameter estimates for the model. We find that supplier-specific assets at Time 1 have a significant and positive effect on both partner qualification efforts ($t = 3.58, p < .01$) and partner hostages ($t = 7.11, p < .01$), consistent with H1 and H2. Next, both qualification ($t = 4.31, p < .01$) and hostages ($t = 3.40, p < .01$) have significant and positive effect on continued investments at Time 2, consistent with H3a and H3b. Finally, as expected, the relationship between the supplier's relationship-specific investments at Time 1 and incremental investments at Time 2 is insignificant, showing that this relationship is completely mediated by the two relationship management devices.

Next, we turn to the actual effects of incremental investments on relationship outcomes. Recall that Hypothesis 4 involves a nonmonotonic effect of a supplier's incremental investments in dedicated assets on relationship out-

comes (i.e., partner opportunism and transaction costs) over the range of partner qualification efforts. In technical terms, the hypothesis involves a positive main effect of incremental relationship-specific investments on partner opportunism and transaction costs and a negative interaction effect between incremental investments and partner qualification. Hypothesis 5, in contrast, involves a positive main effect of incremental investments on partner opportunism and transaction costs that is not moderated by the original hostages (i.e., there is no significant interaction effect between incremental investments and partner hostages on relationship outcomes).

Hypotheses 4 and 5 were tested through two separate models corresponding to the two relationship outcomes. In the first model (Model 1 in Table 3), partner opportunism at Time 2 was estimated as a function of incremental investments, partner qualification, partner hostages, the interaction between incremental investments and partner qualification, the interaction between incremental investments and partner hostages, and the two control variables (the replaceability measures). The second model (Model 2 in Table 4) was specified in a similar fashion, but with transaction costs as the dependent variable.

The estimated coefficients and associated *t*-statistics in tables 3 and 4 show that the main effects of supplier incremental investments in dedicated assets on partner opportunism and transaction costs are significant and positive (Model 1: $t = 3.53, p < .01$; Model 2: $t = 3.16, p < .01$). Furthermore, consistent with Hypothesis 4, the interaction between incremental investments and partner qualification is significant and negative in both models (Model 1: $t = -2.26, p < .05$; Model 2: $t = -1.82, p < .05$). None of the control variables have significant effects. Finally, the interaction between incremental investments and partner hostages is nonsignificant in both models, lending support to Hypothesis 5.

Table 3
OLS Regression Model
Dependent Variable: Partner Opportunism (t_2)

Independent Variables (Time 1)	Standardized Coefficients	t-value
Supplier incremental investments	.41	3.53***
Partner qualification efforts	-.19	-1.67**
Supplier incremental investments x partner qualification efforts	-.25	-2.26**
Partner hostages	.15	1.28
Supplier incremental investments x partner hostages	-.01	-.17
Controls		
Supplier replaceability	.01	.12
Partner replaceability	.01	.11
R^2 adjusted = .18		

* $p < .10$ (one-tailed test), ** $p < .05$ (one-tailed test), *** $p < .01$ (one-tailed test)

Discussion

This study focused on the dynamics of relationship investments and on the strategies that firms use to protect them. Relationship investments pose a dilemma because they have the potential both to create value and to increase lock-in, which facilitates partner opportunism.

Consistent with previous research, our study shows that firms can rely on both qualification and hostages to protect their investments. However, we extend past research by showing that these strategies also promote incremental investments.

We also show that incremental investments expose firms to negative outcomes in the form of partner exploitation and transaction costs. While the protective capabilities of qualification efforts do extend beyond the initial investments, hostages lose their value as a management device over time and actually expose a firm to exploitation. These findings suggest that a firm's qualification efforts, unlike incentives such as hostages, have an important time-independent property.

The general purpose of qualification is to solve potential relationship problems proactively by promoting goal alignment prior to establishing a relationship. Through their formal qualification programs, companies like Culvers, Xerox, and Home Depot are able to identify and select exchange partners that not only possess the required skills and abilities (e.g., pertaining to particular channel functions), but also share their values and goals. Qualification programs can act as a trial period during which time the focal firm can assess a potential partner's skills (e.g., some companies require potential partners to become certified prior to entering into a relationship).

Qualification programs can also provide a socialization opportunity as the potential exchange partner learns about the firm's goals and values (Wathne and Heide 2004). For instance, by increasing the number of interactions prior to entering into a relationship or by requiring potential partners to take on the future role (e.g., a reseller role) in an "anticipatory" fashion, a firm can facilitate the internalization of common goals. To the extent that the parties' goals become aligned ex ante, it provides a basis for the emergence of cooperative behaviors

Table 4
OLS Regression Model
Dependent Variable: Transaction Costs (t_2)

Independent Variables (Time 1)	Standardized Coefficients	t-value
Supplier incremental investments	.37	3.16***
Partner qualification efforts	-.24	-2.07**
Supplier incremental investments x partner qualification efforts	-.20	-1.82**
Partner hostages	.12	.97
Supplier incremental investments x partner hostages	-.01	-.07
Controls		
Supplier replaceability	-.06	-1.04
Partner replaceability	.07	1.08
R^2 adjusted = .16		

* $p < .10$ (one-tailed test), ** $p < .05$ (one-tailed test), *** $p < .01$ (one-tailed test)

during the relationship. The focal firm's investments are then more likely to be viewed by the partner as evidence of the focal firm's intent to enhance joint relationship value, and as a result, the partner will tend to pursue behaviors that maximize joint payoff as opposed to acting exploitatively (Rokkan, Heide, and Wathne 2003). This suggests that investments in partner qualification are likely to yield significant returns over a relationship's life cycle.

Interestingly, while incentives in the form of hostages can also be used to induce cooperative behavior, they are only effective insofar as they make it profitable for one party to adopt another party's goals. As such, as shown by our results, incentive structures have inherent limitations. Specifically, they remain effective only as long as the giver of the hostage perceives the benefit to be gained by adopting the partner's goals to exceed the benefit to be gained by engaging in self-interested behaviors. Over time, as the giver of the hostage recoups the value of the hostage assets, the benefits from continuing the relationship are reduced; the hostage giver no longer has as much incentive to refrain from opportunism. Thus, incentive structures based on hostages are time-dependent and have in-

herent limitations with respect to protecting a firm's incremental investments.

Limitations and Future Research

The results of our study must be interpreted in view of certain limitations, some of which represent interesting avenues for future research.

First, we tested our theoretical framework within a particular industry. Restricting our empirical test in this fashion enabled us to develop context-sensitive measures of our key variables and to eliminate alternative explanations for the research findings, but the context-specific nature of the study means that caution should be used in extrapolating our results to other contexts. While we chose a very common business-to-business setting (i.e., a conventional resale channel), a promising avenue for future research would be to test the theoretical predictions in other industries.

Second, we tested the effects of two particular relationship management strategies, namely, partner qualification and partner hostages. While these strategies are commonly used in relation-

ships, extant research has also identified other approaches (e.g., Cannon and Perreault 1999; Heide 1994). Future research could usefully be directed toward exploring those other approaches' ability to facilitate continued investment and protect the focal assets from exploitation.

Finally, our discussion of the limitations of incentive schemes emphasized the effect of time on partner hostages. Specifically, we argued that as relationships mature, the hostage giver recoups the value of the hostage, and therefore

the hostage is no longer as effective a tool for suppressing opportunism. A fruitful area for future research would be to explore other conditions that may influence the value of incentive structures as relationship management devices. For instance, rapid technological change poses a risk of asset obsolescence, which may decrease the value of a hostage to the party holding it (Gulati, Khanna, and Nohria 1994). As such, technological change may change the dependence structure in a relationship and increase the risk of partner opportunism. ■

Appendix 1. Glossary

Asset accumulation: The accumulation of specific assets resulting from a firm's continued investment in a relationship.

Governance structure/mechanism: A mode of organizing or managing relationships (Williamson and Ouchi 1981). It encompasses elements of both the establishment and structuring of relationships and aspects of enforcement (Heide 1994). Qualification efforts undertaken by a supplier *ex ante* to verify the customer's ability and motivation in key areas are an example of a governance mechanism.

Partner exploitation/opportunism: Self-interested behavior with guile, including calculated efforts to mislead, deceive, obfuscate, and otherwise confuse a partner (Williamson 1985).

Relationship-specific investments: Dedicated or tailor-made investments in assets that cannot be redeployed to alternative uses or users except at a loss of productive value. These assets can take several forms, including human (e.g., training), physical (e.g., tools and equipment), and processes and systems. Specific assets can serve as hostages (Williamson 1983). For instance, in a manufacturer-reseller relationship, a reseller could offer a performance guarantee to the manufacturer in the form of investment in specialized training. This performance guarantee serves as a hostage to the manufacturer and represents a potential loss to the reseller to the extent that the training cannot be readily used in other relationships. A strong disincentive for supplier opportunism is thus

created, as long as the gains from violating the agreement with the manufacturer are less than the loss of income that would be incurred in the event of termination of the agreement.

Self-enforcing range: The extent to which circumstances can change without precipitating partner exploitation (Klein 1996); that is, the circumstances under which a partner firm finds the economic gains from violating an agreement to be less than the loss of future gains that would result from detection of the violation and consequent termination of the agreement.

Transaction costs/relationship management costs: The direct costs of managing relationships (e.g., bargaining and monitoring costs) and the opportunity costs of making inferior governance decisions (e.g., maladaptation costs) (Rindfleisch and Heide 1997).

Transaction cost theory: An interdisciplinary approach to analyzing relationships that draws upon institutional economics, organizational behavior, and contract law. The analytical focus is on the transaction, on "when a good or service is transferred across a technologically separate interface" (Williamson 1985, p. 1). Transaction cost theory follows an efficiency path and says that the purpose of establishing specific governance structures is to economize on transaction costs. Because of its emphasis on efficiency, transaction cost theory is particularly useful for analyzing interfirm relationships and developing an understanding of the comparative advantages of different ways of organizing relationships. It identifies suitable governance mechanisms for managing relationships between firms based on the characteristics of the relationships.

Appendix 2. Measures

Partner Opportunism (t_2) (Reliability = .91)

Please evaluate the degree to which the following statements accurately describe the customer by circling the most appropriate number on the scale (7-point scale):

"completely inaccurate description" – "completely accurate description"; mean = 2.00, s.d. = 1.13, CR = .90, AVE = 75%, SV = 33%).

1. On occasion, this customer lies about certain things in order to protect its interests.

2. This customer sometimes promises to do things without actually doing them later.
3. This customer does not always act in accordance with our contract(s).
4. This customer sometimes tries to breach informal agreements between our companies to maximize its own benefit.
5. This customer will try to take advantage of “holes” in our contract to further its own interests.
6. This customer sometimes uses unexpected events to extract concessions from our firm.

Transaction Costs (t_2) (Reliability = .93)

Please evaluate the following statements by circling the most appropriate number on the scale (7-point scale: “completely inaccurate description” – “completely accurate description”; mean = 2.03, s.d. = 1.00, CR = .94, AVE = 79%, SV = 33%).

1. We spend considerable time negotiating terms with this customer.
2. The customer’s representatives are normally not very well prepared for our meetings.
3. Reaching agreements with this customer requires substantial amounts of time and effort on our firm’s part.
4. We spend considerable time making sure the customer does what it has agreed to.
5. We spend considerable time making sure the customer fulfills its agreements.
6. We spend considerable time monitoring the customer.
7. We spend considerable time making this customer respond to our requests for changes.
8. In this relationship, we spend considerable time on correcting customer mistakes.
9. We spend considerable time on renegotiating terms with this customer.
10. We spend a substantial amount of time and effort on settling disputes with this customer.

Supplier Incremental Investments in Relationship-Specific Assets (t_2) (Reliability = .88)

These questions deal with investments made by your company DURING THE LAST THREE YEARS in the relationship with the customer. Please evaluate the following statements by circling the most appropriate number on the scale (7-point scale: “completely inaccurate description” – “completely accurate description”; mean = 2.83, s.d. = 1.58, CR = .88, AVE = 72%, SV = 23%).

1. Training our employees to deal with this customer has involved substantial commitment of time and money over the past three years.
2. Our production systems have been changed over the past three years to satisfy the requirements of this customer.
3. We have made significant adjustments in our logistics systems to better serve this customer over the past three years.

Partner Qualification Efforts (Reliability = .94)

Suppliers often undertake various qualification efforts

PRIOR to establishing a customer relationship. Please consider the time when the relationship with this customer was FIRST established (for any product), and indicate the extent of such qualification efforts undertaken by your firm with respect to this customer in each area listed below (7-point scale: “minimal qualification effort” – “extensive qualification effort”; mean = 3.96, s.d. = 1.48, CR = .96, AVE = 89%, SV = 23%).

1. Expertise (e.g., product knowledge)
2. Physical space
3. Financial strength
4. Personnel/management resources
5. Price level
6. Relationship with other suppliers
7. Business philosophy (e.g., in dealing with suppliers)
8. Reputation among other suppliers
9. Reputation among customers

Partner Hostages (Reliability = .87)

These questions deal with investments made by the customer in the relationship with your company. Please evaluate the following statements by circling the most appropriate number on the scale (7-point scale: “completely inaccurate description” – “completely accurate description”; mean = 2.10, s.d. = 1.23, CR = .85, AVE = 67%, SV = 32%).

1. This customer has made significant investments in equipment dedicated to the relationship with our company.
2. This customer has made extensive internal adjustments in order to deal effectively with our company.
3. Training their employees to deal with our company has involved substantial commitments of time and money on the part of this customer.
4. The customer’s logistics systems have been tailored to meet the requirements of our company.

Supplier Investments in Relationship-Specific Assets (Reliability = .75)

These questions deal with investments made by your company in the relationship with the customer. Please evaluate the following statements by circling the most appropriate number on the scale (7-point scale: “completely inaccurate description” – “completely accurate description”; mean = 3.07, s.d. = 1.55, CR = .78, AVE = 55%, SV = 32%).

1. Training our employees to deal with this customer has involved substantial commitment of time and money.
2. Our production systems have been tailored to satisfy the requirements of this customer.
3. We have made significant adjustments in our logistics systems to better serve this customer.

Supplier Replaceability

Please evaluate the following statement by circling the most appropriate number on the scale (7-point scale: “completely inaccurate description” – “completely accurate

description”; mean = 2.88, s.d. = 1.70).

If this customer stopped buying our product, it would have a hard time replacing the product with a similar product from another supplier.

Partner Replaceability

Please evaluate the following statement by circling the

most appropriate number on the scale (7-point scale:

“completely inaccurate description” – “completely accurate description”; mean = 3.65, s.d. = 1.58.

If this customer stopped buying our product, we would suffer a significant loss in income, despite our best efforts to replace the lost income.

Notes

1. Although a few studies have explored the time dimension of interfirm relationships (e.g., Heide and Miner 1992; Jap and Ganesan 2000; Lusch and Brown 1996), those studies have done so by including relationship length or stage as a measured variable. In this study, we do something different and more ambitious; namely, we explicitly study relationships over time. Moreover, while a few studies have collected longitudinal data (e.g., Dahlstrom and Nygaard 1999; Jap 1999; Jap and Anderson 2003; Rindfleisch and Moorman 2001), only a small subset of these (Jap 1999; Jap and Anderson 2003) have directly tested the relationship between variables collected at two points in time.

2. In transaction cost theory, partner exploitation is referred to as “opportunism” (Williamson 1993).

3. In transaction cost theory, those costs are referred to as

transaction costs (Williamson 1996). Interestingly, while transaction costs are background variables in many studies, they have rarely been measured directly.

4. These are specific investments made by the reseller, not the supplier.

5. Interestingly, theories of escalating commitment (e.g., Staw and Ross 1978) may suggest a different scenario, namely, that initial stocks of assets may be augmented in a direct fashion.

6. This particular time lag is consistent with recently published studies of similar phenomena (Dahlstrom and Nygaard 1999).

7. Due to the size of the item set, we used a partial disaggregation model as per the recommendation of Bagozzi and Heatherton (1994).

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