Do Norms Matter in Marketing Relationships?

Transaction cost analysis is rapidly becoming an important theoretical paradigm in marketing. However, the accumulation of transaction cost studies has been accompanied by a growing body of criticism, primarily directed toward its underlying behavioral norm of opportunism. That norm is a serious theoretical deficiency, not only because it may be descriptively inaccurate, but also because it limits the applicability of the theoretical framework. The authors show that norms play a very significant role in structuring economically efficient relationships between independent firms. In the absence of supportive norms, it is not possible for parties whose specific assets are at risk to acquire vertical control as per the transaction cost prescription. Instead, those parties lose control because of their dependence. An empirical test of the conceptual model in a sample of manufacturer-supplier relationships shows good support for the authors' hypotheses.

RANSACTION cost theory currently has a prominent role in several streams of work in the marketing literature. The theory is a blend of institutional economics and organizational and legal analysis. Its usefulness derives from its insight into the comparative properties of mechanisms for structuring exchange relationships and from its explicit identification of the conditions under which different structural arrangements are appropriate. Transaction cost reasoning has been applied in the past to sales organization decisions (Anderson 1985; John and Weitz 1989), the structuring of distribution channel and purchasing relationships (Dwyer and Oh 1988; Heide and John 1988, 1990; Noordewier, John, and Nevin 1990), and market entry decisions (Anderson and Coughlan 1987; Klein, Frazier, and Roth 1990).

Interestingly, the enthusiasm for the transaction cost framework has almost been matched by the strength of its criticism (Francis, Turk, and Willman 1983; Knapp 1989; Perrow 1986). Specifically, its behav-

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ioral assumption of opportunistically inclined parties has been criticized frequently for being overly simplistic, if not completely misleading. The core of the criticism draws on sociology to argue that exchange typically is embedded in social structures in which opportunism¹ is the exception, rather than the rule (Chisholm 1989; Granovetter 1985; Shapiro 1987). Accounts of "stewardship" (Donaldson 1990) and "relationalism" (Macneil 1980) describe human behavior that deviates dramatically from the opportunism described by transaction cost analysts. Curiously, however, most of the recent criticism has taken the position that transaction cost theory is deficient per se because of its implausible assumption, and has generally failed to offer refutable predictions about the implications of a deviance from opportunism.

We propose that the presence of alternative normative structures may actually enhance a firm's ability to structure a relationship in accordance with transaction cost prescriptions. Historically, the issue of ability has been ignored in transaction cost theory because of its narrow focus on situations involving com-

¹Opportunism is defined as "self-interest seeking with guile" (Williamson 1975), and includes different forms of strategic behaviors such as information distortion and failure to meet contractual obligations (John 1984).

plete forward or backward integration. In such situations, common ownership of the exchange partners provides a basis for implementing and enforcing a variety of administrative mechanisms, which in turn serve to safeguard transaction-specific assets.

In relationships between independent firms, that ability may not be readily available. Consider, for instance, that one means by which a firm can safeguard specific assets in the absence of vertical integration is to acquire vertical control over the exchange partner. However, doing so is feasible only if the other party has the confidence that relinquishing control will not create a condition of vulnerability. We contend that the presence of supportive norms (or relational norms, in Macneil's 1980 terminology) provides such confidence. That proposition is examined empirically in the context of relations between original equipment manufacturers (OEMs) and their component suppliers.

After providing an overview of the main premises of transaction cost theory and its prescriptions about the structure of interfirm relationships, we discuss the nature of social norms and their effects on interfirm relationships. We then present our conceptual model and research hypotheses. The research method used to test the hypotheses empirically is described and the results are reported. Finally, we discuss the implications of our study.

Transaction Cost Analysis of Interfirm Relationships

TCA is an analytical paradigm whose primary subject matter is the design of efficient governance mechanisms for supporting exchange. At the core of the paradigm are the axioms that certain exchange characteristics give rise to transaction difficulties and that different governance mechanisms exist that have different cost-minimizing properties (Williamson 1985). For our purposes, the key dimension of exchange is the presence of transaction-specific assets. They are assets dedicated to a particular relationship and involve sunk costs that would be nonrecoverable in the event of termination. As argued by Klein, Crawford. and Alchian (1978), transaction-specific investments create a significant "hold-up" potential, which would be exploited opportunistically unless appropriate safeguards are designed. The most prominent safeguard in TCA is vertical integration, which attenuates opportunistic appropriation by virtue of the employment relation that is created (Levy 1985).

The original framework presented the governance decision as a discrete choice between spot-market transactions and complete vertical integration. Recent theoretical studies have attempted to delineate more sharply the precise benefits of vertical integration as

a safeguard, thus extending the analysis to intermediate situations. In a path-breaking analytic model, Grossman and Hart (1986) formally defined vertical integration as control over decisions² and argued that the benefits of vertical integration are not attributable to ownership per se, but rather to the ability to exercise decision control. Hence, in situations where complete integration is not desirable or feasible, "quasi-integration" can be achieved in relationships between independent firms by establishing vertical control. In Stinchcombe's (1985) terminology, control involves establishing a vertical interfirm authority relation, which is the functional equivalent of an organizational hierarchy.

Unfortunately, though the conceptual extensions have increased the generality of the transaction cost framework, some serious theoretical deficiencies remain in applying the analysis to relations between independent firms. In the basic transaction cost framework, control is assumed to follow naturally from vertical integration. Extending that logic to independent firms is not straightforward because achieving vertical control across an organizational boundary is not automatic regardless of efficiency considerations. In fact, power-dependence theory (Pfeffer and Salancik 1978) suggests that a firm's investment in specific assets in and of itself may constrain its ability to acquire vertical control, because the presence of specific assets represents a condition of interfirm dependence (Barney and Ouchi 1986) that actually may transfer control to the party receiving the investment.

The extant TCA analysis thus offers a somewhat incomplete set of prescriptions. It identifies the conditions under which a firm has an incentive to structure relationships in a particular way (i.e., the presence of transaction-specific assets). Moreover, vertical control has been suggested as a functional substitute for ownership in nonintegrated situations. Yet, we do not have an understanding of the conditions that enable a firm to establish vertical control in relationships between independent firms. As we show subsequently, predicting the establishment of vertical control requires an explicit consideration of the conditions that allow control to be relinquished. Specifically, we propose that the presence of certain norms represents such a condition.

Norms in Economic Exchange

Since the early studies by Sherif (1936), the concept of norms has been at the core of research in several

²Similar definitions have been used by Jensen (1983) and Perry (1989). In operational terms, this refers to the actual or achieved control by one firm over another's decisions.

branches of the social sciences, including social psychology (Thibaut and Kelley 1959), political science (Axelrod 1986), law (Macneil 1980), and economics (Bendor and Mookherjee 1990). Despite the diversity of literatures in which the concept appears, there seems to be convergence on its basic meaning.

A working definition is that norms are expectations about behavior that are at least partially shared by a group of decision makers (Gibbs 1981; Moch and Seashore 1981; Thibaut and Kelley 1959). Beyond this general definition, however, norms may exhibit differences in several respects. First, norms may apply at different levels. For instance, norms may apply to entire societies³ (Gouldner 1960), particular industries (Macaulay 1963; Scherer 1980), individual firms (Dornbusch and Scott 1975), or groups of individuals (Bettenhausen and Murnighan 1985). For our present purposes, it is particularly noteworthy that specialized normative structures have been shown to govern individual exchange relationships between firms (Shapiro 1987; Stinchcombe 1986).

Norms also differ in their content or general orientation (Thibaut and Kelley 1959). For instance, norms have been found to differ significantly in the extent to which they prescribe behaviors directed toward collective as opposed to individual goals. Macneil's (1980) typology of "discrete" versus "relational" norms reflects this difference. Basically, discrete exchange norms contain expectations about an individualistic or competitive interaction between exchange partners. The individual parties are expected to remain autonomous and pursue strategies aimed toward the attainment of their individual goals. In contrast, relational exchange norms are based on the expectation of mutuality of interest, essentially prescribing stewardship behavior, and are designed to enhance the wellbeing of the relationship as a whole.⁴ Notice that both types are appropriately viewed as norms in that they represent behavioral expectations, though the respective behavioral expectations are fundamentally different.

Finally, there is evidence that interfirm norms are multidimensional in the sense that they may relate to particular kinds of behaviors. In Macneil's (1980) typology, the concept of "relationalism" may be manifested in several different though related domains, such as flexibility, solidarity, and information exchange. Noordewier, John, and Nevin (1990) contend that relationalism is appropriately viewed as an underlying syndrome or a higher order norm, which gives rise to other, more domain-specific ones.

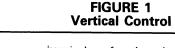
Curiously, though contemporary TCA work offers no help in the matter, the early work (Williamson 1975)

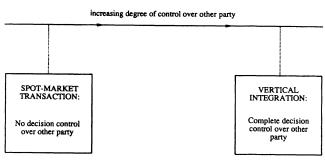
did consider the possibility of variations in exchange norms. The role of industry norms as discussed by Macaulay (1963) is recognized explicitly in the original analysis. Williamson dimensionalized norms along a continuum running from opportunism to stewardship (p. 26) and offered some hints that those differences in norms would have an impact on the structure of relations. Unfortunately, this early treatment has been ignored almost completely, and the assumption of an invariant norm of opportunism is used consistently in the subsequent extensions of the original framework (Williamson 1985, 1990, 1991). As a consequence, the theory provides no basis for understanding the specific implications of a deviation from opportunism.

Conceptual Framework and Research Hypotheses

We emphasize at the outset that our model addresses decision-making control by the buyer in the context of industrial buyer-supplier relationships. Consequently, the domains of the constructs involved are idiosyncratic to the particular setting and the hypothesized linkages may not be automatically generalizable to other interfirm settings.

The dependent variable, vertical control, is defined operationally as the buyer's control over supplier decisions. Stated differently, it refers to the control that the buyer has established in the relationship with the supplier. Figure 1 illustrates the continuum of control implicit here. As a starting point, consider a pure spot-market exchange. Its defining characteristic is that a transaction is conducted with no expectation of an ongoing interaction. Governance reduces to arm's-length bargaining over output, in the form of price and quantity. A departure from market governance is manifested as an increasing degree of buyer control over the supplier's behavior. For instance, a





³Societal norms commonly are formalized and made explicit through the legal system (Axelrod 1986).

⁴For a more thorough review of Macneil's (1980) work, see Dwyer, Schurr, and Oh (1987) and Noordewier, John, and Nevin (1990).

buyer may attempt to control the supplier's decision making in areas such as manufacturing, selection of subsuppliers, and quality control procedures, which under market governance would normally belong entirely to the supplier's domain. With the establishment of vertical control, a condition of vertical integration is being approached. We rely here on Grossman and Hart (1986), who explicitly define vertical integration in terms of a transfer of control.

What are the antecedents of vertical control? In contrast to the underlying assumption in much of the organization theory literature (Oliver 1990), we contend that control is not necessarily desirable per se, but is subject to efficiency considerations and deliberate choice. Following transaction cost theory, we view the establishment of vertical control as the design of a specialized governance structure, which is required only under particular conditions such as the presence of transaction-specific assets. Investments in equipment, tools, and procedures that are specialized to the requirements of a particular supplier relationship pose a "contractual hazard" (Williamson 1985) that must be mitigated by structuring the exchange relationship appropriately.

We propose that a buyer safeguards his specific assets by establishing control over aspects of the supplier's operations. The ability to exercise vertical control prevents the "quasirents" associated with his investment from being expropriated (Klein, Crawford, and Alchian 1978). For instance, in the absence of buyer control, decisions made by the supplier about product design or manufacturing may contribute to reducing the value of the buyer's investment, or at least require him to incur costs associated with ongoing haggling and negotiating (Joskow 1985).

Notice, however, that the presence of specific assets only creates an incentive to establish vertical control, and does not in itself endow the firm with the ability to actually structure a relationship in the desired fashion. In fact, we hypothesize that transaction-specific investments will reduce a firm's ability to exercise control because of the dependence that is created. Dependence arises from investments in specific assets because they make the focal exchange partner irreplaceable, or replaceable only at a cost (Heide and John 1988). Such a dependence structure actually transfers control to the supplier and limits the buyer's ability to structure the relationship in accordance with the prescriptions from transaction cost theory. We propose the following hypothesis.

H₁: Investments in transaction-specific assets by the buyer decrease the buyer's control over supplier decisions.

Conceptually, decision control is a zero sum phenomenon (Grossman and Hart 1986). Though it may not reside in its entirety with either party, an increase

in decision control by one party necessarily comes at the other's expense. As a consequence, one party's ability to exercise decision control derives from the other party's decision to relinquish it. The conventional analysis of that process is based primarily on power-dependence theory (Pfeffer and Salancik 1978), which portrays control relinquishment as a reluctant concession to the demands of a more powerful exchange partner. However, recent theoretical developments have challenged that perspective (Boulding 1989; Galaskiewicz 1985) and show that control relinquishment may be the consequence of voluntary strategic choice (Anand and Stern 1985) and efficiency considerations (Grossman and Hart 1986).

Other things being equal, however, a decision on the part of a supplier to relinquish decision control increases his vulnerability, in the sense that his "domain" becomes subject to external influence (Thompson 1967). The implication is that control relinquishment may necessitate some form of protection against "reverse opportunism" by the control holder. In other words, suppliers may not transfer decision control to the buyer without some insurance that the achieved control will not be abused. What would provide such insurance?

Recall that a defining characteristic of norms is their ability to specify permissible limits on behavior (Opp 1979; Ouchi 1979). Norms thus serve as a *general* protective device against deviant behavior (Stinch-combe 1986; Thibaut 1968). A *particular* property of relational norms is their prescription of behaviors directed toward maintaining the system or relationship as a whole and curtailing behavior promoting the goals of the individual parties. By their very nature, relational norms constitute a safeguard against exploitative use of decision rights.

To operationalize the argument, norms must be dimensionalized. Macneil (1980) originally defined relational norms in terms of a series of partially overlapping norm types. We identify three dimensions that appear to have particular relevance: flexibility, information exchange, and solidarity.

Flexibility defines a bilateral expectation of willingness to make adaptations as circumstances change. From a supplier's perspective, it represents insurance that the relationship will be subject to good-faith modification if a particular practice proves detrimental in the light of changed circumstances.

Information exchange defines a bilateral expectation that parties will proactively provide information useful to the partner. It represents a safeguard to the supplier in the sense that the buyer can be expected to provide unforeseen information that may affect supplier operations. Notice that an expectation of getting all known information on an ongoing basis enables the supplier to cope better with the vulnerability

associated with transferring decision control to the buyer. It is information about production scheduling, design requirements, and the like that attenuates these risks.

Solidarity defines a bilateral expectation that a high value is placed on the relationship. It prescribes behaviors directed specifically toward relationship maintenance. Solidarity represents a safeguard to the supplier because it deters the buyer from using decision control in a way that would be detrimental to the relationship as a whole.

Though these three dimensions have distinct elements, they originate from a single, higher order relational norm (Noordewier, John, and Nevin 1990). As elaborated subsequently, our measurement structure models relational norms as a single second-order factor, which gives rise to three first-order factors representing the three dimensions.

In summary, our theoretical prediction is that a positive effect of buyer-specific assets on decision control over the supplier is contingent on a relatively high level of relational norms. The presence of specific assets creates only the incentive to exercise control, whereas the nature of the normative structure provides the ability to acquire control. We formally propose the following hypothesis.

H₂: Buyers' investments in transaction-specific assets lead to increased control over supplier decisions for relatively high levels of relational norms.

Statistically, we posit a positive interaction between specific assets and relational norms on buyer control. In combination, H₁ and H₂ represent a nonmonotonic effect of specific assets on buyer control over the range of relational norms. When a supporting normative structure is at a low level, increases in specific assets undermine or decrease control. When relational norms are at a relatively high level, specific assets have a positive effect on control.

Two additional variables are included in the model to account for determinants of buyer control other than our focal theoretical variables. Buyers who account for larger proportions of a supplier's output may acquire more control because of their influence and prominence. Therefore, concentration of exchange is included as an additional explanatory variable. Also, buyers who maintain in-house manufacturing in addition to sourcing from suppliers may have higher levels of control.

H_{3a}: Greater buyer concentration increases the buyer's control over supplier decisions.

H_{3b}: Greater in-house manufacturing of the focal products increases the buyer's control over supplier decisions.

Statistically, the full model can be expressed as:

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_1 x_2 + b_4 x_3 + b_5 x_4$$

where:

Y = buyer control over supplier decisions,

 x_1 = buyer-specific assets,

 x_2 = relational norms,

 x_1x_2 = interaction between specific assets and relational norms,

 x_3 = buyer concentration, and

 x_4 = buyer's in-house manufacturing.

Our key predictions are with respect to b_1 , which on the basis of H_1 is expected to be negative, and b_3 , which according to H_2 is expected to be positive. No hypothesis is advanced for the main effect of relational norms on buyer control.⁵

Method

Context and Sampling Strategy

Purchasing relationships between OEM manufacturers and their component suppliers were chosen as the empirical setting. Manufacturers from just three two-digit SIC major groups (35, 36, and 37) were included to limit extraneous sources of variation. Nonetheless, the firms represent a wide variety of products and industries. Plant visits and attendance at industry conferences confirmed our expectations that the type of processes implied in our model operated in those industries, and that the theoretical constructs in question could be measured satisfactorily. Data from the manufacturer (buyer) as well as from the supplier side of the dyad were collected to assess the quality of the measures.

Drafts of the buyer and supplier versions of the questionnaire were developed on the basis of available scales and previous field investigations, and were personally administered at several OEM and supplier sites in the relevant SIC categories. The revised questionnaires then were used in a larger scale mail pretest prior to the administration of the main survey. No particular problems with measures or response formats were revealed.

Measures

The measurement approach for each of the theoretical constructs in our model is described briefly. Table 1 contains a description of response formats and specific items for each scale.

⁵Conceivably, the presence of relational norms might reduce buyer control. For instance, recent sociological analyses (e.g., Granovetter 1985) have implied that the nature of a particular exchange network (e.g., supportive norms) may serve as a transactional safeguard in its own right, and reduce the need for other safeguarding mechanisms. However, consistent with transaction cost theory, we do not view norms in and of themselves as a buyer safeguard in the sense that they may substitute for control (Maitland, Bryson, and Van de Ven 1985; Williamson 1975). Rather, we view norms as a condition that enables a buyer to extract the safeguard of vertical control.

TABLE 1 Response Formats and Sample Items^a

Scale	Response Anchor	Sample Items
Buyer control (BUYCONT)	7-point scale: entirely decided by the supplier/entirely decided by your company	Supplier's production processes and manufacturing technology Ongoing design and engineering changes Supplier's level of inventory (raw material, semifinished and finished components) Selection of supplier's subsuppliers Supplier's quality control procedures
Buyer-specific assets (BUYINV)	7-point Likert scale: strongly disagree/ strongly agree	We have made significant investments in tooling and equipment dedicated to our relationship with this supplier This supplier has some unusual technological norms and standards, which have required adaptation on our part. Training and qualifying this supplier has involved substantial commitments of time and money Our production system has been tailored to using the particular items bought from this supplier Our production system has been tailored to meet the requirements of dealing with this supplier Gearing up to deal with this supplier requires highly specialized tools and equipment
Norm of flexibility (FLEX)	7-point scale: completely inaccurate description/ completely accurate description	Flexibility in response to requests for changes is a characteristic of this relationship The parties expect to be able to make adjustments in the ongoing relationship to cope with changing circumstances When some unexpected situation arises, the parties would rather work out a new deal than hold each other to the original terms
Norm of information exchange (INFO)	Same as above	In this relationship, it is expected that any information that might help the other party will be provided to them Exchange of information in this relationship takes place frequently and informally, and not only according to a prespecified agreement It is expected that the parties will provide proprietary information if it can help the other party It is expected that we keep each other informed about events or changes that may affect the other party
Norm of solidarity (SOL)	Same as above	Problems that arise in the course of this relationship are treated by the parties as joint rather than individual responsibilities. The parties are committed to improvements that may benefit the relationship as a whole, and not only the individual parties. The parties in this relationship do not mind owing each other favors.

^aBuyer version of response anchors and scale items is stated.

- Buyer control (BUYCONT). This scale describes the buyer's actual control over supplier decisions. Specifically, we are measuring the control the buyer has achieved over particular supplier decisions, ⁶ in an approach similar to Dwyer and Welsh's (1985). The items describe decisions such as selection of subsuppliers and quality control procedures ⁷ that would be part of a supplier's domain in a prototypical market transaction.
- Buyer-specific assets (BUYINV). The specific assets scale describes the buyer's investment in specialized physical

- assets, organizational procedures, and training that are idiosyncratic to a particular supplier relationship. The actual items used are based on the ones developed by Anderson (1985), modified to reflect our particular context.
- Relational norms (RELNORM). Recall that we define relational norms as a higher order construct consisting of the dimensions flexibility (FLEX), information exchange (INFO), and solidarity (SOL). Each dimension is measured as a multi-item scale with a Likert-type format.

Two particular aspects of our norms measures are noteworthy. First, we explicitly measure norms as a perception of *bilateral* expectations in the different areas, consistent with the conceptual definition of a norm. We also explicitly measure norms as a contin-

⁶Actual or achieved control over decisions is to be distinguished from a party's potential for exercising control and from the nature of the strategies used for implementing it. For a more comprehensive discussion, see Frazier (1983).

⁷Conceptually, a buyer's ability to exercise control over supplier decisions is distinct from a supplier's decision control over the buyer, as evidenced by Anderson and Narus' (1990) study.

uous as opposed to a discrete phenomenon. Though norms are sometimes described as being discrete (i.e., present or absent), the literature has consistently described the strength of a norm in any particular setting to be a matter of degree (Gibbs 1981; Jackson 1966; Thibaut and Kelley 1959). In other words, norms vary in strength, depending on the extent to which behavioral expectations are shared in a particular situation.

The flexibility items describe the parties' expectations of making adjustments in the ongoing relationship in accordance with changing circumstances. The items in the information exchange scale express the expectation that particular pieces of information that might help the other party will be provided. Finally, the solidarity scale consists of items expressing the expected efforts of the parties toward preserving the relation. The specific items used are based to some extent on the ones developed by Kaufmann and Stern (1988) and Noordewier, John, and Nevin (1990).

Other variables included the percentage of the supplier's total sales of the product accounted for by the buyer (BCONC) and the percentage of the buyer's requirements produced internally (% INTERN).

Data Collection: Buyer Sample

The initial sampling frame was a national mailing list of purchasing agents/directors of manufacturers in the two-digit SIC major groups 35, 36, and 37. A random sample of 1157 names drawn from the sampling frame was contacted personally by phone to locate a key informant. Campbell's (1955) criteria of being knowledgeable about the phenomenon under study as well as being able and willing to communicate with the researcher constituted our criteria for informant selection.

On the basis of the telephone contact, 579 informants were identified who met Campbell's criteria and also consented to participate in the survey. Each informant was subsequently mailed a questionnaire and requested to complete it with respect to a particular supplier about whom he was knowledgeable. As an additional step toward minimizing informant bias, each questionnaire included *post hoc* self-reports on the informant's involvement and knowledge about the supplier relationship. After callbacks and a second mailing, 175 questionnaires were received from the buyers, approximately 30% of the 579 mailed out. After elimination of questionnaires from which excessive amounts of data were missing or in which the informant had

insufficient scores on the *post hoc* informant checks, the final sample of buying firms consisted of 155.9

We evaluated nonresponse bias by comparing early with late respondents, following Armstrong and Overton's (1977) procedure. No significant differences were found on variables such as sales volume, number of employees, value annual of purchases, and buyer concentration, suggesting that nonresponse bias may not be a problem.

Data Collection: Supplier Sample

To identify the corresponding key informant in the supplier firms, the informants in the buying firms were contacted again and requested to identify a contact person within the supplier firm who was in a good position to describe that firm's relationship with the buyer. That procedure yielded 96 individuals who were subsequently contacted by phone to verify their ability to serve as key informants. After callbacks and second mailings, 61 usable questionnaires were returned and 60 were judged to be usable for further analysis on the basis of the *post hoc* informant check.

Measure Validity and Hypothesis Tests

Measure Validation Procedure

For the multi-item scales (BUYCONT, BUYINV, FLEX, INFO, MUT), each set of items was initially subjected to an examination of item-to-total correlations to identify items that did not belong to the specific domain. The resulting pool of items was subsequently subjected to a confirmatory factor analysis to verify the hypothesized factor structure.

In the case of BUYCONT and BUYINV, each set of items was hypothesized to be represented by a single factor. The fit indices from LISREL VI (Jöreskog and Sörbom 1985) in Table 2 indicate an adequate fit to the data. Furthermore, the estimated alpha coefficients for the item sets show satisfactory evidence of internal consistency.

The relational norm items were hypothesized to have a more complex underlying factor structure. Flexibility (FLEX), information exchange (INFO), and solidarity (SOL) are viewed as comprising a higher order norm (RELNORM). This corresponds to a second-order confirmatory factor model, in which the observed items are hypothesized to originate from the three first-order factors and the first-order factors in turn originate from a second-order factor.

The hypothesized factor structure and LISREL parameter estimates are shown in Figure 2. The fit in-

⁸In the remainder of the 1157 cases, the firm itself or an appropriate key informant could not be located, the contact person refused to participate, or the firm itself was inappropriate for the purposes of the study because it either purchased items for straight resale or else purchased from a distributor rather than from a manufacturer.

⁹The components purchased by these buyers from the suppliers in question include fabricated metal parts, electronic subassemblies, and finished components such as power units.

TABLE 2
Properties of Multi-Item Scales

Scale	No. of Items	Fit Indices	α
BUYCONT	5	$\chi^{2}(5) = 2.49$ p = .779 GFI = .99 RMSR = .025	.68
BUYINV	6	$\chi^{2}(9) = 29.33$ p = .001 GFI = .94 RMSR = .06	.81
RELNORM	10	$\chi^{2}(32) = 40.40$ p = .147 GFI = .95 RMSR = .041	a

^{*}Second-order factor comprising the first-order factors FLEX, INFO, and SOL.

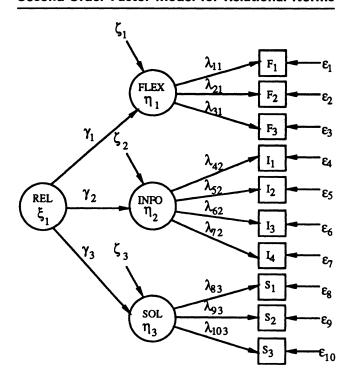
dices for the model are given in Table 2. The model as a whole has a satisfactory fit to the data ($\chi^2(32) = 40.4$, p = .147, GFI = .95, RMSR = .04, Bentler and Bonnett's indices $\Delta = .93$, $\rho = .98$), and the relevant first- and second-order factor loadings are large and significant. In sum, the model lends support to our conceptualization of relational norms as a second-order construct. Hence, the three norm types were combined into an equally weighted composite score for the hypothesis tests.

The final step in the measure validation process involved comparing the obtained measure from the sample of buyers with the corresponding report from the supplier sample. Convergence between the informant reports across the buyer-supplier dyad provides evidence about measure quality. Table 3 shows the correlations between the buyer and supplier informants for the 60 cases in which dyadic data were obtained. All of the correlations are significant and positive.

These dyadic data might have been subjected to a more rigorous analysis via confirmatory factor analysis to examine the extent to which the observed scores are attributable to the underlying trait, random error, and unique "viewpoints" of the parties involved. As shown in previous research (e.g., Bacharach and Lawler 1980), the individual parties to a relationship tend to have somewhat unique perspectives on the ongoing interaction, resulting in part from their particular positions in the exchange network. For measurement purposes, the implication is that each informant's report is influenced systematically by his unique perspective or "viewpoint" in addition to the nature of the focal trait. In practice, this viewpoint will attenuate the raw correlations between the informant reports.

Unfortunately, our sample of dyadic reports is too

FIGURE 2
Second-Order Factor Model for Relational Norms



Standardized LISREL estimates

First-Order Loadings (Aij)

Indicator F1 F2	FLEX .677 ^a .831 (6.9) ^b	<u>INFO</u>	SOL
F3 I1	.614 (6.2)	.765ª	
12		.689 (8.1)	
B		.614 (7.2)	
I 4		.831 (9.7)	
S1			.727ª
S2			.538 (6.0)
S 3			.835 (8.5)

Second-Order Loadings (vik)

First-Order Factor FLEX	RELNORM		
FLEX	.627ª		
INPO	.838 (4.8)		
SOL	.939 (4.6)		

^aFixed parameter.

small to estimate a factor structure that accounts specifically for the different sources of variance. Nevertheless, the extent of agreement between the informant reports, as evidenced by the correlations in Table 3, is encouraging, particularly when we consider the attenuating effect of each party's unique viewpoint.

bt-values are in parentheses.

TABLE 3
Interinformant Correlations Across BuyerSupplier Dyad^a

Buyer control (BUYCONT)	.26 ^b
Buyer-specific assets (BUYINV)	.33 ^b
Relational norms (RELNORM)	.50°
Buyer concentration (BCONC)	.64°

^{*}Percentage manufactured internally (%INTERN) was not measured in the supplier sample.

TABLE 4
Estimated Model
Dependent Variable: Buyer Control (BUYCONT)

Independent Variable	Unstd. Coefficient	T-Value
Constant	2.224	2.566°
BUYINV	−. 571	-1.862a
RELNORM	100	624
BUYINV • RELNORM	.148	2.704°
BCONC	.011	4.210 ^b
%INTERN	.016	2.474°
R^2 adj: .39 $F(5,115) = 16.00^b$		

^{*}Significant at p < .05 (1-tailed test).

Tests of Hypotheses

The statistical model involved estimating buyer control (BUYCONT) as a function of buyer-specific assets (BUYINV), relational norms (RELNORM), the interaction between specific assets and relational norms (BUYINV • RELNORM), and the two control variables, buyer concentration (BCONC) and the percentage of the buyer's requirements produced internally (% INTERN). Table 4 gives the estimated parameters and associated t-statistics. Table 5 is the correlation matrix for the variable set.

The model appears to provide a good account of the data. The adjusted R^2 of .39 indicates satisfactory explanatory power and the individual coefficients are all consistent with our hypotheses. The main effect of buyer-specific assets on buyer control is significant and negative (t = -1.86, p = .03), as in H₁. Also,

as in H_2 , the interaction between specific assets and relational norms is significant and positive (t = 2.70, p = .004). Finally, both buyer concentration (t = 4.21, p = .00) and the buyer's in-house production of components (t = 2.47, p = .007) have positive and significant effects on buyer control as expected.

Recall that our overall hypothesis about specific assets, or the joint prediction of H₁ and H₂, is that the effect of specific assets on buyer control is nonmonotonic over the range of relational norms. That effect can be seen more clearly by plotting the partial derivative of the regression equation (see Schoonhoven 1981). Figure 3 is a plot of the partial derivative of buyer control (BUYCONT) with respect to specific assets (BUYINV) over the range of relational norms (RELNORM). For low levels of RELNORM, increases in BUYINV have a negative effect on BUYCONT. Specifically, BUYINV has a negative effect on BUYCONT in the RELNORM range below 3.85 and a positive effect when RELNORM is greater than 3.85.

Discussion

Theoretical Implications

In its original form, the transaction cost framework predicts a positive relationship between the presence of specific assets and the presence of safeguards for the investing party. However, in our context, specific assets are shown not to have a universally positive effect on vertical control. A positive impact of specific assets is contingent on the presence of relational norms. Our study highlights a limitation of the transaction cost framework, namely a preoccupation with the conditions that motivate a firm to structure relationships in a particular way without specifying the mechanisms that provide the ability to implement the desired structures. Relational norms may be one such mechanism, though accounting for their presence requires an extension of the behavioral assumptions on which the transaction cost framework is built. The original theory, as developed by Williamson (1975), generally presumes exchange relationships to be governed by norms of opportunism, prescribing an ex-

TABLE 5
Correlation Matrix

	BUYCONT	BUYINV	RELNORM	BUYINV · RELNORM	BCONC	%INTERN
BUYCONT	1.00					
BUYINV	.39	1.00				
RELNORM	.31	.16	1.00			
BUYINV • RELNORM	.46	.94	.43	1.00		
BCONC	.41	.18	.10	.20	1.00	
%INTERN	.19	.13	.05	.04	.04	1.00

r > .16 are significant at p < .05 for n = 155.

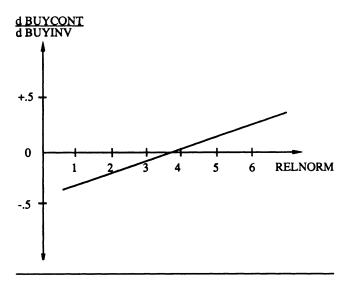
 $^{^{\}rm b}$ Significant at p < .05.

[°]Significant at p < .001.

^bSignificant at p < .001 (1-tailed test).

FIGURE 3
The Effects of Relational Norms (RELNORM) on the Relationship Between Buyer-Specific Assets (BUYINV) and Buyer Control (BUYCONT)

 $\frac{d BUYCONT}{d RUYINV} = -.571 + .148 (RELNORM)$



treme form of individualistic behavior. That assumption not only may be descriptively incorrect, but also limits the generality of the transaction cost framework. Of particular significance is the inability of the conventional wisdom in transaction cost analysis to account for complex nonmarket governance modes between nominally independent firms. It does not suffice to place markets and hierarchies at the ends of a continuum and interpolate between them. The underpinnings of such quasimarket modes differ fundamentally from both markets and hierarchies, and we see that the normative structure is one aspect that must be attended to more closely in analyzing such cases.

One line of speculation pertains to other mechanisms that might afford a firm the ability to structure exchange relationships in the desired way. Though relational norms carry the burden in our model, it is conceivable that other mechanisms serve a similar purpose. One candidate is sheer power, as suggested by Stinchcombe (1985). That is, a dominant partner in terms of bargaining power can extract safeguards for specific investments.

Our data provide the opportunity to make a preliminary exploration of that hypothesis. The two control variables included in our model, buyer concentration (BCONC) and percentage of buyer's requirements produced internally (%INTERN), can be viewed to constitute aspects of buyer power over the supplier or, conversely, supplier dependence. Because each of those variables endows a buyer with the ability to exercise control over supplier decisions, they should have a positive interaction effect with buyerspecific assets, similar to the interaction between specific assets and norms.

An expanded statistical model was estimated that, in addition to the original variables, included the two new interaction terms, BUYINV • BCONC and BUY-INV • %INTERN. Both interaction terms are positive and significant (t=1.29, p=.10, and t=1.40, p=.08, respectively). The effects of the original terms remain basically unchanged, with the exception of the main effects of BCONC and %INTERN, which are insignificant in the expanded model. Thus, dominant firms appear to be able to extract safeguards, but the effect of supportive norms remains unchanged.

The preceding results are interesting, in particular because transaction cost theory proponents historically have been reluctant to acknowledge the potential contributions of power-dependence theory (e.g., Williamson 1981). Our results provide an indication of the potential value of theoretical integration in this area. Transaction cost theory's critique of resource dependence theory has been focused on the latter's descriptive emphasis and its failure to examine the efficiency implications of different structural arrangements. In contrast, one of the distinct strengths of transaction cost theory is its explicit normative treatment of governance issues and its detailed analysis of the conditions under which particular structural arrangements are appropriate. However, the current transaction cost framework also has certain recognized limitations, such as a limited account of the mechanisms that give firms the ability to structure relationships in desired ways. This area appears to be one in which fruitful theoretical integration can take place, where the normative insights from transaction cost theory might be augmented with power-dependence theory's descriptive insight into the mechanisms that allow certain interfirm structures to be implemented.

Managerial Implications

Keeping in mind the general caveats about results from any one study, we obtain some interesting ideas by comparing our findings with those of the most prominent managerial decision model. Consider Porter's (1980) suggestions for dealing strategically with independent buyers and/or suppliers. One of the key normative guidelines that follows from his analysis is for firms to acquire the maximum amount of control in a relationship and conversely, to the extent possible, to avoid relinquishing control.

The results of our study indicate a dramatically different picture and reiterate the value of focusing on efficiency. Contrary to the notion that control is de-

sirable per se, firms should structure relationships in a discriminating way, based on the characteristics of the situation in question. Firms should not pursue control as a goal in its own right, but only attempt to acquire control when specific assets are at risk. From the other side, it is not always wrong to cede control. The key is to be protected against abuse of control, and relational norms can serve that purpose. Hence, supportive norms have significant economic value when specific assets need to be safeguarded. Conversely, managers should be cautious about conceding control even when efficiency considerations warrant such concessions if the partner is prone to abusing the ceded authority.

Limitations and Extensions

Consistent with previous studies, our study is limited to the structural aspects of interfirm relationships. Our hypotheses are motivated by efficiency considerations as specified by transaction cost theory (Williamson 1985), yet we do not include specific performance measures in our model. Though the empirical results are in accordance with the theoretical predictions, a recognized limitation of our analysis is a failure to account directly for any performance indices.

Another limitation of our study is our treatment of relational norms as an exogenous variable. Though relational norms determined the firm's ability to acquire control, we made no attempt to identify their antecedents. Interestingly, the antecedents of exchange norms are currently generating substantial interest in other areas of the social sciences (Axelrod 1986; Granovetter 1985) and appear to be a fruitful avenue for future research.

Finally, future research may be directed usefully toward exploring the dynamics of such interfirm relationships. Though theoretical accounts are lacking, conceivably the relevant mechanisms available for structuring relationships change over time and consequently influence firms' decisions. For instance, in the early stages of a relationship norms may not be fully established, and hence a buyer's ability to exercise needed vertical control is limited. In such instances a buyer may have to rely on other mechanisms for safeguarding specific assets, such as contractual protection. However, as relationships develop, supporting norms may evolve and eventually enable a buyer to establish control. As a matter of fact, it is conceivable that a supplier under such conditions relinquishes control in part as a reciprocation for a buyer's willingness to make investments in idiosyncratic assets. That action, in turn, may provide a basis for increasing the original level of investments in specific assets. An interesting topic for future research would be to examine how relationships' time dimension determines choices among safeguarding mechanisms.

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