JOSEPH P. CANNON and WILLIAM D. PERREault JR.*

During the past decade, marketing managers and scholars have focused increased attention on buyer–seller relationships in business markets. This article contributes to the emerging body of knowledge in this important arena. Building from theories of relationships and empirical research across several disciplines, the authors specify six key underlying dimensions (connectors) that characterize the manner in which buyers and sellers relate and conduct relationships. Measures for these relationship connectors (information exchange, operational linkages, legal bonds, cooperation, and relationship-specific adaptations by buyers and sellers) are developed in a series of pretests. Then, on the basis of relationship profiles for more than 400 buyer–seller relationships sampled from a wide array of industries and market situations, the authors apply numerical taxonomy to develop an empirically based classification of different types of business relationships. Contrary to approaches used in much of the extant literature, taxonomic methods do not rely on an assumption that the connectors are highly intercorrelated or that they combine in some linear fashion to form a single underlying dimension. Furthermore, the research specifies antecedent market and purchase situations and shows that they affect when specific types of relationships are used. The research also shows how customer satisfaction and evaluations of supplier performance vary across different types of relationships. The results provide new insights about the nature of relationships in business markets.

Buyer–Seller Relationships in Business Markets

In today's business-to-business markets, there is intense pressure to improve the efficiency and effectiveness of both marketing and procurement efforts. Firms everywhere are seeking ways to perform these critical functions better while reducing costs in the value-adding process (Dertzousas, Lester, and Solow 1989). Similarly, marketing scholars interested in this arena are critically rethinking previously embraced theories, empirical results, and normative prescriptions, some of which are proving to be outdated in today's highly competitive global markets (Hålansson and Snehota 1995; Webster 1992). Even in markets that are not facing the revenue and cost strains of late product life cycle stages, fast changes in technology, business practices, and economic conditions are calling for new ways of addressing old problems.

Nowhere has such new thinking been more evident than in the arena of relationships in business-to-business markets. Innovative managers worldwide are experimenting with a myriad of approaches to make relationships with their business suppliers and customers more productive and enduring. Some of these efforts are linked closely to broader initiatives. For example, efforts to implement total quality management or process reengineering often require a coordinated effort across the whole value chain. Many manufacturing firms are relying on fewer suppliers and becoming involved in closer relationships with those that remain (Emshwiller 1991). Similarly, just-in-time delivery/inventory systems and computerized order placement technologies often require more closely coupled relationships between suppliers and their business customers (Anderson and Narus

---

*Joseph P. Cannon is Assistant Professor of Marketing, College of Business, Colorado State University (e-mail: jpcannon@lamar.colostate.edu). William D. Perreault Jr. is Kenan Professor, Kenan-Flagler Business School, University of North Carolina-Chapel Hill (e-mail: bill_perreault@unc.edu). The authors appreciate support from the National Association of Purchasing Management, the Purchasing Management Association of the Carolinas and Virginia, and helpful comments and suggestions from four anonymous JMR reviewers and various colleagues, especially Sundar Bharadwaj, Richard Blackburn, Jay Klompmaker, Charlotte Mason, Hayagreeva Rao, and John Workman.
In spite of these trends, the move to cooperative, harmonious relationships is not universal, and many companies continue to rely on the competitive market and a more transactional orientation (Kelly and Kerwin 1993).

Although there is a rich tradition of scholarly research focused on buyer–seller relationships in business markets (especially in channels of distribution), work in this area has surged in the past ten years. Building on and adapting theories from a variety of disciplines, marketing researchers have provided new insights about how factors such as trust or commitment influence behavior in relationships (Anderson and Weitz 1992; Doney and Cannon 1997; Morgan and Hunt 1994), how factors such as uncertainty and dependence affect characteristics of relationships (Anderson and Coughlan 1987; Heide and John 1990; Mohr, Fisher, and Nevin 1996), and the effect of relationship characteristics on key performance outcomes (Lusch and Brown 1996; Noordewier, John, and Nevin 1990). These studies have advanced knowledge by hypothesizing and testing linkages among a wide variety of relationship-relevant constructs.

When the various conceptualizations and constructs are considered as a set, it is clear that a variety of different relationship characteristics must be considered simultaneously. So many different constructs, based on a variety of different theories, have been shown to be relevant to understanding relationships that there is a need to unify and integrate research findings in this area. Some researchers have moved in this direction by using LISREL to analyze simultaneously multiple dimensions of relationships, contingent situational factors that moderate hypothesized linkages, or both. For example, Noordewier, John, and Nevin (1990) specify and test a model that simultaneously incorporates five lower-order factors that model "relationalism" and show a positive relationship between relationalism and performance in high (but not low) uncertainty conditions. Adopting this same basic approach, Kumar, Scheer, and Steenkamp (1995) model "relationship quality," and Kaufmann and Dant (1992) examine a set of Macneil's (1980) relational norms. Explicit in these conceptualizations is the assumption that the lower-order factors are all highly correlated and can be combined to form an underlying relationship continuum that is unidimensional.

As the preceding suggests, it makes sense to characterize the relationships between buyers and sellers in a variety of different ways. Some may be related or connected with formal contracts and others simply by trusting agreements; some may be connected with open communications, and others may treat every piece of information as a secret; some may be connected by a shared sense of cooperation, and others may act as if they were totally independent. It makes sense to conceptualize relationships in terms of multivariate profiles of these different connectors. Yet there seems to be little reason to assume that these connectors are all correlated neatly and go hand-in-hand with one another. For example, a buyer might want to have a formal contract with a seller but not be interested in sharing much information.

Fortunately, the literature of numerical taxonomy provides a process and methodology for examining issues framed in this manner (Sneath and Sokal 1973). A set of unique and differentiated attributes provides the basis for a taxonomy, and the application of cluster analysis methods identifies prototypical patterns or types. Drawing on multiple theories, previous empirical research, and observations of business practice, we identify a set of six relationship connectors that reflect the manner in which business buyers and sellers interrelate and conduct commercial exchange. The cluster analysis procedures identify prototypical patterns that reflect modal types of business relationships—patterns that reflect actual business practice. Thus, we model buyer–seller relationships as a simultaneous combination or mix of the relationship connectors.

The purpose of this research is to contribute to the business marketing and procurement literature by providing new insights about the nature of buyer–seller relationships. This is accomplished by taking a different approach that does not rely implicitly or explicitly on the assumption that all characteristics of relationships are correlated. The resulting classification scheme supports, extends, and challenges existing theory, empirical research, and theoretically derived taxonomies.

More specifically, the contributions of this research are to (1) develop an empirically grounded taxonomy of business relationship types using a large, representative sample of actual relationships between business customers and their suppliers as a basis and (2) compare and contrast the empirical taxonomy with previous empirical research, other theoretically derived taxonomies (e.g., Dwyer, Schurr, and Oh 1987; Heide 1994; Williamson 1985), and relationship management practice to highlight how the findings support, challenge, and extend practice and the extant literature.

These contributions are accomplished by drawing on and integrating different theoretical perspectives, empirical research, and observations of business practice to identify and specify aspects of buyer–seller relationships that differentiate the manner in which relationships are conducted. We subsequently develop valid and reliable measures of these aspects of business relationships. Finally, we provide additional insights about the emerging taxonomy by showing how the relationship types are associated with a set of antecedent market and situational conditions and buying-firm evaluations of supplier performance and satisfaction.

To achieve these objectives, we adopt the organization suggested by the methodological and marketing literature on development of taxonomies (cf. Bunn 1993; McElveen 1982; Sneath and Sokal 1973). First, we draw on theory and observations of business practice to identify and specify key characteristics of business practice along which buyer–seller relationships differ. We also draw on theory and practice to identify market and situational antecedents and important outcomes relevant to commercial exchange. Second, we discuss the research methods used to develop the measures and collect the data on which the taxonomy is based. Third, we present results of the measurement work, the relationship taxonomy, and evaluation of antecedents and outcomes of different types of relationships. Fourth, we conclude with a discussion of the results and their contribution to marketing theory, research, and practice.

**BUYER–SELLER RELATIONSHIP CONNECTORS**

The identification and specification of relationship connectors began with a review of key theories and frameworks that have guided empirical research in business relationships. Several approaches have guided much of the research
into the nature of buyer–seller relationships. With roots in social psychology, social exchange theory and theories of power and dependence emphasize processes that lead to satisfaction for the exchanging parties and emphasize techniques for managing dependence and uncertainty (Anderson and Narus 1990; Dwyer, Schurr, and Oh 1987; Frazier and Summers 1984; Pfeffer and Salancik 1978). Transaction cost analysis (TCA) focuses on identifying efficient structures for governing transactions, and relational contracting adds a sociological perspective to classical contract law (Anderson and Weitz 1992; Heide and John 1992; Macneil 1980; Williamson 1985). Another approach, the interaction model, is rich in description of business practice (Håkansson 1982; Hallen, Johanson, and Seyed-Mohamed 1991). Each of these theories and frameworks emphasizes different yet important aspects of commercial exchange. Therefore, to provide a comprehensive representation of buyer–seller relationships, we draw on multiple theories, and to make certain that our connectors are relevant to business practice, we conduct a series of interviews with marketing and purchasing professionals.

Iterating between theory and practice enabled us to develop an extensive set of potential relationship characteristics (see Cannon 1992). Our list included some factors that were classified best as external to the relationship itself, such as environmental uncertainty and characteristics of the product/service being purchased. Other factors (e.g., performance, satisfaction) were conceptualized best as relationship outcomes. Although some of these market and situational antecedents and performance outcomes were included to validate and extend the usefulness of our taxonomy, the focus of this procedure was to specify relationship characteristics that provide unique and differentiated information about the focal phenomena. Furthermore, it was determined that the connectors would focus on characteristics particularly relevant to business practice. These explicit decisions delimit the domain of relationship aspects that provide the basis for the taxonomy. Therefore, we focus on aspects of relationships that reflect the manner in which the two parties interrelate and conduct commercial exchange and define relationship connectors as dimensions that reflect the behaviors and expectations of behavior in a particular buyer–seller relationship. The selected relationship connectors met these criteria.

In Figure 1, we provide a graphic overview of the constructs studied in this research. The six relationship connectors at the center of the diagram are the basis on which we develop the empirical taxonomy: information exchange, operational linkages, legal bonds, cooperative norms, and relationship-specific adaptations by buyers and sellers. As the descriptions that follow indicate, these connectors reflect important business practices, current theory, and empirical research. We also list the antecedent conditions and customer evaluations expected to be associated with the relationship types. As indicated in the descriptions that follow, though each connector is distinct from the others, all are related closely to other constructs in the literature and depict important business practices.

Before we move to a discussion of the relationship connectors, it is useful to mention briefly other constructs that were not selected. The preliminary interviews focused our attention on the operational elements of relationships. Therefore, important social aspects of relationships that were not anchored behaviorally (e.g., trust, commitment, long-term orientation; see Ganesan 1994; Morgan and Hunt 1994) did not fall within the domain specified by our definition of relationship connectors. However, these constructs, similar to many other aspects of relationships, are associated with our relationship connectors. For example, sharing proprietary information is unlikely to occur in the absence of trust. Similarly, relationship-specific adaptations reflect a way to put long-term orientation and commitment into action. However, as these examples suggest, our connectors anchor on business actions (i.e., behaviors and expectations about behaviors), whereas these other constructs do not.

Information Exchange

We define information exchange as expectations of open sharing of information that may be useful to both parties. More open sharing of information is indicated by the willingness of both parties to share important, even proprietary, information. In practice, this might include involving the other party in the early stages of product design, opening books and sharing cost information, discussing future product development plans, or jointly providing supply and demand forecasts.

Recent advances in information technology and an increasing emphasis on quality in manufacturing organizations have caused many firms to reexamine the risk versus reward trade-off of more extensive information sharing. Greater sharing of information can improve product quality (Emshwiller 1991) and facilitate new product development (Magnit 1994). However, this practice may open the door for opportunistic behavior on the part of one party (John 1984). For example, some suppliers claim that General Motors' former purchasing chief shared blueprints of its latest technology with competitors (Kelly and Kerwin 1993).

Several theoretical approaches refer to elements included in our definition of information exchange. Kelley and Thibaut (1978) note that, through information sharing, exchanging parties come to understand better the outcomes of their mutual behaviors. In bargaining literature, Clapton (1984) finds that more open information sharing (as reflected in integrative bargaining) leads to jointly optimal out-

---

1 More detailed reviews of these theories and approaches already exist in the marketing literature. Integrative frameworks and conceptual models such as those developed by Stern and Reve (1980), Dwyer, Schurr, and Oh (1987), and Heide (1994) review several of these theories. For more specific discussions and reviews of the power and dependence literature, see Hunt, Ray, and Wood (1985) or Frazier (1983); Rindfleisch and Heide (1997) provide a recent review of transaction cost analysis; Anderson and Narus (1984) discuss social exchange theory; and Wilson (1994) and Ford (1990) review research by the Industrial Marketing and Purchasing (IMP) Group.

2 Although other aspects of the research method are discussed in the research methods section, some description of the interview procedures is useful here. Unstructured interviews supplemented the literature review to identify and specify the particular dimensions that practitioners used to describe buyer–seller relationships and validated the dimensions chosen. Participants were asked to describe a particular relationship with a supplier or customer. Initial interviews suggested that practitioners tended to describe relationships by the activities and behaviors involved and helped identify behaviors that were most relevant. Subsequent interviews not only validated the dimensions suggested by our review of the literature, but also indicated the importance of operational linkages, a construct that did not emerge from our review of the academic literature.
come. Similarly, Williamson (1985) suggests that when information is impacted (and not shared between the parties) market failure is more likely, and Macneil (1980) argues that free exchange of confidential information is a characteristic of more relational exchange. The ideas underlying information exchange are related closely to the concept of communication, which is central to channel performance in Mohr and Nevin’s (1990) work and is a prerequisite for building trust for Morgan and Hunt (1994). Finally, Anderson and Weitz (1992) find that open sharing of information leads to increased commitment in a relationship. The existence of related constructs across these different theories and studies testifies to the importance of the concept.

Operational Linkages

Operational linkages capture the degree to which the systems, procedures, and routines of the buying and selling organizations have been linked to facilitate operations. At one extreme, the two organizations may operate independently and at “arm’s length,” where there are not interfirm routines and systems. At the other extreme, intercoupled systems tend to specify roles implicitly or explicitly for both parties in a relationship (Heide 1994). With operational linkages, activities and processes between the firms facilitate the flow of goods, services, or information.

Although there has been little research in marketing on operational linkages, several important contemporary business practices are captured by this connector. These include computerized inventory order and replenishment systems and just-in-time delivery (Frazier, Spekman, and O’Neal 1988), as well as cooperative marketing programs (Anderson and Narus 1990). In a similar vein, the IMP Group (e.g., Johanson and Mattson 1987) considers “technical bonds,” which are based specifically on interconnected technical or production processes. Robicheaux and Coleman (1994) use a similar concept they call “operational integration,” which reflects one dimension of channel relationship structure. Operational linkages also may involve the routinized activities of individuals. Service or sales representatives can develop routines to integrate themselves more closely into a buying organization by conducting regular maintenance checks on equipment or monitoring inventory and placing orders.

Note that interlinked systems can be standardized and operate the same way across many exchange partners; for example, in the packaged goods–retail grocer distribution
channel, the efficient consumer response initiative represents an effort to standardize operational linkages across the industry (Tosh 1993). However, as Stern and Reve (1980) suggest in the context of their political economy framework, to the extent that operational linkages facilitate exchange or reduce transaction costs, they may contribute to the creation of dependence and switching costs for one or both parties.

Legal Bonds

Legal bonds are detailed and binding contractual agreements that specify the obligations and roles of both parties in the relationship. Such legal bonds go beyond the basic obligations and protections that regulate commercial exchange whether the parties sign a formal document or not (Uniform Commercial Code 1978). Legal bonds provide a governance mechanism that may be used to simulate hierarchy in exchange when vertical integration is impractical (Grossman and Hart 1986; Stinchcombe 1985). Lusch and Brown (1996) demonstrate the role of explicit, formal contracts in marketing channels. Although formal, detailed contracts are common business practice, many firms prefer to operate with a “handshake” agreement (Macaulay 1963).

Contracts provide two primary benefits to exchanging parties. First, legal bonds provide the protections available through the legal system should something go wrong (Beale and Dugdale 1975). Second, they regulate the relationship by furnishing a plan for the future (Macneil 1980). For example, Bowersox (1990) notes that contracts pertaining to interfirm logistics systems should detail contingency plans for dissolution of the relationship. However, legal bonds also may become liabilities if they reduce the flexibility of the relationship partners in adapting to environmental changes (Reve 1986).

Several theoretical perspectives explicitly acknowledge the role of formal contractual agreements in interorganizational relations. Resource dependence theory suggests that contracts can be employed to reduce environmental uncertainty (Miles, Snow, and Pfeffer 1974). Transaction cost analysis and relational contracting were developed to complement classical contracting theory. Furthermore, because legal bonds are formal arrangements, they reflect some aspects of the formalization concept adapted from the organization science literature and applied to studies of marketing channels (e.g., Dwyer and Oh 1988; Reve and Stern 1986).

Cooperative Norms

Cooperative norms reflect expectations the two exchanging parties have about working together to achieve mutual and individual goals jointly. As defined here, cooperative norms do not imply one party’s acquiescence to another’s needs but rather that both parties behave in a manner that suggests they understand that they must work together to be successful (cf. Anderson and Narus 1990). For example, two firms may be flexible in response to changing conditions and treat problems as joint responsibilities. Conversely, a focus on working independently to achieve individual goals characterizes low cooperation. Furthermore, by capturing this connector as a set of norms, this construct reflects what the two parties believe is appropriate behavior regarding cooperation.

Popular and academic press highlights a trend toward increased buyer–seller cooperation. However, the trend is not universal. In Detroit, the automakers debate the merits of increased cooperation. Whereas General Motors uses more adversarial tactics to drive down costs (Stertz and White 1992), Chrysler actively cooperates with suppliers to achieve similar goals (Lavin 1993).

The spirit of this connector follows from a broad stream of theoretical and empirical research. Cooperative norms cut across many of the relational norms proposed by Macneil (1980), including flexibility in response to changing conditions (Heide and John 1992) and solidarity, where the preservation of the relationship is an important end (Kaufmann and Stern 1988). Some authors suggest that the development of such norms reflects trust and operates as a mode of governance in commercial exchange (Bradach and Eccles 1989). Cooperation is a key aspect of the political economy framework (Stern and Reve 1980) and interaction model (Håkansson 1982). It plays a central role in achieving coordination in channels of distribution (Anderson and Narus 1990; Morgan and Hunt 1994). A high degree of cooperation suggests behaviors consistent with the bilateral power system described by Bonoma (1976, p. 517), in which the exchange parties “act to maintain the union as well as fulfill individual hedonic plans.” Finally, cooperation is implicit in the game-theoretic representations of interpersonal relationships (Kelley and Thibaut 1978).

Relationship-Specific Adaptations by the Seller or Buyer

Relationship-specific adaptations are investments in adaptations to process, product, or procedures specific to the needs or capabilities of an exchange partner. Whereas the other connectors focus on joint behaviors and shared expectations, adaptive behavior is defined so that it focuses on the individual behavior specific to the other party in the relationship. Preliminary interviews suggested that the pattern of adaptation (i.e., relative adaptation by each party) reflects important qualities of the relationship. This conceptualization is broad enough to include both the one-time investments that might be necessary to conclude a particular transaction and gradual adaptations that might occur over time (Håkansson 1982). By their nature, relationship-specific adaptations have little value outside a particular relationship; to the extent they create value, they contribute to building switching costs (Jackson 1985). Thus, relationship-specific adaptations reflect an aspect of calculative commitment in business relationships (Anderson and Weitz 1992; Becker 1960). However, adaptations may be reciprocated as part of a trust-building process (Hallen, Johanson, and Seyd-Mohamed 1991). Adaptations can provide value to one or both parties to the extent that these investments reduce costs, increase revenues, or create dependence.

Relationship-specific adaptations are a common business practice. Many business products, ranging from industrial coatings to machine tools, are customized to the needs of a particular customer. This may require investment in research and development and/or new manufacturing technology. Buying firms also may adapt to a particular supplier. Computer manufacturers often design their products to work with the specific chip provided by a particular supplier. Similarly, a producer may develop a marketing program on the basis of an association with a supplier (e.g., independent photo processors note “We Use Kodak Paper for the Good Look” in their advertising).
These two connectors are central to several of the theoretical perspectives reviewed previously. Social exchange theory explicitly considers the role of adaptations in interpersonal relationships, though it refers to such adaptations as investments (e.g., Rubelt 1983). Williamson’s (1985) notion of asset specificity also is related closely to the idea of relationship-specific adaptations. However, TCA typically models specific assets as exogenous to governance because it focuses on a transaction as the unit of analysis. In contrast, the IMP Group views adaptation as possibly exogenous or endogenous to (i.e., a characteristic of) the relationship (Håkansson 1982; Hallen, Johanson, and Seyed-Mohamed 1991). Because our conceptualization treats the relationship as the unit of analysis, we adopt the IMP Group’s perspective.

In summary, the set of six relationship connectors shown in Figure 1 reflects key characteristics of business exchange that emerge from observations of practice and a review of theory. These connectors capture legal, economic, political, sociological, and psychological aspects that are key to commercial exchange relationships. Our review of theory also suggests specific conditions that influence relationships and criteria on which business relationships may be evaluated. These antecedents and outcomes, shown in Figure 1, are described next.

**ANTECEDENTS AND OUTCOMES OF BUYER–SELLER RELATIONSHIPS**

Linking taxonomic groups with specific market and situational antecedents and key outcomes provides additional insights into the nature of the business relationships. Finding associations with these conditions and evaluations extends the validity, theoretical relevance, and managerial usefulness of the classification scheme (Hunt 1991; Punj and Stewart 1983). The purpose in identifying these conditions was not to provide an exhaustive set of predictors that might explain more variance in the relationship types but to generate additional insights into the nature of the taxonomy by examining how the types of relationships differed on important theoretical and practical measures.

Both theory and practice suggest that two motivators for buying firms to enter into closer relationships with their suppliers are the desire to manage uncertainty and dependence (Oliver 1990; Pfeffer and Salancik 1978). For buying organizations, uncertainty or dependence may be rooted in external characteristics of the supply market or in internal, situational factors. A customer’s evaluation of a relationship with a supplier is also important, so we examine the customer’s satisfaction and assessment of supplier performance.

**Market and Situational Antecedents**

The supply market provides a buying organization with needed inputs for operations. Although a variety of supply market factors may influence relationship formation, two conditions—supply market dynamism and the availability of alternatives—are cited widely across different streams of literature and also emerged in our interviews with buying firms. Supply market dynamism characterizes the degree of variability of changes in a firm’s supply market (Achrol and Stern 1988; Aldrich 1979). Such changes may be short-term variations or long-term shifts and may be due to factors such as rapidly changing technology, frequent price changes, or fluctuations in product availability. Significant supply market dynamism can create uncertainty and risk for a buying organization. In such an environment, closer interaction with a particular supplier may create opportunities to learn about and manage future developments. However, such locking-in can create switching costs that make it difficult to change quickly to a superior alternative if, for example, a competing technology offers benefits to the buying firm (Balakrishnan and Wernerfelt 1986). Thus, we posit that the potential risks and rewards of market dynamism will influence the type of relationship between a customer and its supplier.

Availability of alternatives is simply the degree to which a buying firm has alternative sources of supply to meet a need. Traditional economic theory argues that when many suppliers compete to sell comparable goods, the market becomes a ready source of information on prices and quality. However, few suppliers or noncomparable goods may increase the information impacted with a seller. Thus, not having readily available alternative sources of supply may be a source of uncertainty (Achrol and Stern 1988) and dependence (Pfeffer and Salancik 1978) for a buying firm. Consequently, we expect the availability of alternatives to affect the nature of the buyer–seller relationship.

In addition to the broader supply market, characteristics of the buying situation may create uncertainty and dependence for the buying firm. Complex supply needs make it more difficult for a buying firm to evaluate purchase choices a priori or even be certain about a supplier’s performance ex post. In essence, greater complexity of supply increases purchase decision ambiguity and risk. Thus, when supply needs are complex, a buying firm is likely to seek a relationship form that helps reduce ambiguity and risk.

The importance of a supply is the buying firm’s perception of the financial and strategic significance of a particular supply. Here, we focus on the impact of the purchase on the buying firm’s objectives. For example, in manufacturing operations, certain raw materials or components will be more critical to the success of the buying firm’s own offering than routine maintenance and repair items.

These market and situational factors reflect key conditions in which relationships form. Buying firms also are concerned with the outcomes of the relationship, which are described next.

**Customer Evaluations**

Because relationship forms may reflect conscious choice or uncontrollable circumstance, buying-firm evaluations of relationships may provide insights on structures preferred by buying organizations. Customer evaluations of supplier performance and satisfaction with the relationship represent important outcomes in business exchange. With all the attention being given to relationship marketing, can we say what types of relationships perform better and create increased buyer satisfaction? If different forms of close relationships exist, are certain types more effective? Measuring these outcomes and linking them with the taxonomic groups

---

3 Although, in general, the literature implies that significant adaptation may limit alternatives, from our interviews, relatively few buying firms actively engage in adaptations to reduce potential alternatives intentionally (see also Hallen, Johanson, and Seyed-Mohamed 1991).
enables us to begin to sketch answers to these important questions.

RESEARCH METHODS

Data Collection and Sample

The unit of analysis for this research is a specific buyer–seller relationship. Our conceptualization of relationships as multidimensional in nature required a substantial amount of information regarding each relationship, as well as cooperation from people who could provide the needed information competently. Furthermore, our objective of developing a generalizable taxonomy of relationships required that we sample a large number of relationships from across a broad, representative cross-section of industries and organizations. This also enabled us to assess the relationship between the buyer’s industry or the supplier’s primary business (i.e., distribution versus manufacturing) on relationship type.

Conceptually, a researcher could argue for collecting data about buyer–seller relationships from the supplier’s perspective, the customer’s perspective, or both. However, it is usually the customer that ultimately makes the decision of whether to purchase from a supplier. Thus, even if the supplier and customer have different views regarding relationships, it is the customer’s view that is likely to be determinant. Therefore, we elected to seek data from the customer’s vantage point.

We prepared an eight-page questionnaire that was designed to be completed by a purchasing professional in a customer firm. The sample frame consisted of purchasing professionals who were members of the National Association of Purchasing Management (NAPM). Each purchasing manager was asked to report on only one supplier relationship. Although other members of the customer firm may be in a position to have knowledge about some aspects of a relationship with a supplier, their scope of knowledge often is limited. In contrast, it is usually a purchasing professional’s responsibility to be well-informed about the overall relationship. In pretests and interviews, respondents confirmed that they were well-informed and confident in their ability to respond to the questions posed in the questionnaire. Furthermore, these interviews indicated that, for most buyer–seller relationships, it would be difficult or impossible to find additional informants with the requisite knowledge on all aspects of the questionnaire. Similar difficulties were reported by Heide and John (1990) in their attempts to identify qualified alternate informants in a procurement context.

Almost all of the questions focused on the relationship between the purchasing professional’s organization (i.e., the customer firm) and a specific supplier. In particular, the directions explained that the questions should be answered with respect to the “main supplier your firm chose” in the last purchasing decision with which the purchasing manager was involved. This procedure directed respondents to a particular relationship and indirectly focused on relationships with suppliers that had been more successful in obtaining the customer’s business. However, the directions also noted that the respondent should “not be concerned if this supplier is typical or unusual, important or unimportant, new or old, used frequently or only this one time.”

The wording of scale items and directions and other survey procedures were refined on the basis of a small pilot study with 25 purchasing managers (6 of whom participated in extended personal interviews). Then, a larger mail pretest, which resulted in responses from 157 purchasing professionals, provided a basis for a standard psychometric evaluation (and refinement) of scale items. Furthermore, because nonresponse bias potentially could limit the generalizability of our results, we embedded a test of possible nonresponse bias within this measure-development pretest.

Specifically, the pretest included a comparison of responses collected in two data collection conditions. In one condition, the researchers contacted 45 purchasing managers by telephone and asked them to complete the mail questionnaire; 34 (76%) of those notified completed and returned the questionnaire. In a second condition, 362 purchasing managers were mailed questionnaires (without prenotification); 123 (34%) responded. To assess the potential effects of nonresponse, we compared responses from the high response rate (telephone-contact group) with the control group on a variety of variables that reflected characteristics of the respondents (e.g., job title, involvement with supplier) and of the relationship (e.g., age of relationship, seller business). No statistically significant differences were found. Thus, given the high cost of telephone prenotification and no evidence of nonresponse bias, the final survey was conducted without telephone prenotification. In the final survey, from 1937 qualified members of the NAPM, we received 443 (23%) completed questionnaires, with 15 later removed for excessive missing data.

The final sample was tested for nonresponse bias with three additional tests. First, we compared the high response rate, telephone-prenotified group from the pretest with the final sample on the same variables noted previously. Although the small sample size of the telephone-prenotified group limits the power of a statistical comparison, the results did not provide evidence of nonresponse bias. Second, we compared early and late respondents and found no differences. Third, the characteristics of the final sample were compared with the same year’s NAPM Profile of Membership across six respondent job titles and nine categories of seller business. Only 1 of these 15 comparisons was significantly different, with the final sample including a somewhat lower proportion of respondents with the title “Purchasing Manager” (31% versus 23%). Because of the large number of comparisons and only one noted difference, we concluded that nonresponse was not a problem.

After completing the questionnaire, respondents were asked to respond to several questions related to their ability to portray the buyer–seller relationship accurately. Specifically, they were asked to indicate how confident they felt about answering the questionnaire and how involved with and knowledgeable they were about the supplier. The responses were uniformly high, as suggested by mean ratings of 6.5, 6.5, and 6.4 on a 7-point scale. Two respondents who indicated a low level of knowledge and confidence were removed from further analysis.

One of the objectives of this research was to capture a broad variety of buying and selling organizations to achieve a final sample that included a variety of relationship forms. Respondents represented all levels of purchasing, including buyers and managers in equal numbers. Customer organizations were largely in some form of manufacturing (59%) but also included producers of services (including utilities and
educational and financial institutions), distributors, and government agencies. Selling organizations were mostly manufacturers (56%) and distributors (36%). On average, customer firms had been buying from the focal supplier for 11 years, though 15% of the buyer–seller relationships were less than 2 years old, and 22% were more than 20 years old. Furthermore, the supplier relationships tended to be those more central to a customer firm, with 24% being sole source suppliers, 58% the “major” supplier (among multiple sources) of a particular supply, and 18% minor or secondary suppliers. In summary, the resulting sample of business relationships reflects the diversity inherent in the business marketplace, with a somewhat greater emphasis on those relationships within a given product/service category that are more central to a customer firm.

Measure Development Procedures

Although the focal constructs for this research in large part are stimulated by previous theories and research, the scales were developed specifically for this research. We used traditional psychometric approaches to develop scale items and evaluate scale properties. We started by developing an initial pool of scale items based on a thorough review of the literature and interviews with marketing and purchasing personnel. The wording of specific items was refined in response to feedback obtained in the pilot study, which included structured interviews and evaluation of item intercorrelations. The pretest data, based on the revised questionnaire items, provided a basis for a more complete statistical evaluation, including consideration of item response distributions, estimates of scale reliabilities, item–total correlations, and item scale discrimination. As a result of these evaluations, several scale items were modified, deleted, or added prior to the final survey.

In Table 1, we list the scale items, response cues, average variance extracted, adjusted item-to-total correlations, and scale and item reliability estimates for each of the six relationship connector measures. In Table 2, we provide the means, standard deviation, and a correlation matrix for the relationship connectors. The means indicate that among these relationships cooperation is relatively high, which possibly reflects the importance and/or longevity of the relationships in this sample. In contrast, the relatively low means for buyer and supplier adaptation suggest that, in this sample on average, relationship-specific adaptations are not extensive. In Table 3, we provide measurement information for the situational determinant and outcome measures. As suggested by the adjusted item-to-total correlations, average variance extracted, item reliabilities, and Cronbach’s alphas, the items and scales demonstrate reasonable reliability. Measures of alpha ranged from .75 to .87.

We also used LISREL VII (Jöreskog and Sörbom 1989) to test confirmatory factor models and evaluate the measurement data from the final survey. These models were estimated using the maximum likelihood fitting function and the polychoric correlation matrix (Babakus, Ferguson, and Jöreskog 1987). In light of the large number of scale items and measures for this research, we used the confirmatory factor analysis model comparison strategy suggested by Bollen (1989b). It begins with an examination of single construct models and continues by combining them into larger confirmatory factor models. Here, this building-up procedure leads to tests of three different confirmatory factor models: one for the relationship connectors, one for the determinants measures, and one for the outcomes measures. Correlations among errors of measurement for each model were constrained to be zero (except for the pairs of similarly worded indicators for the buyer adaptations and seller adaptations constructs).

With the large sample size, the number of parameters estimated, and the analysis being based on individual items, it is not surprising that the chi-square is statistically significant ($p < .01$) for each of the confirmatory factor models. Furthermore, because sample size and the polychoric matrix contribute to a downward bias of other descriptive fit statistics, for diagnostic purposes, we relied on the more robust incremental fit (IFI; Bollen 1989a) and comparative fit (CFI; Bentler 1990) indices. Specifically, the IFI and CFI values were .91, .92, and .97 for the respective models. A more complete set of descriptive fit statistics is reported in Tables 1 and 3. Furthermore, the estimates of the paths from the individual items to the latent factors are all statistically significant ($p < .01$), with parameter estimates ranging from 5 to 26 times as large as the standard errors; this pattern and the high average variance extracted for each scale provide evidence of convergent validity. Discriminant validity was assessed by examining the pattern of loadings in an exploratory factor analysis and using structural equation modeling approaches suggested by Anderson and Gerbing (1988) and Fornell and Larcker (1981). Each test provided strong evidence of discriminant validity. Finally, based on Jöreskog’s (1971) method, the lowest reliability estimate for any of the constructs is .79; more generally, these reliability estimates are consistently higher than the values of coefficient alpha shown in Tables 1 and 3.

Although we briefly summarize these LISREL results for completeness, we should note that we did not view improved LISREL fit as a criterion for deleting items to “purify” scale measures. On the contrary, as suggested by the item reliabilities in Tables 2 and 3, some items were retained in the final scales in spite of borderline fit. Specifically, we retained items that we believed were important to the conceptual definition of the construct and when no alternative item adequately captured that aspect (e.g., the “pricing” item in the market dynamism scale).

Furthermore, it might be argued that some of our measures are formative as opposed to reflective and, given this conceptualization, we would not expect particularly high interitem correlation and, thus, lower item and scale reliabilities. As noted by Bollen (1989b), determining whether items are formative or reflective is not always clear. For example, it might be argued (as we do) that market dynamism is a latent variable that “affects” items such as pricing, product availability, and so forth (Bollen and Lennox 1991). Others might suggest that dynamism is caused by the items we measure. Because of the difficulty of making such a distinction and the lack of proven techniques for evaluating the reliability and validity of formative scales, we chose a more conservative approach and modeled and assessed all measures as reflective scales. This decision may contribute to lower reliabilities and fit assessments for some of these measures.

4Although weighted least squares estimation has been shown to be superior with polychoric correlation matrices, these benefits are reduced with larger sample sizes (Rigdon and Ferguson 1991). Furthermore, the application of weighted least squares presents difficulties in practice (Jöreskog and Sörbom 1989).
Buyer–Seller Relationships

Table 1
SCALES, ITEMS, SCALE RELIABILITY, AVERAGE VARIANCE EXTRACTED, ADJUSTED ITEM-TO-TOTAL CORRELATIONS, AND ITEM RELIABILITIES FOR RELATIONSHIP CONNECTORS

<table>
<thead>
<tr>
<th>Scale Name (Response Cues) and Items</th>
<th>Coefficient Alpha</th>
<th>Average Variance Extracted</th>
<th>Adjusted Item-to-Total Correlation</th>
<th>Item Reliability*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational Linkages (strongly agree—strongly disagree)</strong></td>
<td>.81</td>
<td>.65</td>
<td>.71</td>
<td>.77</td>
</tr>
<tr>
<td>Our business activities are closely linked with this vendor.</td>
<td></td>
<td></td>
<td>.57</td>
<td>.44</td>
</tr>
<tr>
<td>This supplier’s systems are essential to our operations.</td>
<td></td>
<td></td>
<td>.72</td>
<td>.73</td>
</tr>
<tr>
<td>Some of our operations are closely connected with this supplier.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Information Exchange</strong> [In this relationship it is expected that...](very inaccurate description—very accurate description ... of this relationship)</td>
<td>.79</td>
<td>.53</td>
<td>.59</td>
<td>.51</td>
</tr>
<tr>
<td>Proprietary information is shared with each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We will both share relevant cost information.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We include each other in product development meetings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We always share supply and demand forecasts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Legal Bonds</strong> (strongly agree—strongly disagree)</td>
<td>.87</td>
<td>.76</td>
<td>.67</td>
<td>.58</td>
</tr>
<tr>
<td>We have specific, well-detailed agreements with this vendor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have formal agreements that detail the obligations of both parties.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We have detailed contractual agreements with this supplier.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cooperative Norms</strong> [In this relationship it is expected that...](very inaccurate description—very accurate description ... of this relationship)</td>
<td>.81</td>
<td>.52</td>
<td>.45</td>
<td>.30</td>
</tr>
<tr>
<td>No matter who is at fault, problems are joint responsibilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both sides are concerned about the other’s profitability.</td>
<td></td>
<td></td>
<td>.66</td>
<td>.61</td>
</tr>
<tr>
<td>One party will not take advantage of a strong bargaining position.</td>
<td></td>
<td></td>
<td>.59</td>
<td>.51</td>
</tr>
<tr>
<td>Both sides are willing to make cooperative changes.</td>
<td></td>
<td></td>
<td>.73</td>
<td>.75</td>
</tr>
<tr>
<td>We must work together to be successful.</td>
<td></td>
<td></td>
<td>.62</td>
<td>.61</td>
</tr>
<tr>
<td>We do not mind owing each other favors.</td>
<td></td>
<td></td>
<td>.43</td>
<td>.34</td>
</tr>
<tr>
<td><strong>Seller Adaptations</strong> (not at all—very much)</td>
<td>.83</td>
<td>.59</td>
<td>.59</td>
<td>.51</td>
</tr>
<tr>
<td>Just for us, this supplier changed its product’s features.</td>
<td></td>
<td></td>
<td>.62</td>
<td>.62</td>
</tr>
<tr>
<td>Just for us, this supplier changed its personnel.</td>
<td></td>
<td></td>
<td>.61</td>
<td>.51</td>
</tr>
<tr>
<td>Just for us, this supplier changed its inventory and distribution.</td>
<td></td>
<td></td>
<td>.64</td>
<td>.64</td>
</tr>
<tr>
<td>Just for us, this supplier changed its marketing.</td>
<td></td>
<td></td>
<td>.65</td>
<td>.66</td>
</tr>
<tr>
<td>Just for us, this supplier changed its capital equipment and tools.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Buyer Adaptations</strong> (not at all—very much)</td>
<td>.82</td>
<td>.67</td>
<td>.58</td>
<td>.59</td>
</tr>
<tr>
<td>Just for this supplier, we changed our product’s features.</td>
<td></td>
<td></td>
<td>.66</td>
<td>.79</td>
</tr>
<tr>
<td>Just for this supplier, we changed our personnel.</td>
<td></td>
<td></td>
<td>.54</td>
<td>.55</td>
</tr>
<tr>
<td>Just for this supplier, we changed our inventory and distribution.</td>
<td></td>
<td></td>
<td>.64</td>
<td>.71</td>
</tr>
<tr>
<td>Just for this supplier, we changed our marketing.</td>
<td></td>
<td></td>
<td>.64</td>
<td>.72</td>
</tr>
<tr>
<td>Just for this supplier, we changed our capital equipment and tools.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Item reliabilities are the squared multiple correlation of the standardized measurement parameter (Bollen 1989b) and reflect variance in the item shared with the latent construct.

Notes: All scales have seven-point response levels. Descriptive fit statistics: \(\chi^2\), degrees of freedom = 279, 894.9 (\(p < .01\)); goodness-of-fit index = .87; adjusted goodness-of-fit index = .84; incremental fit index = .91; and comparative fit index = .91.

Table 2
CORRELATION MATRIX, MEANS, AND STANDARD DEVIATIONS FOR RELATIONSHIP CONNECTORS

<table>
<thead>
<tr>
<th>Connector</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>OL</th>
<th>IX</th>
<th>LB</th>
<th>CN</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational linkages (OL)</td>
<td>4.12</td>
<td>1.56</td>
<td>.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information exchange (IX)</td>
<td>4.10</td>
<td>1.55</td>
<td>.29</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal bonds (LB)</td>
<td>4.38</td>
<td>1.83</td>
<td>.20</td>
<td>.50</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative norms (CN)</td>
<td>5.28</td>
<td>1.05</td>
<td>.32</td>
<td>.41</td>
<td>.24</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Seller adaptations (SA)</td>
<td>2.68</td>
<td>1.41</td>
<td>.30</td>
<td>.25</td>
<td>.18</td>
<td>.00</td>
<td>.39</td>
</tr>
<tr>
<td>Buyer adaptations (BA)</td>
<td>1.77</td>
<td>1.04</td>
<td>.30</td>
<td>.25</td>
<td>.18</td>
<td>.00</td>
<td>.39</td>
</tr>
</tbody>
</table>

For each of the constructs, scale scores were computed as the average of the individual items, where appropriate, after reverse scoring. The profile of scores for all six relationship connectors on each relationship (i.e., observation) then served as the input for the cluster analysis.

Taxonomic Procedures

Alternative analytical techniques may be employed to develop an empirical taxonomy of relationship types. When the characteristics of the business relationships are assumed...
Table 3  
SCALES, ITEMS, SCALE RELIABILITY, AVERAGE VARIANCE EXTRACTED, ADJUSTED ITEM-TO-TOTAL CORRELATIONS, AND ITEM RELIABILITIES FOR RELATIONSHIP DETERMINANTS AND OUTCOMES

<table>
<thead>
<tr>
<th>Scale Name (Response Cues)</th>
<th>Coefficient Alpha</th>
<th>Average Variance Extracted</th>
<th>Adjusted Item-to-Total Correlation</th>
<th>Item Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Alternatives (strongly agree–strongly disagree)</td>
<td>.75</td>
<td>.48</td>
<td>.46</td>
<td>.29</td>
</tr>
<tr>
<td>This supply market is very competitive.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other vendors could provide what we get from this firm.</td>
<td>.57</td>
<td>.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This supplier almost has a monopoly for what it sells. (R)</td>
<td>.56</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This is really the only supplier we could use for this product. (R)</td>
<td>.60</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No other vendor has this supplier’s capabilities. (R)</td>
<td>.43</td>
<td>.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Market Dynamism (“How significant are changes</td>
<td>.77</td>
<td>.44</td>
<td>.40</td>
<td>.20</td>
</tr>
<tr>
<td>[in each market factor]?” minor-major)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product features and specs</td>
<td>.60</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vendor support services</td>
<td>.61</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology used by suppliers</td>
<td>.56</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product availability</td>
<td>.51</td>
<td>.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Importance* (&quot;Compared to other purchases your firm makes, this product is&quot;)</td>
<td>.85</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important–unimportant (R)</td>
<td>.75</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonessential–essential</td>
<td>.61</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High priority–low priority (R)</td>
<td>.67</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insignificant–significant</td>
<td>.71</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Complexity* (&quot;Compared to other purchases your firm makes, this product is&quot;)</td>
<td>.88</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple–complex</td>
<td>.84</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complicated–uncomplicated (R)</td>
<td>.86</td>
<td>.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical–nontechnical (R)</td>
<td>.66</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy to understand–difficult to understand</td>
<td>.64</td>
<td>.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with Supplier (strongly agree–strongly disagree)</td>
<td>.84</td>
<td>.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our firm regrets the decision to do business with this supplier. (R)</td>
<td>.47</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, we are very satisfied with this supplier.</td>
<td>.71</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We are very pleased with what this supplier does for us.</td>
<td>.78</td>
<td>.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our firm is not completely happy with this supplier. (R)</td>
<td>.66</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If we had to do it all over again, we would still choose to use this supplier.</td>
<td>.57</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier Performance (needs improvement–superior performance)</td>
<td>.85</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product quality</td>
<td>.62</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery performance</td>
<td>.61</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales, service, and/or technical support</td>
<td>.70</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total value received</td>
<td>.80</td>
<td>.86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a These scales were constructed as semantic differentials.

*b Respondents were asked to consider the "main product your firm purchases from this supplier."
Bunn and Clopton (1993), which is simply a newer iterative extension of the traditional k-means approach recommended by Punj and Stewart (1983).

RESULTS

In Table 4, we provide the mean and standard deviation of each of the six relationship connectors for each cluster. In Table 4 and subsequently, we refer to each cluster with a nickname. Although there are risks of oversimplification in using such nicknames, they highlight empirically distinct aspects of different types of relationships and facilitate the discussion of the results.

From a strict technical perspective, statistical tests of differences among means in Table 4 are not appropriate because the clusters are formed a priori to differ on the connectors. Yet the clusters vary on the connectors in quite different ways; for example, a relationship type that is prototypically low in operational linkages may not be low with respect to another connector in the profile, such as cooperation. Thus, to facilitate comparison and contrast, in Table 4, we use the probability levels associated with Duncan’s multiple-range test as a heuristic for identifying similarities and differences among the relationship types. Furthermore, boxes in a column highlight the relationship types with a mean in the highest range for a dimension, and circles highlight relationships in the lowest mean range; thus, the graphics supplement the statistical detail with a simple visual overview.

In general, clusters are arranged in Table 4 so that those closer to the bottom involve closer relationships between buyers and sellers. Note, for example, that boxed (higher) means are concentrated among the four relationship types at the bottom of Table 4. In other words, these reflect different forms of the closer relationships that have been attracting increasing attention in the academic and popular press. In contrast, circled means (reflecting lower mean scores on a relationship dimension) are more concentrated among the three relationship types at the top of Table 4. These involve more traditional arm’s-length dealings between buyer and seller. The varying profiles of high and low means across the various relationship connectors, however, also make it obvious that a simple close–distant continuum is not adequate in discriminating among the relationship types.

More insight about the nature of each cluster is provided by examining a set of variables that provide descriptive information about each relationship type. In Table 5, we provide the results of a set of descriptive variables that measured (1) annual expenditures on the main supply purchased from this supplier; (2) the buying firm’s trust of the focal supplier; (3) the buying firm’s active market monitoring or soliciting of bids or information from multiple suppliers; (4) the number of years the two parties had done business together; (5) the buying firm’s primary business, categorized as service, distribution, or manufacturing; (6) the supplier’s primary business, categorized as distribution or manufacturing; and (7) the proportion of suppliers that were the sole

<table>
<thead>
<tr>
<th>Type of Buyer–Seller Relationship (Cluster)</th>
<th>N</th>
<th>Operational Linkages</th>
<th>Information Exchange</th>
<th>Legal Bonds</th>
<th>Cooperative Norms</th>
<th>Adaptations by Seller</th>
<th>Adaptations by Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic buying and selling</td>
<td>45</td>
<td>1.82b</td>
<td>3.57d</td>
<td>2.73a</td>
<td>5.53b</td>
<td>1.31c</td>
<td>1.18c</td>
</tr>
<tr>
<td>Bare bones</td>
<td>56</td>
<td>3.31d</td>
<td>2.27f</td>
<td>2.46a</td>
<td>4.29d</td>
<td>1.79a</td>
<td>1.21c</td>
</tr>
<tr>
<td>Contractual transaction</td>
<td>62</td>
<td>3.75c</td>
<td>2.69e</td>
<td>5.96a</td>
<td>4.48d</td>
<td>1.85a</td>
<td>1.30c</td>
</tr>
<tr>
<td>Custom supply</td>
<td>52</td>
<td>3.16d</td>
<td>4.19c</td>
<td>3.81c</td>
<td>5.05c</td>
<td>3.83b</td>
<td>2.07b</td>
</tr>
<tr>
<td>Cooperative systems</td>
<td>56</td>
<td>5.15e</td>
<td>4.77h</td>
<td>2.92a</td>
<td>5.93a</td>
<td>2.56c</td>
<td>1.24c</td>
</tr>
<tr>
<td>Collaborative</td>
<td>61</td>
<td>4.68b</td>
<td>5.30e</td>
<td>5.84a</td>
<td>6.03a</td>
<td>2.05c</td>
<td>1.82b</td>
</tr>
<tr>
<td>Mutually adaptive</td>
<td>37</td>
<td>5.39a</td>
<td>4.93ab</td>
<td>5.40b</td>
<td>5.10c</td>
<td>3.96b</td>
<td>4.26a</td>
</tr>
<tr>
<td>Customer is king</td>
<td>57</td>
<td>5.55a</td>
<td>5.29a</td>
<td>5.56a</td>
<td>5.83ab</td>
<td>4.61a</td>
<td>1.83b</td>
</tr>
<tr>
<td>Total sample</td>
<td>426</td>
<td>4.12</td>
<td>4.10</td>
<td>4.38</td>
<td>5.28</td>
<td>2.68</td>
<td>1.77</td>
</tr>
</tbody>
</table>

Notes: For a given variable (column), means for different relationship types with the same superscript letter are not significantly different (p < .05), based on Duncan’s multiple-range test of statistical significance. The mean(s) in the highest range are designated with a superscript a, the next highest with b, and so on. Solid-lined boxes highlight the relationship type(s) with a mean in the highest range for a connector, dashed boxes represent the next highest level (though not significantly different from the solid-lined boxes), and circles highlight the lowest range.
Table 5

<table>
<thead>
<tr>
<th>Type of Buyer-Seller Relationship (Cluster)</th>
<th>Median Expenditure on Supply ($000/year)</th>
<th>Buying Firm's Trust of Supplier * ***</th>
<th>Buying Firm's Active Market Monitoring ** ***</th>
<th>Relationship Age in Years, Mean (Range)</th>
<th>Percentage of Buying Firms in Service/Distribution/Manufacturing†</th>
<th>Percentage of Suppliers Classified as Distributors/Manufacturers‡</th>
<th>Percentage Single/Major/Minor§</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic buying and selling</td>
<td>218</td>
<td>5.89ab</td>
<td>5.04ab</td>
<td>9.8 (0-30)</td>
<td>20/7/50†</td>
<td>51/36</td>
<td>24/49/27</td>
</tr>
<tr>
<td>Bare bones</td>
<td>225</td>
<td>5.17cd</td>
<td>5.01ab</td>
<td>9.4 (1-48)</td>
<td>25/5/59</td>
<td>50/42</td>
<td>25/61/14</td>
</tr>
<tr>
<td>Contractual transaction</td>
<td>450</td>
<td>5.31bc</td>
<td>5.42a</td>
<td>10.6 (0.8-50)</td>
<td>48/2/39</td>
<td>39/54</td>
<td>16/61/23</td>
</tr>
<tr>
<td>Custom supply</td>
<td>500</td>
<td>5.21cd</td>
<td>5.33ab</td>
<td>10.1 (5-40)</td>
<td>31/4/59</td>
<td>35/62</td>
<td>12/71/17</td>
</tr>
<tr>
<td>Cooperative systems</td>
<td>500</td>
<td>6.15a</td>
<td>4.83abc</td>
<td>12.1 (5-50)</td>
<td>11/2/73</td>
<td>32/64</td>
<td>25/61/14</td>
</tr>
<tr>
<td>Collaborative</td>
<td>500</td>
<td>5.97a</td>
<td>4.66abc</td>
<td>9.9 (1.7-35)</td>
<td>28/5/62</td>
<td>39/49</td>
<td>34/56/10</td>
</tr>
<tr>
<td>Mutually adaptive</td>
<td>1000</td>
<td>4.63d</td>
<td>4.32c</td>
<td>12.9 (5-50)</td>
<td>11/11/70</td>
<td>19/76</td>
<td>32/49/19</td>
</tr>
<tr>
<td>Customer is king</td>
<td>1000</td>
<td>5.99a</td>
<td>5.02ab</td>
<td>13.0 (2-91)</td>
<td>16/2/67</td>
<td>19/67</td>
<td>29/57/14</td>
</tr>
<tr>
<td>Total sample</td>
<td>500</td>
<td>5.61</td>
<td>4.98</td>
<td>10.9 (0-91)</td>
<td>25/5/59</td>
<td>36/56</td>
<td>24/58/18</td>
</tr>
</tbody>
</table>

*Trust was measured with a four-item Likert scale that appeared on half the questionnaires mailed out and 230 of the responses. Coefficient alpha for the scale was .71; sample item, "This is one of the most trustworthy suppliers with whom we do business."

**A three-item scale assessed the extent to which the supplier used the market as a source of information before buying from the supplier. Coefficient alpha for the scale was .73; sample item, "We often check the price and quality of other vendors of this product."

***For a given variable (column), means for different relationship types with the same superscript letter are not significantly different (p < .05), based on Duncan's multiple-range test of statistical significance. The mean(s) in the highest range are designated with a superscript a, the next highest with b, and so on.

†To be read as, "Of all relationships classified as basic buying and selling, 20% involved buying firms whose primary business is in the service industry, 7% are primarily engaged in distribution, and 59% are primarily engaged in manufacturing."

‡Totals do not equal 100% because in each category some were classified as "other."

§Referring to the main good or service purchased from the supplier, respondents were asked if this supplier was the sole source or the major supplier (if multiple sources were employed), and other suppliers were assumed to be secondary or minor.

source, the major source, or a secondary source for a particular supply. The results shown in Tables 4 and 5 provide information about how the relationship types differ. Thus, a brief overview of how the relationship types are similar and how they differ is useful.

**Basic buying and selling.** The relationships in the first cluster are distinctly lowest in terms of operational linkages, as well as in specific adaptations by the seller to the buyer's needs. In the same vein, adaptations by the buyer to the seller and legal bonds between the exchange parties are in the lowest mean range. Purchases are disproportionately from distributors as opposed to manufacturers. Thus, these relationships suggest a relatively simple exchange when what the seller routinely has to offer matches the buyer's needs. Furthermore, the annual expenditures on the supply are the lowest in annual dollar volume. However, basic buying and selling relationships are definitely not adversarial. On the contrary, they involve moderately high levels of cooperation and also information exchange—behaviors reflective of the relatively high level of trust reported in the relationship.

**Bare bones.** The relationships that form the second cluster are at the lowest mean level with respect to both legal bonds and buyer adaptations, and in that regard, they are similar to basic buying and selling relationships. Yet, they also differ in significant respects; operational linkages are notably higher, and there is more adaptation by the seller. There is substantively less cooperation and information exchange between these buyers and sellers and a substantially lower level of trust of the supplier. Thus, these are "bare bones" relationships that are based primarily on a modest degree of routinized structural linkages.

**Contractual transaction.** Contractual governance, as is evidenced by the highest mean score on legal bonds, is the most distinctive feature of relationships that form the third cluster. There is also a modest level of operational linkage; however, suppliers and customers in this cluster have relatively low mean scores for cooperation and buyer adaptation. Furthermore, the buyers report relatively low levels of trust of the supplier, a high level of active market monitoring, and less reliance on sole sourcing. The buying firms are engaged disproportionately in service (including government) operations, in which purchasing policies often require firms to use competitive bidding and contracts and minimize interpersonal social contact to solicit suppliers. This pattern suggests that this relational form is formalized by a legal contract and that other forms of cooperation, interaction, and linkage are minimal.

**Custom supply.** Although the mean scores on most of the relationship connectors (i.e., operational linkages, informa-
tion exchange, legal bonds, cooperation, and buyer adaptations) are in the midrange, the distinguishing feature of this relationship type is the relatively high level of seller adaptation. These buyers report low levels of trust, the least reliance on sole sourcing, and a relatively high monitoring of the supply market. This overall profile suggests a traditional custom supply situation (say, for component parts or equipment) in which competitive market forces and use of multiple suppliers (i.e., the market mechanism), rather than a joint focus on collaboration, is the dominant form of governance.

Cooperative systems. Buyers and sellers in the cooperative systems cluster are in the highest mean range on both operational linkages and cooperation, but they are among the lowest (on average) with respect to legal bonds and buyer adaptations. The means for information exchange and seller adaptations are moderate, whereas cooperation is high. Furthermore, we find the highest level of trust in the supplier for this relationship type. Thus, these firms are coupled closely in operational ways—possibly to speed the flow and accuracy of orders—but neither party demonstrates structural commitment through legal bonds or relationship-specific adaptation.

Collaborative. The cluster relationships of the sixth group are highly collaborative, as is suggested by the highest mean score of any relational form on cooperation and a high mean score on information exchange. As with custom supply relationships, the score for adaptations by the buyer is near the sample mean, but here, the mean level for both operational linkages and legal bonds is above average. Buying firms reported a high degree of trust in their supplier, and the collaborative form was associated more frequently with single sourcing arrangements than any other relationship type was. Although buyers and sellers in this type of relationship are not at the extreme in making specific adaptations to one another, this overall profile is highly consistent with the partnering philosophy that often has been touted in the popular business press.

Mutually adaptive. An outstanding characteristic of this relationship type is the high degree of relationship-specific adaptations made by both buyers and sellers. Consistent with this mutually adaptive style, operational linkages are at the highest mean level, and information exchange is near the top. This form of relationship also is characterized by a high degree of operational linkages and information. The median annual expenditure on the supply is tied for highest, and single sourcing is also more common. In spite of the interdependence created by their mutual investments and the relatively high reliance of the buyer on the supplier as a sole source, this type of relationship exhibits just an average level of cooperation, and the buying firm’s trust in the supplier is the lowest of all the relationship types.

Customer is king. The final relational form in Table 4 suggests a “customer is king” philosophy, because adaptations by the seller are the highest, even though reciprocal adaptations by the buyer are much lower than in the mutually adaptive relationships. Furthermore, in contrast to custom supply, which involves only customization of the supply, these relationships are much more involving, with operational linkages, information exchange, legal bonds, and cooperation at or near the highest levels. Annual expenditures on the supply and buying-firm trust of the supplier are also correspondingly high. Thus, buyers and sellers in these relationships are bonded by a close, cooperative relationship, but the seller meets the customer’s needs without expecting the customer to alter substantially the way it normally would do business.

Although these profile summaries are brief, they begin to provide a skeletal framework for thinking about key differences and similarities in contemporary buyer–seller relationships across a large, representative sample of firms and industries. As suggested by Table 4, the level of operational linkages and information exchange discriminates well, in general, between closer and more distant relational forms. Yet, other relational connectors are important in framing distinctions within the broad (close–distant) discrimination. For example, the pattern and levels of relationship-specific adaptation and legal bonds are especially important in discriminating among closer relationships; differing levels of cooperation and legal bonds differentiate among the more transactional forms.

The results of the empirical taxonomy overviewed in Table 4 suggest not only that there are prototypical relationship types that differ in important ways, but also that they are relatively common in occurrence. The clustering procedures we use do not attempt to recover clusters with evenly distributed numbers of observations; in a solution with eight clusters, we might expect that several would be based on a small number of observations. Yet in this analysis, which derives relatively homogeneous clusters from a large and heterogeneous sample of firms, the number of firms grouped with each relationship type is quite uniform.

Although the cluster analysis creates a stable and parsimonious empirical taxonomy of relationship types, the validity and insights from the taxonomy can be extended by providing evidence that the relationship types are associated with particular market and situational determinants and customer evaluations of the supplier. These linkages are demonstrated in the following sections.

Situational Determinants of Relationship Types

In Table 6, we provide means and standard deviations for each of the situational determinant variables across the whole sample and for each relationship type. The high means on product importance and availability of alternatives suggest that, on average, the products/services exchanged in these relationships are important to the customer firms, and buyers usually have many sources of supply available. For each of the situational determinants, a (univariate) test of no mean differences among relationship types is rejected ($p < .01$). How relationships differ with respect to the determinants is suggested by the results of Duncan’s multiple-range test. Although this detail is potentially useful, the overall pattern of discrimination is understood best by considering the results of a multiple discriminant analysis, in which the relationship type is the dependent variable and the situational determinants are the predictors.

In Table 7, we provide key statistics estimated in the multiple discriminant analysis, and in Figure 2, we offer a graphic overview. We developed Figure 2 on the basis of procedures recommended by Perreault, Behrman, and Armstrong (1979). Specifically, the rotated discriminant function centroids position each of the relationship types in the determinant space. The vector for each of the four determinants is positioned in the space on the basis of its loadings.
Table 6
MEANS AND STANDARD DEVIATIONS OF SITUATIONAL DETERMINANTS AND CUSTOMER EVALUATION VARIABLES BY TYPE OF BUYER–SELLER RELATIONSHIP (CLUSTER)

<table>
<thead>
<tr>
<th>Type of Buyer-Seller Relationship (Cluster)</th>
<th>Situational Determinant Variables</th>
<th>Customer Evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Availability of Alternative Suppliers</td>
<td>Supply Market Dynamism</td>
</tr>
<tr>
<td>Basic buying and selling</td>
<td>45</td>
<td>6.09a</td>
</tr>
<tr>
<td>Bare bones</td>
<td>56</td>
<td>5.98ab</td>
</tr>
<tr>
<td>Contractual transaction</td>
<td>62</td>
<td>5.92ab</td>
</tr>
<tr>
<td>Custom supply</td>
<td>52</td>
<td>5.58bc</td>
</tr>
<tr>
<td>Cooperative systems</td>
<td>56</td>
<td>5.75bc</td>
</tr>
<tr>
<td>Collaborative</td>
<td>61</td>
<td>5.69abc</td>
</tr>
<tr>
<td>Mutually adaptive</td>
<td>37</td>
<td>5.02d</td>
</tr>
<tr>
<td>Customer is king</td>
<td>57</td>
<td>5.38ed</td>
</tr>
<tr>
<td>Total sample</td>
<td>426</td>
<td>5.70</td>
</tr>
</tbody>
</table>

Notes: For a given variable (column), means for different relationship types with the same superscript letter are not significantly different (p < .05), based on Duncan's multiple-range test of statistical significance.

Table 7
RESULTS OF CANONICAL (ROTATION) DISCRIMINANT ANALYSIS WITH SITUATIONAL DETERMINANTS AS PREDICTORS AND RELATIONSHIP CLUSTERS AS CRITERION

<table>
<thead>
<tr>
<th>Discriminant Analysis Statistics</th>
<th>Situational Determinants (Independent Variables)</th>
<th>Multivariate Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Availability of Alternative Suppliers</td>
<td>Supply Market Dynamism</td>
</tr>
<tr>
<td></td>
<td>F-ratio</td>
<td>4.45</td>
</tr>
<tr>
<td></td>
<td>Probability (less than)</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Multiple/canonical correlation</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td>Discriminant loadings, first function</td>
<td>-.62</td>
</tr>
<tr>
<td></td>
<td>Discriminant loadings, second function</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Varimax rotated loadings, first function</td>
<td>-.61</td>
</tr>
<tr>
<td></td>
<td>Varimax rotated loadings, second function</td>
<td>-.19</td>
</tr>
</tbody>
</table>

(correlations) with the functions. The length of each vector suggests the relative potency of the associated determinant variable in discriminating among relationship types. Furthermore, each vector points toward relationship types for which that determinant is more prominent (i.e., as can be confirmed by detailed analysis of the statistics in Table 6, an axis defined by a vector, in general, arrays the relationship types from low to high mean scores on the corresponding determinant variable).

The first function (horizontal axis) in Figure 2 is correlated negatively (−.61) with availability of alternative suppliers but correlated positively with supply market dynamism (.64) and complexity of supply (.59). Thus, relational forms to the left in Figure 2 (bare bones, basic buying and selling, contractual transactions, and cooperative systems) are more likely to occur when there is a competitive supply market, the purchase decision is not complex, and the market is static. Conversely, the mutually adaptive and customer is king
relational forms (to the right in Figure 2) are more likely to emerge when there are few alternative suppliers, the supply market is dynamic, and the supply complexity is high. Thus, from a customer’s perspective, this multivariate function suggests a continuum of procurement situations that progressively involves more “procurement obstacles” in which purchasing is more difficult for the buying firm. Moreover, the greater the combined effects of such obstacles, the more likely is the customer to turn to a closer relational form with the supplier.

The vertical function in Figure 2 is more straightforward. The only prominent loading for this function (Table 7) is on supply importance, yet that loading is very high (.96). Thus, this function is a continuum reflecting increasing importance of the supply to the customer. This suggests that relational forms in the top half of the graph (customer is king, cooperative systems, and mutually adaptive) are more likely when the supply is more important to the customer. Conversely, when the supply is less important, the relational forms in the lower half of the graph (basic buying and selling, bare bones, contractual transactions, and custom supply) are likely to be more prominent. Thus, we find that the relational forms that arise for important purchases are ones that are also more likely to involve operational linkages and higher levels of information exchange.

As suggested by the preceding discussion, the two functions discriminate among the relational forms in different ways. The closest partnerships (customer is king, mutually adaptive) arise both when the purchase is important and when there is a need—from the customer’s perspective—to overcome procurement obstacles that result from fewer supply alternatives and more purchase uncertainty. Conversely, when buying firms view the purchase as less important and the situation involves less uncertainty and more potential suppliers, one of the less connected relationship forms emerges. In these circumstances, the need to manage uncertainty and dependence is minimal, so simpler relational forms are preferred.

The cooperative systems relationships also involve important purchases, but they are different because they are likely to arise in spite of the availability of more supply alternatives and more stable market environments. This type of relationship may be characteristic of trends emerging in the supply of products previously viewed as commodities (e.g., ball bearings, office supplies), in which suppliers are now using sophisticated logistics and customer support to create competitive advantage.

As suggested by the means in Table 6 and by Figure 2, the situational determinants that give rise to collaborative relationships are similar to those that prompt custom supply re-
relationships, except that the importance of supply is higher in collaborative relationships. In spite of this situational similarity, the collaborative and custom supply relationships are quite different. The custom supply relationship involves significantly more adaptations by the seller, and the collaborative form involves significantly higher operational linkages, legal bonds, information exchange, and cooperation. Thus, though the situational determinants in general predict the relational form used by buying and selling firms, there are situations in which firms choose to cope with similar situations in quite different ways.

As is suggested by their position in the lower left quadrant of Figure 2, the more distant relational forms (i.e., bare bones, contractual transactions, custom supply, and basic buying and selling) are more prominent when the supply is less important and when the availability of alternative suppliers is high. For example, the basic buying and selling relationships are characterized by the highest mean for availability of alternative suppliers and the lowest mean for importance of supply.

This analysis confirms that buyers and sellers craft different types of relationships in response to situational and market conditions. Two key underlying dimensions—procurement obstacles and importance of supply—discern among the different types of relationships. In the next section, we analyze customer evaluations of these relationships.

Relationship Differences in Satisfaction with Supplier and Supplier Performance

In Table 8, we report the results of multivariate analysis of variance (MANOVA), which tests for differences in customer evaluations of satisfaction with the supplier and supplier performance. The multivariate test statistics we report in Table 8 indicate statistically significant differences among the different types of relationships with respect to customer satisfaction and supplier performance.

In light of the multivariate results, it is useful to consider the univariate results in greater detail. As with constructs previously discussed, Table 6 also shows results of Duncan's (univariate) multiple-range test for each of these variables. The grand means indicate that satisfaction and performance were generally high, as might be expected with relationships that have survived the test of time. The Duncan tests provide specific evidence about the nature of differences in the outcome variables between relationship types.

Satisfaction with supplier. The results of the MANOVA and Duncan's multiple-range tests indicate clear differences in customer satisfaction across the relationship types. Specifically, and as may be found from the means in Table 6, customers involved in mutually adaptive relationships report the lowest mean satisfaction, and satisfaction is almost as low (based on Duncan's multiple-range test) for customers in bare bones and custom supply relationships. In contrast, customers in cooperative systems report the highest satisfaction with suppliers; mean satisfaction is nearly as high among customers in customer is king, collaborative, and basic buying and selling relationships. Relationships characterized as contractual transactions are in the middle with respect to satisfaction (and close to the overall sample mean).

These results are provocative. They make it clear that we should not assume that the most closely coupled buyer–seller relationships are necessarily the most satisfying ones for the customer. On the contrary, when a close relationship involves or requires more adaptations by the customer, as in the mutually adaptive and custom supply relationships, satisfaction is lower. Furthermore, and in contrast, customer satisfaction with simple basic buying and selling relationships is almost as high as it is in the much more closely coupled customer is king relationships. Such results may reflect differing customer expectations or different demands placed on suppliers in each relationship type.

Supplier performance. The results of the MANOVA and Duncan's multiple-range tests also indicate differences in supplier performance among the relationship types. Suppliers in bare bones relationships report the lowest performance evaluations; based on Duncan's multiple-range test, supplier performance evaluations are nearly as low in mutually adaptive, custom supply, and contractual transaction relationships. With the exception of the lower performance evaluation in mutually adaptive relationships, other more closely coupled relationships—collaborative, customer is king, and cooperative systems—evoke the highest evaluations of supplier performance. Again, we find that closer relationships do not necessarily mean higher performance in the eyes of the customer. Taken as a set, the taxonomy, antecedents, and outcomes provide new insights on the nature of business relationships. These insights are compared and contrasted with theory and practice next.

**DISCUSSION**

Drawing on relationship theories and observations of business practice, six relationship connectors are identified and provide the basis for an empirical taxonomy. The results described in the previous section highlight some of the

---

**Table 8**

**DIFFERENCES IN CUSTOMER EVALUATIONS (SATISFACTION WITH SUPPLIER AND SUPPLIER PERFORMANCE) DUE TO TYPE OF BUYER–SELLER RELATIONSHIP**

<table>
<thead>
<tr>
<th>Customer Evaluations Dependent Variable(s)</th>
<th>Source of Variance</th>
<th>Wilks' Lambda</th>
<th>Sums of Squares</th>
<th>Degrees of Freedom</th>
<th>F-ratio</th>
<th>Probability Less Than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multivariate (satisfaction and performance)</td>
<td>Relationship type</td>
<td>.82</td>
<td>14832</td>
<td>6.30</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with supplier</td>
<td>Relationship type</td>
<td>.82</td>
<td>14832</td>
<td>6.30</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>.82</td>
<td>438.67</td>
<td>424</td>
<td>7.61</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>.82</td>
<td>438.67</td>
<td>424</td>
<td>7.61</td>
<td>.001</td>
</tr>
<tr>
<td>Supplier performance</td>
<td>Relationship type</td>
<td>.82</td>
<td>14832</td>
<td>6.30</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Error</td>
<td>.82</td>
<td>438.67</td>
<td>424</td>
<td>7.61</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>.82</td>
<td>438.67</td>
<td>424</td>
<td>7.61</td>
<td>.001</td>
</tr>
</tbody>
</table>
unique insights that emerge from this alternative research approach. The characteristics of the eight relationship types provide evidence of the diverse ways that buyers and sellers conduct business. The relationship types vary depending on the importance of the supply and procurement obstacles faced by customer firms. In addition, the results indicate that some patterns of interaction clearly are preferred by buying firms, as are indicated by the differences in customer satisfaction and supplier performance across the relationship types. These findings would not be revealed by traditional approaches to empirical studies of buyer–seller relationships and represent important contributions to the literature.

Although many of the findings of this study are consistent with the current literature, others challenge some prevailing wisdom about the nature of buyer–seller relationships. Therefore, we begin the discussion of the results by comparing and contrasting our findings with three theoretically derived classification schemes that have guided marketing thought: (1) Williamson’s (1985) markets versus hierarchy dichotomy blended with Macneil’s (1980) discrete–relational continuum, (2) Heide’s (1994) tripartite typology, and (3) Dwyer, Schurr, and Oh’s (1987) relationship life cycle. A discussion of the implications of the results for management practice follows. The section concludes by acknowledging the limitations of the research. Throughout this section, we provide informed speculation about the nature of the results and suggest directions for future research.

Contributions to the Institutional/Relational Perspective on Relationships

Research in TCA (Williamson 1985) has received a great deal of attention from business marketing scholars (for a recent review, see Rindfleisch and Heide 1997). Transaction cost analysis proposes that firms choose the most efficient governance mechanism to safeguard transactions from potentially opportunistic exchange partners. Although the market generally is preferred, conditions of uncertainty and investments in relationship-specific assets may raise transaction costs for this form of governance, which leads to hierarchical or internal production. When pure hierarchy is impractical, it has been suggested that contracts may be drawn up to simulate hierarchy (Grossman and Hart 1986; Stinchcombe 1985). Subsequently, it has been suggested that relational exchange norms (Macneil 1980) may provide a hybrid governance between markets and hierarchies (Williamson 1985). Thus, TCA conceptualizes relationships along a market–relationalism–hierarchy continuum.

Although our empirical taxonomy does not focus on the issue of governance per se, the results still offer insights relevant to TCA. The taxonomy was developed with underlying assumptions that differ from those of TCA; for example, we conceptualize adaptations as a relationship connector, not as an antecedent condition, and focus on relationships, not individual transactions. However, many of our constructs are similar, including active monitoring of the supply market and sole sourcing (proxies for market governance), cooperative norms and trust, legal bonds, internal and external uncertainty, and relationship-specific adaptations. Thus, though these findings do not provide a formal test of the predictions of TCA, they do provide insights when considered in combination with TCA.

For example, though TCA predicts that pure market governance fails when relationship-specific investments and uncertainty are high, our results differ. Using multiple sources of supply and active monitoring of the supply market as proxies for market governance, our results suggest that the use of these mechanisms was relatively common across each relationship type (see Table 5), even in more closely connected relationships that involve higher levels of relationship-specific adaptation and uncertainty (e.g., custom supply, mutually adaptive, and customer is king).

Similarly, TCA suggests that a high level of relationship-specific investment would be associated with higher levels of relationalism (Noordewier, John, and Nevin 1990), trust (Bradach and Eccles 1989), or formal contract (Stinchcombe 1985). Yet comparing and contrasting the more closely connected relationships (last five types in Tables 4–6) provides interesting insights about such associations. Although the high levels of supplier adaptation in the customer is king relationships are associated with higher levels of relationalism (i.e., cooperative norms and trust) and legal bonds, the other types are less consistent with the theory’s predictions. Both the cooperative systems and collaborative relationship types involve low levels of relationship-specific adaptation, yet each also exhibits a relatively high level of cooperative norms, with the collaborative type also relying heavily on formal contracts (i.e., legal bonds). Although custom supply relationships involve a relatively high level of adaptation by both parties, the use of contracts, norms, or trust is relatively modest; market governance seems most prominent. Finally, the mutually adaptive form indicates a high degree of adaptation by both parties but relatively low levels of trust and relational norms. Mutually adaptive relationships may be governed by the hostage model (Williamson 1983), in which the high specific investments by both parties are presumed to mitigate opportunism. These results illustrate the value of an alternative approach such as that employed here. Although the results of extant research—which rely on correlational methods—often find the anticipated associations, our approach points to relatively frequently occurring exceptions. Research that explores these exceptions in greater depth may refine and advance theories such as TCA.

Together, these findings also suggest the need to explore other drivers of governance, the roles performed by these mechanisms, and the collateral benefits each provides. For example, operational linkages have emerged as a mechanism for efficiently managing serial transactions. With the decreasing cost of information technology and the focus on cost reduction in the supply chain, developing operational linkages will become an increasingly important competitive tactic in commercial exchange. How operational linkages interact with other aspects of business relationships is largely unknown and a suggested direction for additional research.

The pattern of results provides support for recent conceptualizations that acknowledge multiple or plural forms of governance (Bergen et al. 1995; Bradach and Eccles 1989). Rindfleisch and Heide (1997, p. 51) suggest that understanding how multiple governance mechanisms operate in practice represents “an especially important area for future applications of TCA.” With the relatively early development of theory about multiple forms of governance or control (Bradach and Eccles 1989; Jaworski 1988; Rindfleisch and Heide 1997), our results and the taxonomic methodology described in this study offer an avenue for developing
grounded theory by creating an empirical taxonomy based on particular governance mechanisms.

The results also provide evidence of the variety of hybrid relationship forms that exist between market and hierarchy. Furthermore, it is clear that these relationship types do not array along a unidimensional continuum, such as that which provides the basis for TCA and other research in this area. Coming to a similar conclusion, Heide (1994) develops a governance typology based on three ideal forms of governance. The results of our taxonomy are compared and contrasted with this typology next.

Contributions to the Market/Unilateral/Bilateral Perspective

Building on the institutional, relational contracting, and resource dependence perspectives, Heide (1994) develops a typology characterized by three "ideal" relationship forms: market, unilateral/hierarchical, and bilateral. Heide acknowledges that, in practice, individual relationships may combine aspects of each form. Our results support this and demonstrate just how elements of market, unilateral, and bilateral governance are combined in practice.

For example, the low level of operational linkages in the basic buying and selling relationships reflects the low degree of role specification characteristic of Heide's market governance. However, this relationship type also exhibits a relatively high level of cooperative norms, a bilateral quality. Similarly, the high level of legal bonds in collaborative relationships would be a market or unilateral quality in Heide's typology, but collaborative relationships exhibit bilateral qualities with relatively high levels of information exchange and cooperative norms.

Heide's (1994) typology and an empirical test in the same article provide evidence for the association between high levels of interdependence and high levels of bilateralism (in the empirical test, in the form of higher flexibility). Other research also has found that relationalism occurs more frequently in highly interdependent relationships (Gundlach and Cadotte 1994; Kumar, Scheer, and Steenkamp 1995). One type of relationship in the taxonomy—the mutually adaptive form—also is characterized by a high level of interdependence through mutual relationship-specific adaptation. But in contrast to these other findings, the mutually adaptive relationship is not very relational, exhibiting the lowest level of trust and relatively low levels of cooperative norms. One explanation may be that the source of interdependence in our study is internal, whereas in the others, the sources are external. The research methods used in this study make it possible to identify explicitly important types of relationships that frequently occur in practice but that have been overlooked in the past. Together, these findings indicate the need for more research that extends our understanding of interdependence and its role in exchange relationships.

An important contribution of an empirical taxonomy such as that developed here is that it extends typologies such as Heide's by showing just how actual buyer–seller relationships combine different market, unilateral, and bilateral elements, as well as the market situational factors that influence each and the performance outcomes associated with each relationship type. Another prominent role played by taxonomic research is in understanding evolutionary processes (cf. McKelvey and Aldrich 1983; Sneath and Sokal 1973). In marketing, a prominent relationship life cycle model is the one developed by Dwyer, Schurr, and Oh (1987).

Contributions to the Life Cycle Perspective

Dwyer, Schurr, and Oh (1987) propose a classification scheme based on the stages and process along which business relationships develop. Understanding a life cycle for buyer–seller relationships is potentially useful in both theory development and providing guidance to managers. Classification plays an important first step in understanding the process of evolution (McKelvey and Aldrich 1983). The results of the empirical taxonomy stimulate informed speculation about the developmental process of business relationships.

Implicit in Dwyer, Schurr, and Oh's (1987) model is the expectation that relationships inevitably move toward the commitment stage or dissolve along the way. Our results do not support this conceptualization. The eight relationship types do not significantly differ with respect to the age of the relationships (p > .05; see Table 5), though each exhibits varying levels of trust and commitment (as indicated by relationship-specific adaptations, one of Dwyer, Schurr, and Oh's criteria). Thus, if relationships meet customer needs, they are likely to endure, no matter how closely connected. The relative longevity across all types of relationships provides evidence that a domesticated character (Arndt 1979) and long-term orientation (Ganesan 1994) characterize most relationships in business markets.

However, we find support for the belief that some relationship types require more time to develop. For example, though 15% of all relationships in our sample were less than two years old, only 3% of mutually adaptive and customer is king relationships were this young. These two relationship types both involve high levels of relationship-specific adaptation, which provides an indication that adaptations may evolve slowly. This finding suggests that one avenue for further research into the complex territory of relationship development might begin by examining specific subprocesses, for example, the adaptation process (cf. Hallen, Johanson, and Seyed-Mohamed 1991).

Other results suggest an alternative theoretical approach that may provide additional insights about how relationships develop. Research in sociology and organization studies has found that life cycles often are influenced by institutional factors (for review, see Scott 1995). Institutional explanations focus on the effects of larger institutions or trends. We find that buying firms in the service sector (including a large number from the public sector, such as government, schools, and hospitals) disproportionately employ contractual transactions. When selling firms were engaged primarily in manufacturing as opposed to distribution (see Table 5), mutually adaptive and customer is king types of relationships were more common, whereas relationships with distributor suppliers were more frequently of the basic buying and selling or bare bones form. These findings may reflect the institutional effects of industry practice. For example, our post-study interviews with executives suggested that the use of formal contracts is a commonly accepted practice in some industries, whereas it signals mistrust in others.

We also might expect that successful relational forms may be copied within a particular firm (Scott 1995). The popular
business press often asserts that effective relationships are
customized and idiosyncratic to the partners involved. The
best of these relationships are likely to be those that reduce
total systems costs rather than simply creating short-term
cost shifts from one firm to another. Yet there are usually
significant costs associated with custom relationships. Thus,
effective relational modes are not likely to be unique for
long. For example, operational linkages that focus on im-
proving logistics service or reducing inventory cost may re-
quire that both the buyer and seller agree on a certain bar
code system for identifying the contents of shipping cartons.
Any such system is likely to involve costs for one or both
parties. But, having invested in such systems and found
them to be effective, one or both firms may want to use them
in other relationships. Although Procter & Gamble’s rela-
tionship with Wal-Mart initially involved idiosyncratic
processes, both firms later leveraged the practices across
other customers/suppliers. Thus, what starts out as a
relationship-specific adaptation by a buyer or seller may end
up, longer-term, being part of a new way of working with
other customers or suppliers (cf. Chandler 1962). Research
is needed to understand better how institutional factors such
as standards affect the process of evolution for business rela-
tionships and when customization versus standardization
of relationship styles makes sense.

Managing Buyer–Seller Relationships in Business Markets

The results of our taxonomy have important implications
for the management of buyer–seller relationships. In the busi-
ness press, there has been substantial advocacy of the need
for firms to build and manage close, long-term relationships
with their customers. At first blush, that seems compelling.
After all, who would disagree with the idea of having good
relationships with customers? But important caveats must be
considered before embracing this prescription.

Foremost, the taxonomy makes it clear that some buyer
firms do not want or need close ties with all of their suppli-
ers. They are satisfied with the effective performance of
suppliers who simply meet their needs without extensive en-
tanglements. Furthermore, our results document that differ-
et types of buyer–seller relationships predominate in dif-
ferent situations. For example, the most closely coupled
relationships arise when the supply is important to the cus-
tomer and when there are procurement obstacles such as
complex purchase requirements and few alternative suppli-
ers. Conversely, when the purchase is less important to the
customer, competitive market forces operate, and uncertain-
ity is not too great, customers are more likely to elect for a
type of relationship that is less closely linked across several
relationship connectors.

Customer and supplier firms do not always select the “op-
timal” type of relationship for a given the situation. Yet, in
all likelihood, there is some collective wisdom in how firms
structure their relationships. Over time, successful firms ex-
perientially identify “vaguely right” solutions to supply their
needs. Thus, a supplier that is pushing to develop a closer rela-
tionship with customers carefully should consider the type
of relationship it expects, that is, how the supplier connects
with the customer. The connectors we identify and the tax-
onomy they produce provide some important guidance in
managing relationships.

The results also may be useful to business buyers or sell-
ers in managing a portfolio of buyer–seller relationships (cf.
Fiocca 1982). Each relationship type requires different types
and degrees of investment and produces different outcomes.
Understanding how each relationship type fits into a larger
portfolio of relationship types becomes a strategic issue for
marketing and procurement managers.

The study also points to the critical role of relationship-
specific adaptations. These investments can involve signif-
icant costs for development and ongoing management and in
forsaking other opportunities. Comparing and contrasting
the mutually adaptive and customer is king relationship types
suggests that patterns of adaptation have important implica-
tions for the participants. Managers must understand the
short- and long-term implications of adaptation decisions.

In addition, though many studies point out the benefits of
building trust in relationships (e.g., Doney and Cannon
1997; Ganesan 1994), our results indicate that the most
closely connected suppliers are not necessarily the most
trusted. The highest levels of trust reported in Table 5 occur
in three of the four closest relationship types, as well as in
the more distant basic buying and selling form. Further-
more, the lowest level of trust occurs in the more closely
connected mutually adaptive relationships. Because of the
lack of strong formal connections in basic buying and sell-
ing relationships, suppliers may work hard at developing
trust as a source of loyalty, possibly as a dependence bal-
cancing tactic (Heide and John 1988). In addition, the ease
with which buyers can switch to alternative sources of sup-
ply gives them the ability to punish untrustworthy suppliers
readily by discontinuing the relationship, so those suppliers
able to build and maintain the buying firm’s trust are re-
tained (cf. Hill 1990). Because a buyer’s investments lock it
into a mutually adaptive relationship, there may appear to be
less incentive for sellers to act in a trustworthy manner. Fur-
thermore, buyers may be more willing to grant trust when
vulnerability is low. Current research on trust does not ad-
dress the effect of these types of market and situational con-
tingencies on the development of trust adequately.

Limitations

In any research project, choices made by the researchers
create limitations in interpreting the results. The data for this
research are based on the customer’s perspective of the buy-
er–seller relationship. Readers should keep in mind that a
seller’s point of view might be different. For example, a pur-
chase that is not particularly important from the perspective
of a customer (say, a large corporation) may be a crucial sale
from a seller’s perspective. Because of our focus on opera-
tional aspects of buyer–seller relationships and purchasing’s
broad responsibility for relationships, these respondents
have the appropriate perspective for informing on the buy-
er–seller relationship constructs central to this research.
However, other members of the buying organization might
have a different view and emphasize other relationship-
relevant connectors. For example, the highest levels of pur-
chasing management might focus on strategic aspects of
supplier relations, and technical personnel might be interest-
ed in learning from suppliers.

The scope of the research is delimited by the constructs
we explicitly specify, measure, and evaluate. We have at-
ttempted to strike a balance between parsimony and com-
pleteness in identifying theoretically relevant and unique
connectors that indicate key ways that buyers and sellers
conduct commercial exchange, as well as important deter-
minants and outcomes. However, other constructs that are potentially important were not included. For example, though this study focuses on relationship connectors that are anchored behaviorally, a different typology would emerge if it was based on constructs that reflected the social nature of the relationship.

Sampling decisions indicate that researchers should exercise some caution in generalizing the findings to new contexts. Membership in NAPM, though it represents a broad variety of industries, tends to include better-educated purchasing professionals, larger buying organizations, and a large proportion of manufacturing firms. Furthermore, by focusing respondents on the main supplier for their most recent purchasing decision, the sample reflects a higher proportion of relationships with sole and major suppliers and a lower proportion of minor suppliers within a given product category. These decisions suggest that the results are indicative of more important supplier relationships.

There is no single optimal way to develop an empirical taxonomy. Thus, some buyer–seller relationships might be understood best by thinking of them as hybrids or combinations of the “pure types” presented and discussed here. Similarly, the modal prototypes we identify might not be representative of certain types of relationships that are infrequent in occurrence but nevertheless important.

These and other limitations should be kept in mind in considering our results and the implications of our findings. Even so, the results of the taxonomic research offer new insights and contributions to theory and practice.

CONCLUSION

Although advances in practice and theory have contributed to enhanced knowledge of buyer–seller relationships, the discipline is far from mature. Firms continue to struggle with developing and implementing new strategies with their customers and suppliers. More effective buyer–seller relationships help both parties manage uncertainty and dependence, increase efficiency by lowering total costs, and enhance product development and market orientation through better knowledge of customers and their needs. To realize these benefits, firms must understand how to interrelate and conduct relationships with customers and suppliers to achieve effectively the diverse objectives and outcomes possible from each relationship. By offering insight into prototypical patterns that show how firms relate and conduct exchange and finding associations with important attitudes, situational factors, and outcomes, this study helps advance theory and knowledge in the arena of business marketing and procurement.

REFERENCES


Arndt, Johan (1979), “Toward a Concept of Domesticated Markets,” Journal of Marketing, 43 (Fall), 69–75.


Buyer-Seller Relationships


Milligan, Glenn W. and Martha C. Cooper (1984), “An Examination of Procedures for Determining the Number of Clusters in a Data Set,” Psychometrika, 50 (June), 159-79.


Visit the AMA Website!

http://www.ama.org

Here's a sampling of what you'll find on the AMA website:

- Selected articles and abstracts from Journal of Marketing Research and other AMA publications
- Updated information on advertising in AMA publications
- Other advertising, sponsorship and exhibit opportunities
- Marketing discussion groups
- Information on the American Marketing Association, its members, and benefits

Plus much more!