# *Research Report*

# The Effect of Negotiation Practices on the Relationship between Suppliers and Customers

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*This article examines the effects of negotiation practices, such as coercion and contract formality, on how suppliers and customers perceived the resulting business relationship. We conducted a purchasing negotiation simulation with students in a classroom setting in which participants competed for resources in a mock supply-chain context. The participants were surveyed at key stages of the ongoing negotiation in order to measure their behaviors as a customer–supplier relationship developed. The data were used to test several hypotheses developed from the marketing and purchasing literature. The hypotheses were analyzed using structural equation modeling.*

*Results demonstrated that the use of coercive techniques by negotiators during negotiation had a negative effect on satisfaction. In addition, the findings showed that, as expected, negotiators entering a negotiation with a cooperative orientation would tend to avoid the use of coercive practices during negotiation. The cooperative orientation also exhibited an unexpected positive effect on the formalization of the design of the contract between the parties. This study contributes to the current knowledge base focusing on the creation of agreements between companies and will, we hope, encourage the integration of suppliers and customers in an operating context within a supply-chain setting.*

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## The Supply Chain

Over the past decade, global competitive pressures on manufacturers have forced them to produce more technically advanced products at ever higher levels of quality, at lower cost, and in shorter lead times. The business environment continues to pressure firms through shrinking product life cycles and increasing quality demands from customers. To address these pressures, many manufacturers have focused their in-house activities on their core competencies and have tended to outsource increasing amounts of noncore products and services (Prahalad and Hamel 1990). This has fueled a stronger focus upon the strategic importance of integrating service suppliers, manufacturers, and customers into a smoothly functioning supply chain (Frohlich and Westbrook 2000). This multiple-party context builds on Michael Porter's (1985) concept of the value system, which he introduced twenty years ago. Porter defined primary activities within the firm (which he called the value chain) as those that are directly concerned with the creation or delivery of a product or service. The five areas of primary activity include inbound logistics, operations, outbound logistics, marketing and sales, and service. He argued that the ability to perform these activities and to manage the linkages between them is a source of competitive advantage. According to Porter's value system, in reality, value is created through a series of value chains representing multiple organizations that create end-user value. The value system is therefore consistent with the term used by some as the supply chain.

The supply chain is considered an interorganizational system. Within this supply-chain setting, there is a trend toward outsourcing some of Porter's value-chain elements that are not critical to the firm. This has made negotiations between supply-chain members a much more essential activity for all involved and has enhanced the competitive environment of the supply chain.

Many manufacturers are now outsourcing (purchasing from suppliers) 50 to 70 percent of their cost of goods sold, and these figures may soon balloon to 70 to 90 percent (Fawcett and Magnan 2000). Lloyd Rinehart and his co-authors (2004) and Joseph Cannon and William Perreault (1999) have studied how innovative managers worldwide are experimenting with a myriad of approaches to make relationships with their business suppliers and customers more productive and enduring. The trend toward more outsourcing of goods and services has magnified the level of dependence between customers and suppliers and changed the ways these players interact. Consequently, the study of supplier–customer relationships has been the subject of many articles over the past several years (Achrol 1997; Brown et al. 2000; Houston and Johnson 2000; Johnson 1999). For example, recent emphasis on the use of collaborative planning, forecasting, and replenishment — in which some manufacturers and distributors

share information about demand, inventory, and capacity — has allowed such food industry companies as Nabisco and its retail distributors to more effectively manage their manufacturing, distribution, and retail operations throughout the country and in their global operations.

A distinct movement away from traditional adversarial arms'-length supplier–customer relationships and toward more cooperative interorganizational relationships has been noted in the purchasing literature, which focuses on the management of firms' inbound transaction activities (Monczka et al. 1993). Researchers studying channels, the area of marketing that investigates interorganizational activities between suppliers and customers, have noted that closer supplier–customer relationships provide many technical, financial, and strategic advantages over spot market transactions and vertical integration (Gulati 1995; Mohr and Spekman 1994). Customers are engaged in a battle to form and maintain successful relationships with the best suppliers (Meier et al. 1998). These suppliers are important because they provide a majority of inputs to a firm's production or service processes, so leading manufacturers now link their internal processes to the processes of external suppliers and customers (Frohlich and Westbrook 2000), and the foundations for these relationships are often built during the initial negotiation process.

The effect of negotiation practices on these relationships has been largely unexamined, and we believe this area warrants investigation. The process of negotiating these transactions can lead to satisfaction or dissatisfaction with the relationship on the part of the supplier and the customer. Firms actively seek to adopt programs that promise to develop closer or longer-lasting relationships in order to achieve lower product costs, reduced time-to-market, improved quality, advanced technology, and improved service and delivery. One such relationship management tool that warrants more attention is the negotiation process itself. Negotiation provides an excellent vantage point for examining interorganizational relationships because its rich tradition addresses important antecedent conditions, communication techniques, and power structures affecting exchange partners who must divide benefits and burdens, resolve conflicts, plan, and exercise power (Dwyer et al. 1987). Shankar Ganesan (1993) maintained "each negotiation episode is one of a sequence of episodes that constitute the relationship between the supplier and customer. The outcomes from a specific negotiation involve not only the agreement and related consequences such as total concessions and profits but also residual emotions such as satisfaction or frustration with the outcome." He concluded that a retailer's use of noncoercive practices is positively related to satisfaction, but could not support his assertion that aggressive strategies are negatively related to satisfaction.

The central question underlying the research described in this article is: How do negotiation practices affect the subsequent development of the

supplier–customer relationship? We believe this is an important question because it is possible that a successful negotiation experience will result in both parties feeling more satisfied with the relationship, thus enabling the parties to gain the benefits stemming from a long-term relationship. Thus, negotiation can be examined as a management mechanism that can allow both parties to benefit from the experience and move toward a stronger relationship. The outcome of any negotiation is dependent both on the nature of the issue to be resolved and on the type of practices used by the parties to address it (Lewicki and Litterer 1985). Although the success of a cooperative relationship depends largely on how the parties develop that relationship over time, negotiation of the initial agreement is critical in setting the stage (Rognes 1995). Furthermore, we believe that positive negotiation experiences may encourage firms to engage in more frequent and more successful joint strategic initiatives affecting their operations.

## Research Hypotheses

According to the political economy paradigm (PEP) approach, a social system comprises interacting sets of major economic and sociopolitical forces that affect collective behavior and performance (Stern and Reve 1980). Researchers have focused on the effect of power on supplier or customer control in the distribution channel (Hunt and Nevin 1974; Lusch and Brown 1982). More recently, dependence, cooperation, and communication have been shown to jointly determine the relationship structure that is likely to emerge in a particular exchange relationship (Robicheaux and Coleman 1994). John Graham (1987) offered a theory to explain the outcomes of negotiations between representatives of buying and selling firms. He proposed that situational constructs (power relationships) as well as bargainer characteristics (interpersonal orientation, listening skills) influence the implementation of negotiation practices (use of questions, initial demands, procedural discipline, impression formation, and topical control). The last step in his model proposed that the negotiation practices listed above have an impact upon negotiation outcomes such as economic rewards, satisfaction, and interpersonal attraction. His model included both economic and sociopolitical factors in keeping with the PEP. Our research builds on that foundation to empirically verify and measure the impact of negotiation practices on negotiation outcomes.

Negotiation is a fundamental phenomenon in interfirm exchange behavior in industrial markets (Perdue et al. 1986). The negotiating practices that a firm adopts are components of the company's overall competitive strategy that will enable it to maximize its competitive position vis-à-vis its rivals (Porter 1985). It is a dyadic (two-sided) process designed to solve problems in a way that benefits all the parties involved (Rinehart et al. 1988).

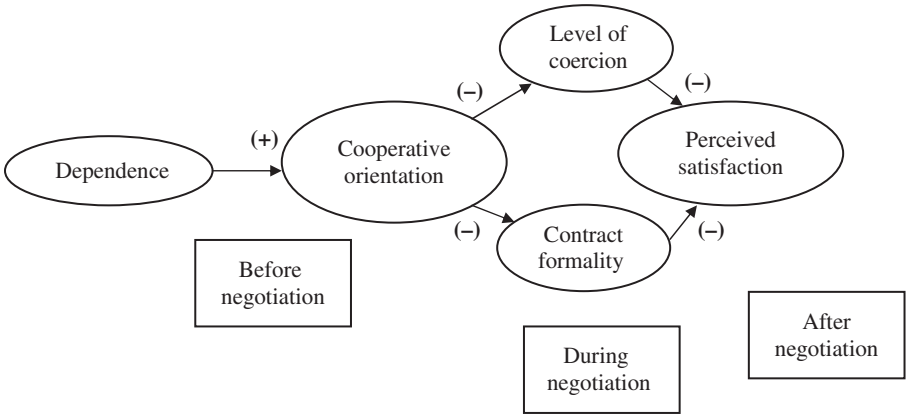
In the purchasing area, negotiation is central to the decision-making process through which a supplier and a customer establish the terms of

a purchasing agreement (Dobler et al. 1984). The concept of negotiation presented here is very broad. While many people think of negotiation as bargaining or the actual interaction between the parties, for this research, we have defined bargaining as only one stage of a larger negotiation process, which also includes the stages prior to bargaining, such as environmental assessment and planning, as well as the stages that take place after the bargaining, such as outcome evaluation. "Negotiation is a management process involving the preparation for bargaining, the interaction of two or more parties in a bargaining situation, and the resolution or outcome of this interaction" (Rinehart et al. 1988).

We have defined negotiation *preparation* to include the collection of information and its use in the formulation of plans designed to help the firm achieve its objectives in a bargaining situation. *Bargaining* includes the execution of these plans as well as the "give and take" over individual issues, which is necessary to satisfy the parties. The *outcome* represents the parties' perceptions of the agreement that has been created: a positive perception of the agreement may lead to additional business between the parties, while a negative perception may lead to the dissolution of the relationship. Defined this way, the negotiation process can help explain long-term relationships, which can be seen as a continuing series of negotiations.

As mentioned earlier, our overall research hypothesis was that negotiation practices are chosen based upon bargainer characteristics and the degree of power possessed by each party, and that these practices will contribute to the party's level of satisfaction with the negotiation event. Figure One shows the model we developed to reflect important characteristics that could be measured as a mock negotiation progressed. We

**Figure One**
**Model of Negotiation Satisfaction Assessment**



then designed a survey to measure participant perceptions of these characteristics at the relevant stage of the negotiation.

*Dependence* and *cooperative orientation* were measured before the negotiation began. We hypothesized that dependence and cooperative orientation would influence the negotiation practices used, specifically the level of coercion and contract formality exercised in the negotiation. We measured each negotiator's perceptions at each stage of the negotiation. The outcome of the negotiation was measured as level of satisfaction and it was measured after the negotiation was completed.

We developed five specific research hypotheses that we sought to test experimentally. They were:

1. The level of *dependence* perceived by each negotiator (both customers and suppliers were measured) will have a significant and positive effect on the *cooperative orientation* of that negotiator.

2. The *cooperative orientation* of each negotiator (both customers and suppliers were measured) will have a significant and negative effect on the *level of coercion* used in the negotiation.

3. The *cooperative orientation* of each negotiator will also have a significant and negative effect on the degree of *contract formality* in the agreement achieved.

4. The level of *coercion* implemented in the negotiation will have a significant and negative effect on the degree of *perceived satisfaction* in the relationship. (Both customers and supplier were measured.)

5. The level of *contract formality* implemented in the negotiation will have a significant and negative effect on each negotiator's *perceived satisfaction* in the relationship.

### *Definition of Terms*

*Dependence.* Defined broadly, dependence exists whenever one actor does not control all the conditions necessary for the achievement of an action (Pfeffer and Salancik 1978). More specifically, dependence has been defined as a firm's need to maintain a customer–supplier relationship with another firm in order to achieve desired goals (Frazier et al. 1989; Heide 1994). Obviously, the fewer sources a firm uses, the greater its dependence on those suppliers it does use, and its dependence increases when it makes exclusive deals with a single provider of a good or service (Newman 1989). (Table One identifies the specific items used to assess dependence and the other concepts in this research.)

*Cooperative Orientation.* The cooperative orientation of the participants is their willingness to work with the other party cooperatively rather than in an adversarial fashion. According to Louis Stern and Torger Reve

**Table One**
**Measurement Scales and Analysis Assessments**

**Dependence**
1. How dependent are you on this supplier/customer for this product/service?
2. If the other party were no longer available as a channel participant, what effect would this have on your business?
3. How difficult would it be to replace the other party with another supplier/customer?

**Cooperativeness**
1. I can't afford to worry about the other party's profits if my firm is to remain competitive in its own markets.
2. I look out for my firm; other firms have to look out for themselves.
3. My job is to obtain the lowest possible total cost to my firm whether or not the other party will be able to make a profit on the deal.

**Coercion**
1. How often did your team twist the other party's arm in order to obtain its agreement on an issue?
2. How often did your team threaten to give competitors preference over the other party in negotiations?
3. In order to get the other party to agree on an issue, how often did your team demand that it comply on that issue?
4. In order to get the other party to agree on an issue, how often did your team indicate that your personal relationship would worsen if it did not comply on that issue?

**Contract Formality**
1. The terms of our relationship have been written down in detail.
2. Our expectations of the other party have been communicated in great detail.
3. In coordinating our activities with the other party, formal contractual terms have been developed.
4. The terms of our relationship with the other party have been explicitly verbalized and discussed.

**Satisfaction**
1. Our firm's working relationship with this party has been an unhappy one.
2. The other party is a good company to do business with.
3. This relationship meets or exceeds our expectations.

(1980), "cooperation can be represented as a joint striving towards an object — the process of coalescing with others for a good, goal, or value of mutual benefit." In this research, cooperative orientation was measured by the attitude that each individual participant formed based on the environment and his/her own predispositions. (See Table One.)

*Level of Coercion.* Coercive practices are defined as "mechanisms for gaining target compliance that reference or mediate negative consequences for non-compliance" (Gundlach and Cadotte 1994). Coercive practices can be differentiated from noncoercive uses of power in that they involve potential punishment. John Gaski and John Nevin (1985) enumerated noncoercive activities such as the training of personnel, giving trade allowances, and providing ordering assistants as reward power sources, whereas coercive practices include such actions as refusing to sell, delaying delivery, and taking legal action (Gaski and Nevin 1985). (See Table One.)

*Contract Formality.* The second type of negotiation practice that we measured was the formality of the contract created by the parties, which was defined as the explicitness of the directives for action provided under the contract (Mohr et al. 1996). Contractual formality can be placed on a continuum from a simple letter of intent at one extreme to a long complex legal document at the other end (Bucklin and Sengupta 1993). Peter Smith Ring and Andrew H. Van de Ven have argued that firms, to some degree, substitute trust for contractual safeguards in their repeated relationships (Ring and Van de Ven 1992; 1994). This idea has been supported in more recent research: "In the absence of trust, an effort is made to legislate cooperation" (Fawcett and Magnan 2000). (See Table One for the contract formality items used in our research.)

*Perceived Relationship Satisfaction.* Satisfaction was defined as the level of overall approval that the parties felt toward each other (Anderson and Narus 1990) after the negotiation. Relationship satisfaction encourages relationship expansion (Dwyer et al. 1987). On the other hand, continued dissatisfaction with outcomes by either party will lead to the dissolution of the relationship (Frazier 1983). Dissatisfaction with the other party may also hinder morale, impede cooperation, or precipitate litigation (Hunt and Nevin 1974).

Channel power base research has consistently demonstrated that the use of coercive power results in more negative attitudes than the use of expert power (based on having distinctive knowledge, expertise, ability, or skills), referent power (through association with others who possess power), or reward power (based on the perceived ability to impose positive consequences or remove negative ones). (These bases of social

power were defined by John French and Bertram Raven [1959].) The threat or use of punishment causes dissatisfaction, whereas the provision of assistance increases satisfaction (Scheer and Stern 1992). Research has found that the actual *exercise* of coercion damages satisfaction more than the mere *presence* of coercive power does (Gaski and Nevin 1985). (See Table One for the items used to assess satisfaction in our research.)

Researchers on supplier–customer relationships have shown great interest in the role of formal and informal agreements, with a particular focus on the level of loyalty, cooperation, trust, and success that the agreement affords (Lassar and Zinn 1995; Frankel et al. 1996). Their findings create some confusion, which justifies additional investigation. Initially, Ring and Van de Ven (1992) proposed that informal contracts would serve as a substitute for formal contracts when trust was exhibited. In their research, both manufacturers and materials suppliers ranked written contracts as low contributors to relationship success with a neutral mean response. Respondents indicated that informal contracts, built more on trust than formality, were stronger contributors to relationship success than formal contracts (Ring and Van de Ven 1992).

However, in a later study, these same researchers concluded that respondents favored exogenous (external) safeguards and formalized contracts over exclusive reliance on trust in uncertain environments (Ring and Van de Ven 1994). Some researchers have suggested that the written contracts create desired patterns of exchange behavior and extract penalties from the failure of one party to perform in the eyes of the other party (Bucklin and Sengupta 1993). Consequently, uncertainty prevails on this issue. However, significant discussion in the "supply chain" discipline suggests that relationalism (the proactive creation, development, and maintenance of relationships with customers and other parties) is not consistent with the potential rigidity of formal agreements between the parties. Consequently, our fifth hypothesis (the level of contract formality will have a significant and negative effect on the perceived satisfaction in the relationship) is designed to test that contention.

## Research Method

We empirically tested the hypotheses by surveying participants in a negotiation simulation conducted in a purchasing class at Michigan State University. The simulation replicated an emerging industry (personal communication systems) that produced a high-tech type product (a hypothetical product, an online portable personal radio, similar to a Sony Walkman or an Apple Ipod). The object of the exercise was for the students to create the necessary supplier–customer relationships to accomplish specified market objectives. The sequence of negotiations took place over a three-month period.

Approximately 150 students (three classes of about fifty students each) were divided into groups containing two to four members. There were nineteen groups in each class, for a total of fifty-seven groups. Four groups played the role of manufacturers who were responsible for producing the product. Twelve groups were distributors who were responsible for selling the product in a particular market area. Three groups were carriers who were responsible for providing transportation service between the manufacturers and distributors. The basic premise of the simulation was that each distributor served a unique geographic market area of retail electronics stores within the United States and needed to determine which of the four manufacturers of a new personal electronics device it would buy from. Distributors had the option to choose to do business with more than one manufacturer. Parties negotiated such issues as price, volume, quality level of the products and services offered, as well as marketing and logistics support.

A second negotiation arose between the manufacturer and distributor because the two parties were required to negotiate shipping terms (collect or prepaid) and ownership while in transit. Therefore, for every negotiation between a manufacturer and distributor, there was a corresponding negotiation with a carrier.

Each team was also responsible for making organizational decisions that were independent of each supplier–customer negotiation. Through internal discussion, each group determined the type of relationship it wanted to have with each supplier or customer and considered the financial implications of those relationships. Elements of each team's operating environment, such as facility size (manufacturing/distribution/carrier terminal) and workforce size, were determined by each group within constraints established by the researchers. The same was true of transaction elements such as pricing and the quality level of the product that was exchanged.

We used a calculation of profit margin (after taxes) as the financial criteria upon which to judge each team's performance. We chose profit margin as the fundamental element of outcome analysis for two reasons. First, it provided an incentive for the students to negotiate realistically in a traditional business context because each individual's profit margin score was included in his or her final class point tally, which was a portion of what was used to calculate the course grade. In addition, because the teams served markets of differing sizes and demand outputs (the markets varied to make the simulation more realistic), profit *margin* (as opposed to total profit) was a way of measuring results more equitably.

A simulation such as this provided an excellent method to investigate the dynamics of an ongoing negotiation. A classroom simulation allows access to exchange environments in a dyadic (two-sided) form, which is

important for studying exchange behavior between parties (Achrol et al. 1983). The use of students provided access to the participants in the negotiation that would be difficult to obtain in the real world due to the competitive sensitivity of customer–supplier negotiations.

Within this simulation context, participants were instructed to answer questionnaires as the negotiation progressed. Conducting the surveys sequentially allowed us to obtain data at successive stages of the simulation that corresponded to the stages in the original model, as proposed by Graham (1987). (See Figure One.) We collected data at three points during the simulation: at the beginning of the negotiation preparation phase to assess the participants' predispositions and perceptions (dependence and cooperative orientation were measured); after the group had implemented the negotiation activities with the other party (coercion level and contract formality were measured); and after the negotiated agreement was finalized and the outcomes had been evaluated and communicated to the whole class (satisfaction was measured).

The specific questions asked in the survey are listed in Table One. Participants were asked to describe, on a scale from 1 to 7, how strongly they disagreed (1) or agreed (7) with a question. Each set of questions represented or measured one of the variables in the model. In combination, the answers to these questions give a reasonably accurate measure of the variable (such as coercion). All scales are founded upon published research in the marketing literature. We were then able to use EQS software to examine the correlations between the applicable variables. (The basis of each scale is available from the lead author as well as full reporting of reliability and validity of the measures.)

The unit of analysis was the relationship formed between two companies, as viewed by each individual participant. Each participant was asked to answer questions about his or her attitudes prior to entering each negotiation as well as to assess each relationship he or she subsequently forged with another party. Because some relationships were terminated before an agreement was reached, only relationships that continued through all three phases of data collection were included. A total of 264 individual observations were ultimately identified from the 150 participants.

The proposed structural model shown in Figure One was analyzed using structural equation modeling. The structural equation model uses regression models to specify causal relationships among latent variables (variables that have to be measured indirectly). The regression function describes how the mean of a response variable (such as coercion) changes according to the value of an explanatory variable (such as cooperative orientation). A positive effect would indicate that, as the mean of the explanatory variable increased, so did the mean of the response variable. A negative effect would indicate that, as the mean of the explanatory variable

increased, the mean of the response variable decreased. The mean of each variable (on a scale from 1 to 7) was:

| | |
|---|---|
| Dependence | 4.14 |
| Cooperativeness | 3.56 |
| Coercion | 3.03 |
| Contract Formality | 4.38 |
| Satisfaction | 4.75 |

In addition to the positive or negative direction of the effect, the size of the effect can also be measured by the Pearson correlation.[1] The correlations are shown in Table Two. A significance test is a way of statistically testing a hypothesis by comparing the data with values predicted by the hypothesis. Data that fall far from the predicted values provide evidence against the hypothesis. A summary of the analysis appears in Table Two below and further details can be obtained from the primary author.

## Research Results

Our findings indicate that when participants exhibited a higher degree of cooperative orientation, coercion was used less frequently during the negotiation. As the negotiation progressed, lower levels of coercion led to higher levels of satisfaction with the relationship formed. In addition, the cooperative orientation of the participants had an unexpected, but positive and significant effect on contract formality. In other words, more cooperative participants tended to choose more formal contract arrangements.

> *Hypothesis One:* The perceived level of dependence will have a significant and positive effect on cooperative orientation of the negotiators. **Not Supported**.

We hypothesized that, consistent with the PEP, the more dependent one party is on another party, the more that party (or its members) will desire to act cooperatively (Stern and Reve 1980). Correlation analysis found a negative, but not significant effect of dependence upon cooperativeness, so Hypothesis One is not supported.

**Table Two**
**Hypothesis Correlations**

| Explanatory Variable | Response Variable | Effect Size (*r*) (Correlation) | Statistical Significance |
|---|---|---|---|
| Dependence | Cooperative orientation | Negative: −.059 | Not significant |
| Cooperative orientation | Level of coercion | Negative: −.167 | Significant |
| Cooperative orientation | Contract formality | Positive: +.263 | Significant |
| Level of coercion | Perceived satisfaction | Negative: −.327 | Significant |
| Contract formality | Perceived satisfaction | Positive: +.045 | Not significant |

*Hypothesis Two:* The cooperative orientation of the negotiator will have a significant and negative effect on the level of coercion used in the negotiation. **Supported**.

This assertion is again based on the PEP, especially Graham's work (1987), which demonstrated that elements such as cooperativeness are established before the negotiation begins and will have an effect on negotiation practices. Hypothesis Two asserted that a greater cooperative orientation of the negotiator would lead to a lower level of coercion. This assertion is supported by the regression analysis.

*Hypothesis Three:* The cooperative orientation of the negotiator will have a significant and negative effect on the degree of contract formality achieved in the negotiation. **Not Supported.**

This assertion is also based on Graham's work on the PEP (1987). Correlation analysis revealed a significant, but positive relationship between cooperativeness and contract formality. The cooperativeness of the party did not lead to a lesser degree of formality in the contract as hypothesized, rather it led to a *greater* degree of contract formality. Thus, Hypothesis Three was not supported.

*Hypothesis Four:* The level of coercion implemented in the negotiation will have a significant and negative effect on the degree of perceived satisfaction in the relationship. **Supported.**

Power base research in channels and supply-chain management has consistently demonstrated that the use of higher levels of coercion correlates with higher levels of dissatisfaction than does the use of less coercion. Regression analysis demonstrated that coercion indeed has a negative and significant impact on satisfaction. Hypothesis Four is thus supported.

*Hypothesis Five:* The level of contract formality will have a significant and negative effect on perceived satisfaction in the relationship. **Not Supported.**

This hypothesis was not supported by regression analysis. Higher levels of contract formality actually *increased* the satisfaction, but not significantly. Hypothesis Five asserted that satisfaction would decrease as the level of contract formality increased. The direction of the effect was the opposite of the hypothesis (although not significant) so Hypothesis Five is not supported.

## Managerial Implications and Conclusions

We found support for several key aspects of our model, which are of managerial as well as theoretical interest. First, the model showed that

particular personal characteristics and negotiation practices can contribute to parties' increased satisfaction with the negotiation. We believe that satisfaction with the initial negotiation may be an early indicator of the subsequent maintenance of long-term relationships between the parties, although that is beyond the scope of this study. On the other hand, a lack of cooperative orientation or the use of coercive practices by negotiators in the early stages of relationship development can lead to reduced levels of satisfaction in the relationship.

Examples of this type of situation can be found throughout industries where smaller firms deal with larger firms on a daily basis. For example, coal companies deal with railroads on a regular basis, because rail is a predominant mode of transportation for getting coal to power plants. However, many coal companies are smaller organizations than railroads and are classified as "captive shippers" that are highly dependent on specific rail carriers. In these cases, it is a challenge for both parties to fully embrace cooperative negotiating strategies and for the railroads to refrain from utilizing the coercive negotiating strategies made possible by their power in the relationship. We believe that if long-term relationships are to develop and strengthen the supply chain, then this "relational hurdle" must be addressed. Longitudinal research is required to fully investigate this assertion.

We also found that cooperative orientation has a significant and negative effect on the level of coercion used in the negotiation. If a negotiator is predisposed toward cooperation, then that negotiator will tend to use less coercive tactics. This finding has important implications for determining the makeup of a supply-chain negotiation team. This finding may help managers to understand which individuals should be involved in negotiations with suppliers and/or customers. It is common for a negotiating team to comprise representatives of finance, operations, and either purchasing, or marketing and sales (depending on whether the negotiation is with a supplier or customer). A manager should be aware of the personal characteristics of each team member and recognize when members may benefit from some additional negotiations training. For instance, a new operations representative may need to be made aware that a cooperative orientation can have a positive impact on the negotiation outcome. The new representative of the operations department should not become overly sensitive to an operational constraint in a negotiation without considering the need for cooperative benefits gained by other functional areas of the firm during a bargaining session.

The findings of this study highlight the importance of determining who the most appropriate lead negotiator should be in any given negotiation. The decision as to who is going to take the lead can affect the general direction of the negotiation. For example, if a representative of the purchasing department is responsible for leading the negotiation, there may be a stronger cost focus than if a representative of the engineering

department — where product design and quality issues are often paramount — were to bear that responsibility. Similarly, if the sales department has the lead, then there may be greater emphasis on "getting the sale at any cost." In this cross-functional setting, all functional representatives have an interest in the negotiation, but each individual's interest may be different. Therefore, it becomes necessary to make sure that all parties on a negotiating team understand the overall objectives and work together to make sure those overall objectives are attained, recognizing that individual goals may or may not be fully achieved as the overall goal is pursued.

Cooperative orientation also had a significant positive effect on the degree of contract formality in the agreement. Our hypothesis that the effect would be negative was not supported; instead our findings support the use of formal contract terms in relational supplier–customer relationships. This finding challenges researchers who have suggested that when negotiating parties have a strong relationship and display trust, then the establishment of more specific contractual terms becomes superfluous. Rather, our findings suggest that supplier–customer relationships will benefit from specific contractual terminology. We must note, however, that there may be a bias toward formality in this research because the research simulations conducted were the first negotiations to take place between these parties, so elements of trust had not had an opportunity to develop. On the other hand, the realities of the business community support negotiation outcome formality measures. While some academics have suggested that very relational outcomes do not require formal contracts (Ring and Van de Ven 1992; 1994), the business community tends to depend on formality for legal purposes as the negotiation process comes closer to conclusion. The results of this study indicated that participants did not necessarily view the formality of the contracting process as anti-relational, but, in fact, relationship-enhancing in many ways.

A link between the use of coercive negotiation practices and dissatisfaction with the negotiation outcome was also substantiated. Aggressive strategies using high levels of coercion had a negative effect upon relationship satisfaction. As mentioned earlier, many manufacturers now outsource a majority of their cost of goods sold (Fawcett and Magnan 2000). This means that more products and services will be obtained from suppliers rather than produced in-house. Therefore, negotiated relationships between suppliers and customers are becoming increasingly important, and relationship managers must understand how best to build strong relationships with their supply-chain partners. These findings support the idea that hardball negotiation tactics can indeed negatively affect participants' perceptions of the success of the negotiation and, ultimately, the relationship between the parties.

Companies increasingly strive to develop closer, more cooperative relationships with key suppliers and key customers (Monczka et al. 1998).

They seek to gain benefits by maintaining trading relationships over a longer period of time with key suppliers or customers (Spekman 1988). Negotiation practices play a key role in these endeavors. Firms striving to develop and integrate their supply chains (or value systems) need to know what kind of effect the utilization of negotiation practices, such as coercion and contract formality, will have on a relationship. In fact, the Association for Manufacturing Excellence surveyed suppliers to determine what characteristics they use to describe a "Best Customer"; the quality of the negotiation and award process were among the characteristics named by these suppliers (Moody 1992).

In the theoretical domain, Gary Frazier has framed the expansion process of a relationship as a consequence of each party's satisfaction with the other's role performance and its associated rewards (Frazier 1983). Later research by Shankar Ganesan (1993) showed that residual emotions such as satisfaction were positively related to noncoercive practices. He was not able to support the assertion that satisfaction was negatively related to aggressive strategies. The results of this research provide some additional support for the contention that satisfaction is diminished by the use of coercive practices.

## Limitations and Future Research Issues

While the controlled environment of the classroom allowed the variables of this study to be tailored to abstract theoretical constructs, the use of student subjects participating in an in-class simulation makes the options for generalizing the results to practitioners somewhat limited. A negotiator's attitude and cooperative orientation toward a particular negotiation is heavily dependent upon the particular situation, including his or her prior working relationship with the negotiation counterpart. Replications of this effort in a real-world context would increase the relevance of these findings to actual business practice.

In addition, surveying business professionals in regard to this particular area of investigation would provide additional insights. However, we note that managers are generally willing to offer insights into relationship strategies when the issues being investigated are generic and not tied to specific identifiable relationships.

Although the success of a cooperative relationship depends largely on how the parties develop the relationship over time, negotiation of the initial agreement is critical in setting the stage for subsequent development of the exchange relationship (Rognes 1995). The analyses contained in this research link specific negotiation practices with the achievement of satisfactory outcomes. In this research, observations were recorded at several points during a single negotiation event and prior performance of the parties could not be addressed. Future research should consider adapting a longitudinal design to assess the effects after a series of transactions have

occurred. A longitudinal study would involve measuring the same parameter at two or more points in time (Agresti and Finley 1997). This would allow researchers to learn more about the positive experiences that help build trust and cooperation.

We should also acknowledge that the findings here do not necessarily reflect the true inter-functional dynamic found in business settings. The students participating in this research were all studying within a "supply-chain" major, and consequently, the realities of internal team conflict between purchasing, sales, operations, engineering, etc., that often occur in a typical business setting are not present in these findings. There was, however, significant potential for intra-team conflict based on students' personal concerns and characteristics. For example, conflict could have arisen between two students over strategy when one student cared more or less than the other about his or her grade for the assignment, and, consequently, took a different approach to the negotiation (to maximize profit margin).

It would also be instructive to investigate negotiations that terminate before an agreement is reached to see if particular practices are involved. Subsequent research could also control for the functional category assigned to each group (manufacturer, distributor, carrier). This would help uncover whether reactions vary according to position in the supply chain or value system. Lastly, analysis based on dyadic pairings of the groups would help to shed light on the negotiation process. These types of questions are central to a better understanding of how individuals and firms can become more effective at implementing the negotiation process. Negotiation is, of course, a highly complex process involving many dynamics, and while this simulation setting was designed to be relatively complex for a classroom learning setting, there are many dynamics of general negotiations that this research could not capture.

## Conclusion

The current business environment finds many firms engaged in business-to-business relationships that are not being optimized from a value system or supply-chain perspective. Managers need guidance on how to best accomplish supplier–customer relationship goals. Designing and managing the relationship is an integral component of implementing sourcing strategies as greater integration is sought in the value system or supply chain. The negotiation process model contributes to developing successful supplier–customer relationships and can serve as an early predictor of success or failure in matters such as supplier or customer development. Those applications are important to senior management, as well as to functional management representatives such as operations management personnel and to all personnel who manage the relationship with suppliers and customers on a daily basis. Managers in these areas can benefit from the

findings presented here by using effective negotiation practices to maximize supply chain and value system benefits.

## NOTE

**1.** Also known as the standard regression coefficient for the regression model, the Pearson correlation measures the strength of the linear association between the explanatory variable and the response variable with a larger absolute value meaning a stronger association. An increase of one standard deviation in the explanatory variable corresponds to an increase of ($r$) standard deviation in the response variable.

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