

# Conflict in Business-to-Business e-Commerce (B2B): A Study of B2B Relational Structure and Perceptions of Conflict, Power, and Relationship Success

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conflict, power, business-to-business e-commerce.

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## Abstract

This field study investigates how the relational structure of business-to-business (B2B) e-commerce relationships affects perceptions of conflict, power, and success in e-commerce relationships. Data from interviews with employees in 82 U.S. organizations reveal that employees in community-oriented B2B structures perceive themselves as experiencing more process conflict than do employees in buyer/supplier-oriented structures. Also, employees in community-oriented B2B structures perceive more organizational power. Furthermore, the B2B e-commerce relational structure was found to moderate the relationship between perceived organizational power and the number of reported conflict incidents. Specifically, in buyer/supplier structures, power differences were associated with low conflict and in community-oriented structures power differences were associated with high levels of conflict.

Business-to-business e-commerce (B2B e-commerce) is the electronic purchase of goods and services by businesses, from businesses (Claycomb, Iyer, & Germain, 2005). These electronic transactions facilitate efficiency, enhance capacity, and speed resource exchange among organizations. Increasingly, B2B has become a significant aspect of U.S. business. The U.S. Census Bureau estimates that for 2007, 93% of total U.S. e-commerce was B2B-related and the total value of U.S. shipments, sales, and revenue attributed to B2B e-commerce totaled roughly 3 billion dollars (U.S. Census Bureau, 2009).

To date, the research on B2B e-commerce has focused almost exclusively upon the technological systems that underpin these interorganizational relationships and in doing

so has failed to consider the human, *relational* component inherent in these interactions. In this study, we seek to address this deficiency by investigating how the e-commerce structure affects the perceptions and actions of the people in these interacting firms. And when doing so, we will investigate the connection between B2B e-commerce relational structure and conflict.

Typically, research on organizational conflict has focused on *intraorganizational* conflict, but given the current frequency of interorganizational interactions and conflicts, there is a need for more research related to *interorganizational* conflict (Callister & Wall, 2001; Sheppard, 1992; Shrum, 1990). As such, our study examines interorganizational conflict within the B2B e-commerce environment. Conscious of this need, we examine interorganizational conflict within the B2B e-commerce environment and when doing so rely primarily upon power theory for our conceptual framework and hypotheses development.

In this report, we first describe B2B e-commerce and the construct, B2B e-commerce relational structure. Next, we consider the construct of power and its influence within relationships. We then provide an overview of conflict and its relationship to power. Subsequently, we provide the conceptual framework and present the hypotheses. This is followed by a delineation of the methodology and results. Finally, we discuss the theoretical and practical implications of the study, its limitations, and the potential for future research.

## B2B e-Commerce and Its Relational Structure

While the effective exchange of information, goods and resources has long been an essential component of interorganizational success, the method of managing this exchange has been profoundly altered by technology (Chowdhury, 2000). Through the use of electronic data interchange (EDI) and later, through Internet-based applications, organizations have created new electronic procedures to handle interactions. However, industry's increasing interest in B2B e-commerce has so far not been equally apparent in academic research (Cullen & Webster, 2007; Reynolds, 2000). Hopefully, the current study helps reduce this deficiency.

In order to investigate the electronic structures and their effects, we first needed to identify the types of B2B relational structures; however, a search of the literature revealed no such classification. While some taxonomies of B2B e-commerce do exist, prior categorizations focus on the operational aspects of the transaction or the mechanisms that go into the exchanges (Cullen & Webster, 2007; Jones & Beatty, 2001; van de Velde, 2000), not on the nature of the *relationships* themselves. Therefore, we conducted an initial study wherein we interviewed 66 individuals from 26 organizations in the United States, all of whom were involved in various B2B e-commerce relationships on behalf of their organizations. From these interviews, we identified two distinct categories of B2B e-commerce relational structures: (a) "buyer/supplier-oriented relationship structures" and (b) "community-oriented relationship structures." [More information about how we arrived at these categorizations is delineated in the Method section.]

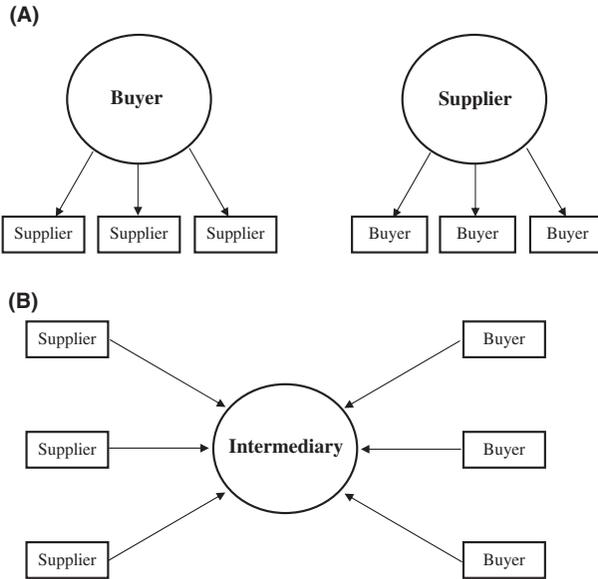


Figure 1. (A) Buyer/supplier-oriented B2B e-commerce relational structures. (B) Community-oriented B2B e-commerce relational structure.

Buyer/supplier-oriented relationship structures are established to create or sustain a particular buying/selling relationship (see Figure 1A). Such a structure may consist of an arrangement between a buyer organization and a set of targeted suppliers. For example, General Electric's Trading Partner Network (TPN) links 1,700 suppliers to the buyer. Supplier-oriented relationships are similar in nature, except that the supplier creates a system of targeted business customers, as is the case with Boeing's Commercial Airplane Group which links the company to approximately 700 buyers. One distinct characteristic of buyer or supplier-oriented relationship structures is the one-to-one nature of interaction between the buyer and seller. To illustrate, within Boeing's Commercial Airplane Group, interaction occurs primarily between Boeing and each buyer; the 700 buyers do not communicate with each other within the context of this B2B structure.

In contrast to the buyer/supplier-oriented relationship structures, there are the "community-oriented relationship structures" (see Figure 1B). These B2B e-commerce relationships encompass more variety in terms of possible groupings of buyers, suppliers, and possibly a third party. Community-oriented relationships differ from buyer/supplier-oriented relationships in two key ways: First, there is not necessarily a "buyer" or "supplier" responsible for its creation/continuation, and second, the relationship is created to serve either an open marketplace or a broad set of "member" users. A marketplace-oriented website created by Ariba serves as an example of such a community-oriented structure. As an industry leader that provides sourcing and procurement expertise to organizations, Ariba created a B2B website as an online network to connect

buyers and sellers such as Chevron, Cisco Systems, Hewlett-Packard, and Unilever across a wide range of products.

Having identified the two primary relational structures occurring within this context, we can turn now to a discussion of power and subsequently to its effect on perceptions of conflict in the B2B e-commerce relationships.

## Power

A common underlying theme in the study of power is that it involves *relationships*. From this perspective, power is defined as the extent to which one party can carry out its own wishes without resistance from another party in the course of relational interaction (Pfeffer, 1981: 3). In other words, it is nearly impossible to discuss one's power except within the context of a relationship with another party. Indeed, power is a characteristic found in social relationships at all levels of analysis (Rubin, 1990).

Organizational researchers have long emphasized the impact of such power interactions on *interorganizational* relationships (Kim, 2000; Van de Ven & Walker, 1984). In interorganizational relationships, power concerns the extent to which the organizations are dependent upon each other. The link between dependency and power is well established in organizational research, and most theories of power assume some degree of dependency (Bacharach & Lawler, 1980). For example, resource dependency theory emphasizes the link between organizational dependency and power (Galaskiewicz, 1985; Molnar & Rogers, 1979; Pfeffer & Salancik, 1978; Van de Ven & Walker, 1984). Similarly, the open-systems perspective (March & Simon, 1958; Lawrence & Lorsch, 1967; Pfeffer & Salancik, 1978) states that organizations are not independent; to some extent, all organizations are reliant upon the external environment for certain key resources and information.

Because power is generally considered to involve dependency, we propose that a power difference exists where social actor A (e.g., person, group, or firm) can force social actor B to do something that B would not otherwise have done (Dahl, 1957, pp. 202–203; Kim, Pinkley, & Fragale, 2005). We will use the extent of dependency and the subsequent balance of power that exists among B2B partners as the theoretical basis for our examination of conflict within these relationships. Specifically, we will theorize conflict is affected by power differences and it is to conflict which we now turn.

## Conflict

Conflict is a social process between individuals, groups, or larger entities wherein one party perceives its interests are being opposed or affected by another party (Callister, 1996; Wall & Callister, 1995). In a relationship, the comparative power level of each party affects the level of conflict.

Perceived power differences tend to reduce the level of conflict (Smith, Carroll, & Ashford, 1995). Specifically, previous studies indicate that when two parties are interacting, the party with low power usually acquiesces to the stronger party's demands without overt conflict (Hayward & Boeker, 1998). Coleman (2000) states that conflict may be dictated by preexisting power interactions between the parties (established

through history and/or accessibility to resources). The interorganizational relationship literature also indicates that potential constraints or problems organizations face due to power are sometimes unavoidable because of issues of dependency (Callister, 1996; Galaskiewicz, 1985; Van de Ven & Walker, 1984).

In an interorganizational relationship, the organization which is depended *upon* holds the power (Emerson, 1962), and the perceptions of this power determines each party's actions toward the other party. Specifically, the perception of a power difference creates a sense of confidence in stronger parties and a sense of helplessness in weaker parties (Coleman, 2000). As a result, the weaker party will often acquiesce to its stronger counterpart without initiating or engaging in overt conflict.

In contrast to the low conflict exhibited in a relationship of unequal power, a relationship between parties of relative equal power exhibits conflict levels indicative of less dependency-based control (Molnar & Rogers, 1979). As such, these "equal power" parties are more inclined to disagree over goals and issues (Pruitt & Rubin, 1986). Also, because of this sense of equal standing, each party will feel tempted and empowered to promote its own agenda. These relational conditions result in greater overt conflict between the parties.

Having delineated the relationship between power and conflict—namely, that unequal power generally results in less conflict—we now focus on two facets of conflict that are relevant to interorganizational power, particularly within the B2B e-commerce context. Based on the extant literature (Jehn, Northcraft, & Neale, 1999; Molnar & Rogers, 1979; Mooney, Holahan, & Amason, 2007; Rahim, 1983), we will examine (a) the number of conflict incidents B2B e-commerce employees reported as occurring in a particular relationship and (b) the level of process conflict.

According to Pondy (1967), general conflict in relationships can be described in terms of their number or frequency of occurrence. Pondy represents this as a series of "episodes" or incidents which occur within these relationships. The nature of business between individuals and organizations makes conflict inevitable and "pervasive" (Putnam & Poole, 1987). Note that past researchers have found that the greater the number of conflict incidents which occur, the more likely it is that subjects report detrimental effects upon relationships (Anderson & Narus, 1990; Geyskens, Steenkamp, & Kumar, 1999; Webb & Hogan, 2002). According to conflict researchers, conflict can emerge in a variety of forms (Janssen, Van De Vliert, & Veenstra, 1999; Pearson, Ensley, & Amason, 2002). One such form is particularly relevant to the dynamic nature and requisite (and often frequent) interaction of the B2B e-commerce context: process conflict.

Process conflict is a type of conflict which involves disagreements about task process (rather than task content), such as selecting various courses of action and determining how resources will be assigned and duties or responsibilities distributed (Jehn, 1995, 1997; Jehn & Mannix, 2001; Jehn et al., 1999). It is formally defined as an awareness of issues or controversies about aspects of how tasks will be accomplished and/or proceed (Jehn & Mannix, 2001, p. 239). Findings regarding the positive or negative impact of process conflict are not definitive. However, many of the findings associate negative consequences with process conflict, particularly when such conflict occurs at high levels (Jehn & Mannix, 2001; Kellermanns & Eddleston, 2004; Matsuo, 2006). Given this, we

approached process conflict theoretically as a type of conflict leading primarily to undesirable results.

The decision to measure process conflict is based on the nature of the B2B e-commerce context and its relevance to the interactions that occur within said context. The dynamic and sometimes complex quality of B2B e-commerce transactions, coupled with the boundary-spanning environment in which these transactions occur, makes process-oriented discussions crucial and inevitable among B2B e-commerce partners. Furthermore, the characteristics of the e-commerce environment (e.g., fast paced, complex, cross boundaries, cost and returns at stake) increases the likelihood of process-oriented conflict.

An example that illustrates the presence of frequent, process-oriented conflict within the B2B e-commerce context involves the relationship between one organization and a major member/client within an online marketplace. The main problem stemmed from an integration issue between the two organizations' technological systems that created operational problems with the order verification process. Both parties were powerful organizations and both insisted the other organization's technology was at fault. Ultimately, it was determined a third-party intermediary was inadvertently blocking contact between the two companies. However, this conflict became very heated and took almost a year of repeated interactions to resolve.

When asked the nature of the conflict, one involved manager's response was "process—you have to talk process with your partner. We're so reliant on automation that when there's a problem, it disrupts the business process." He went on to state that only with "lots of negotiation and communication" were all the parties able to arrive at an acceptable resolution after almost 12 months of numerous conflict incidents.

Having indicated the two ways in which conflict is to be studied in this research, and having presented an example that illustrates a manifestation of these conflict constructs in a B2B e-commerce context, we now present our conceptual framework and hypotheses.

## Conceptual Framework and Hypotheses Development

The conceptual model identifying the relationships among represented variables is presented in Figure 2. Consider first, the B2B e-commerce relational structure and its effect on conflict.

### B2B e-Commerce Relational Structure and Conflict

When considering this effect, we predict that employees involved in community-oriented relationships will perceive a greater level of process conflict and a greater number of conflict incidents than will their counterparts in buyer/supplier-oriented relationships. Power theory provides the basis for this reasoning.

As explained above, power is a characteristic found in social relationships, including interorganizational relationships (Kim, 2000; Van de Ven & Walker, 1984). In a typical buyer/supplier-oriented structure, that relationship is typically well-defined. When power imbalances are present in such relationships, the effect is similarly well-defined; the stronger party feels confident to push its agenda and the weaker party feels less able

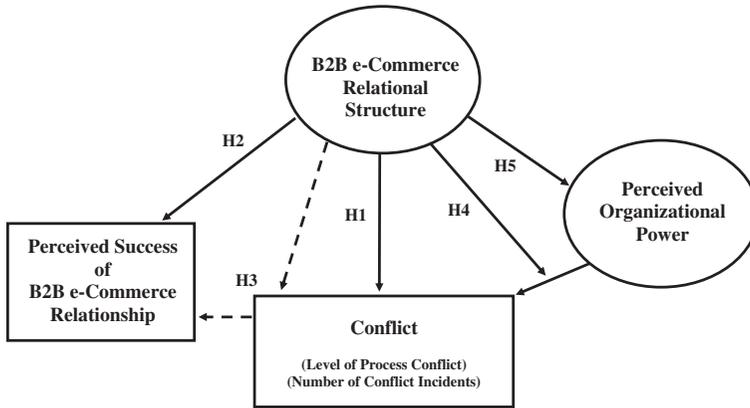


Figure 2. Conceptual model.

to resist or to advocate its wishes. The result is fewer conflicts. When power is balanced, it is a clear struggle—conflict—between two parties which is fairly straightforward.

In contrast, community-oriented structures involve relationships which take place among a greater number of organizations in a much more ambiguous environment. As such, there are more opportunities for interdependence with another organization, distracting sources of information, divergent goals, and potential replacement partners in relationships of this type. Therefore, when a powerful party exercises its power, the weaker one will tend to resist, creating conflict.

Given this reasoning, the result should be fewer conflicts in buyer/supplier-oriented relationships relative to their community-oriented counterparts. In addition, the greater complexity of the community-oriented environment should create a greater likelihood of process-oriented conflict in community-oriented relationships than in buyer/supplier-oriented relationships.

Stated formally, it is hypothesized:

**Hypothesis 1a:** Employees from organizations involved in B2B e-commerce community-oriented structures will report more process conflict than employees from organizations involved in buyer/supplier-oriented B2B e-commerce structures.

**Hypothesis 1b:** Employees involved in B2B e-commerce community-oriented structures will report a greater number of conflict incidents than employees involved in buyer/supplier-oriented B2B e-commerce relationship structures.

## B2B e-Commerce Relational Structure and Perceived Success of Relationship

In addition to and consistent with the prediction that B2B e-commerce community-oriented relationships will experience more conflict than organizations in buyer/supplier-oriented B2B e-commerce relationships, we predict that managers and other boundary-spanning employees involved in community-oriented relationships will report less perceived success with their B2B e-commerce relationships than will employees

whose relationships are embedded in buyer/supplier-oriented B2B e-commerce relational structures. While buyer/supplier-oriented relationships will exhibit complexity and issues, the nature of this type of relational structure (i.e., two parties) should help minimize potential difficulties and aid efficiency efforts. For community-oriented relationships, the added members of the community (which often includes a third-party intermediary acting as the technological host or service agent) have the potential to increase complexity and decrease efficiency. It is also possible that the process involved in community-oriented B2B-e-commerce is more prone to problems with the multiple members and technological units involved. Therefore, it can be predicted that subjects will report lower levels of perceived success than their buyer/supplier-oriented counterparts. As such, we hypothesize:

**Hypothesis 2:** Employees involved in B2B e-commerce relationships utilizing buyer/supplier-oriented relational structures will report greater perceived relationship success of the B2B e-commerce relationship than employees involved in B2B e-commerce relationships utilizing community-oriented B2B e-commerce relational structures.

### **B2B e-Commerce Relational Structure, Conflict, and Perceived Success of the Relationship**

To this point, we have theorized that B2B e-commerce relational structure will affect perceptions of conflict and the extent to which these interorganizational, e-commerce relationships are deemed successful. These predictions are graphically represented in Figure 2. When we consider the ebb and flow of conflict in this process, it can also be reasoned that conflict has an intervening effect upon the relationship between relational structure and perceived success. Likewise, it can be argued that conflict mediates the relationship between structure and perceived success (arrow H3 in Figure 2). Specifically, incidents of conflict result in a decrease of collaborative tendencies. If these incidents go unresolved or if they routinely produce negative perceptions among involved parties, an environment is created which decreases the willingness to collaborate. This lessening of collaborative interaction will have an adverse effect on information exchange and the subsequent success of the B2B e-commerce relationship.

Consider also that B2B e-commerce relationships depend heavily upon successful coordination and interaction among the organizations in the relationship. When problems arise, coordination and problem-solving are essential (Putnam & Poole, 1987). However, these corrective processes are undermined when there are high levels of process conflict among the organizations involved. Such conflict takes time, energy, and resources away from successful implementation, and this diversion will negatively impact productive work processes and by extension, performance (Jehn, 1997). Given this, we hypothesize:

**Hypothesis 3a:** The level of process conflict will mediate the relationship between B2B e-commerce relational structure and the perceived success of the e-commerce relationship, such that conflict reduces the level of perceived success reported.

**Hypothesis 3b:** The number of conflict incidents reported will mediate the relationship between B2B e-commerce relational structure and perceived success, such that as conflict increases, the level of perceived success reported decreases.

### Power, Conflict, and the Effect of B2B e-Commerce Relational Structure

As mentioned previously, power theory dictates that when two parties are interacting, the party with low power usually acquiesces to the stronger party's demands without overt conflict (Hayward & Boeker, 1998). We expect this traditional notion to hold when the B2B e-commerce relationship takes place in a *buyer/supplier-oriented* relational structure. That is, all other things constant, we predict that when two organizations are engaged in this form of B2B e-commerce relationship, an organization which perceives it has low power relative to the other firm will often yield rather than create conflict by challenging the existing power structure. Therefore, conflict will be low.

However, this effect will not hold—we predict—when the relational structure is *community oriented*. In B2B e-commerce community-oriented structures, low perceived power will *generate* conflict, because the weak/low power organization will take actions to increase its strength. Recall that B2B community-oriented structures are characterized by the interaction of multiple parties. This allows for the shifting of power among specific organizations within the B2B e-commerce structure in three ways: (a) via an increase in the number of alternatives available to weaker parties, (b) through an increase in the information available to weaker organizations, and (c) from the opportunity for managers of weak organizations to work collectively with others to improve their power base.

Consider each of these three avenues in more detail. First, power theory indicates that one organization's dependency upon another is determined in part by the number of alternatives which are available to and identified by the focal organization outside of the current relationship (Pfeffer, 1982; Pfeffer & Salancik, 1978). In B2B e-commerce community-oriented structures, alternatives are more easily discovered and accessed because there are multiple buyers and/or suppliers at hand. For example, a retailer might traditionally rely on the industry leader as its sole supplier, because of that leader's powerful presence in the market or because of a lack of awareness of other potential suppliers. Situated within an e-commerce community-oriented structure, this retailer can access and more easily "shop" through the inventory of multiple suppliers (often for very little relative cost). This significantly increases the "supplier pool" available to it and subsequently expands its alternatives.

A second way that weaker community-oriented members can enhance their power is by capitalizing on the availability of information. Through e-commerce technology, information about multiple organizations is readily available to the various suppliers and buyers that utilize and have access to members-only information through the community-oriented B2B marketplace. An organization can find information from a variety of alternative transaction partners, any of whom can be compared/pitted against the current partner in ways not possible outside of that community, thereby potentially increasing its power relative to that other party.

Thirdly, community-oriented relational structures provide the opportunity for weaker organizations to build strength by working collectively (i.e., building coalitions) instead of alone in dyadic situations. Pfeffer (1982) reports examples in traditional business relations in which small organizations created associations and gained control over external forces (e.g., the formation of purchasing cooperatives in an effort to control interdependence on specific suppliers). B2B e-commerce community-oriented structures provide a rich environment for such formations. For instance, a group of independent suppliers functioning in an industry dominated by one buyer can form an alliance to create an online auction marketplace unbounded by geographical or temporal constraints. The result is a potentially vast increase in their pool of buyers and a greater control over price and cost than they would have if dealing individually with such a powerful buyer.

In sum, weak firms in B2B e-commerce community-oriented relational structures can build their power by increasing their alternatives, using available information, and working collectively. Increased alternatives provide an incentive for weak/low power organizations in such structures to resist the will of the stronger party. As a result, initial power differences are reduced and the effect of power on conflict is reduced, increasing the likelihood of conflict occurring. In contrast, weak firms in buyer/supplier structures do not have these opportunities. Based on this reasoning, we predict:

**Hypothesis 4a:** Business-to-business e-commerce relational structure will moderate the relationship between perceived organizational power and the level of process conflict reported; specifically, levels of process conflict reported will be lower in buyer/supplier structures than when the relational structure is community oriented.

**Hypothesis 4b:** Business-to-business e-commerce relational structure will moderate the relationship between perceived organizational power and the number of conflict incidents reported; specifically, the number of conflict incidents reported will be lower in buyer/supplier structures than when the relational structure is community oriented.

The above reasoning—that weaker firms can and will modify power imbalance in community-oriented structures—also supports the prediction that organizational members in community-oriented structures will perceive themselves as having more power than do members in buyer/supplier-oriented relationships. Our reasoning here is based upon mental schema. As they deal with other firms in B2B e-commerce transactions, managers and other boundary-spanning employees in community-oriented relational structures develop templates or mental schemas which are a cognitive map of social interactions (Bartunek, 1984; Goffman, 1974; Manz & Sims, 1986). This template allows employees to reduce the cognitive complexity of the transactions. Embedded in this schema are ways of thinking about relationships, interactions, roles, power, and processes in the B2B transactions.

Over the course of multiple transactions, employees in community-oriented relational structures note they can enhance their power by finding alternative buyers or suppliers, using available information and forming coalitions with other members. Therefore, their

schema is that their firm is capable of maneuvering to increase its power. In contrast, the schema of employees in the firms operating in buyer/supplier-oriented relational structures is that they must play the hand that has been dealt to them. They lack the same maneuverability within the dyadic relationship. Therefore, their schema is the perspective of being locked into their current power position.

**Hypothesis 5:** Employees involved in B2B e-commerce community-oriented relationships will report greater perceived organizational power than employees involved in B2B e-commerce buyer/supplier-oriented relationships.

## Method

### Participants and Procedure

To test the above hypotheses, we interviewed 141 B2B e-commerce managers and boundary-spanning employees from organizations in the United States. A total of 160 companies were contacted for this study, with employees from 82 companies agreeing to participate; hence, the response rate was 51%. From these 82 companies, we were able to gather data for 95 unique B2B e-commerce relationships. A relationship (not the organization) was our primary unit of analysis.

Of the 82 organizations, 15% had < 25 employees and 17% had between 26 and 100 employees. In contrast, 50% of the organizations had 1,000 or more employees. Nine percent of companies reported between 100 and 200 employees, 4% reported between 200 and 500 employees, and 6% between 500 and 1,000 employees. Of the 82 organizations, 43% were in service-oriented industries and 57% were in goods-oriented industries. [A means comparison test between these two categories revealed no significant statistical difference with regard to the two conflict variables.]

The firms we contacted for this study were identified in multiple ways: (a) through their association with the researchers' university, (b) by recommendation from other participating organizations, (c) by cold calling, and (d) through past consulting relationships with the researchers. Of the organizations who participated, 18% originated from the first category (university affiliation), 27% originated from the second category (recommendation), 44% originated from cold calling, and 11% from past consulting relationships. [A subsequent means comparison test of respondent answers across the identification categories revealed no significant statistical difference.]

Participants from these companies consisted primarily of middle to upper-middle-level managers with first-hand knowledge of a particular e-commerce relationship of their organization and employees working with these managers who were engaged in boundary-spanning activities for the same B2B e-commerce relationship. These respondents represented a mix of functional and technical personnel. For each organization, one manager was selected for the study and whenever possible, an additional boundary-spanning associate working with that manager was also included. When more than one relationship was gathered from an organization, every effort was made to ensure different managers were surveyed for each relationship. The exception to this was four

managers who discussed two different relationships on behalf of their organization. In each of these cases, the two partner organizations discussed by the manager was different. Job titles for subjects varied across organizations, but typical titles for managerial subjects included “corporate account manager,” “business development officer,” “director of purchasing,” “logistics manager,” “territory manager,” and “VP of purchasing logistics,” while typical job titles for additional boundary-spanning personnel included “product manager,” “shipping manager,” and “technology specialist.” When a boundary-spanning employee for a particular organization participated, an average score of both the employee and the manager’s responses was calculated.

The primary form of data collection was a semi-structured phone survey. The average length for interviews was 30 min. The interviews began with general questions about the organization (e.g., nature of the organization’s purpose, size of organization), moving to more specific questions about one specific B2B e-commerce relationship. (In interviews with supporting boundary-spanning employees, subjects were instructed to discuss the same B2B e-commerce relationship as the one discussed by their manager.) Each interview was transcribed shortly after completion.

Our decision to collect data using phone surveys was based on the subjects we were targeting and our desire to increase accuracy and response rate. Past experience with B2B e-commerce managers led us to conclude our best chance of obtaining quality, complete data from these individuals was to arrange a set time in which we could ensure the respondents completed the survey. B2B e-commerce employees work in a fast-paced environment and often perceive themselves as severely lacking in time. Therefore, we felt surveys delivered via mail or the Web were likely to go unnoticed or ignored. Ironically, it was via a more personal approach that we were able to get these “technological” subjects to take the time to complete our survey. The benefits of phone interviews include greater control of the data and potentially less effect on the interviewee (Babbie, 2007). While qualitative data are always useful and create a richer picture of the phenomenon, we were not afforded the opportunity with these subjects to spend the time required to gather such information. As such, we focused on having subjects complete the survey in the time we were allowed. See below for a description of included measures.

## Measures

Where possible, questions consisted of statements to which the subject responded on 6- and 5-point Likert scales. These allowed us to optimize reliability and reduce overlap between scale points (Bass, Cascio, & O’Connor, 1974; Lissitz & Green, 1975). Where applicable, the verbal descriptors “always,” “frequently,” “quite often,” “sometimes,” “once in a while,” and “never” were utilized, as recommended by past researchers (Bass et al., 1974; Schmitt & Klimoski, 1991). (The questions used in our survey are represented in Appendix A.)

### *B2B Relational Structure*

Prior to the primary data collection, we interviewed 66 managers from 26 organizations in the United States, all of whom were involved in various B2B e-commerce

relationships on behalf of their organizations. (As noted earlier, the objective of these interviews was to determine types of B2B e-commerce *relational* structures.)

The status of these individuals ranged from middle to upper-middle management. These initial interviews lasted between 30–60 min, during which notes were taken and transcribed shortly after the interviews. Respondents were interviewed at their place of work. In these interviews, we utilized a system of “open coding” (Strauss & Corbin, 1998) which involves coding/scanning each interview’s contribution for concepts and then grouping like concepts into categories. B2B e-commerce relational structure was determined from the managers’ responses.

In the interviews, the 66 managers were asked to describe the nature of specific B2B relationships (care was taken not to bias the managers in their responses; rather, we took note of various characteristics described by subjects and used these characteristics as concepts for grouping). These characteristics included: the number of organizations involved in the relationship, the instigator of the relationship (one primary organization, multiple organizations, intermediary organization), the nature of interactions within the relationship (one-to-one, interconnected), the purpose behind the relationship (service vs. goods), types of organizations involved (buyers, suppliers, distributors, intermediary service providers, etc.), use of descriptors when referring to relationships (marketplace, collaborative alliance, dyadic, buyer–seller, etc.). Based on the resultant groupings, two main, distinct categories of relational structures emerged: buyer/supplier- and community oriented.

We determined that additional subcategories within *community-oriented* relationships were present based on the purpose and/or creator of the relationship (e.g., created by an alliance of companies, created for logistical purposes). However, we determined the best approach for the next study was to restrict our model to the two main categorizations. This has precedence in the extant literature. Prior taxonomies of B2B e-commerce structures have emphasized two key categories as well. Van de Velde (2000) used two categories (buyers and suppliers) as the basis for a two-by-two model and Cullen and Webster (2007) likewise used a “buyer and supplier” foundational categorization as the basis for their taxonomy. As such, we felt it appropriate, particularly at this stage in our research of this phenomenon, to adopt a similar strategy.

Therefore, during the subsequent study to test our hypotheses, the 141 employees were asked to identify which of the two types of B2B e-commerce relational structures best represented the specific B2B e-commerce relationship they would discuss and were provided with descriptions of each of the relational structures for further clarification. Again, care was taken not to bias the managers in their responses.

### ***Perceived Organizational Power***

The amount of perceived organizational power (as it related to the specific B2B relationship) was measured with an average score from a preexisting scale for perceived power (Callister, 1996;  $\alpha = .83$ ). A sample item (which we reversed scored) from that scale is: “It would not be difficult for our organization to replace the other organization in this relationship.” Organizational researchers often differentiate between the perceived power

held by an organization and that organization's explicit use of such power. In this study, we focused on the "perceived" power of each organization (as perceived by its members) rather than upon the explicit use of power. That is, power was treated as the potential to influence others, as opposed to the use of influence (Brass & Burkhardt, 1993; Pfeffer, 1981).

### ***Conflict***

To measure the level of process conflict, we used a slightly modified version of the scale developed by Jehn (1995) and Shah and Jehn (1993;  $\alpha = .69$ ). To measure the number of conflict incidents, participants were asked to recall the number of conflict incidents in which his/her organization had "experienced problems" or "had issues" with the other B2B e-commerce organization in the relationship over the last 6 months. We chose this wording over the actual word *conflict* because typically subjects are inclined to think they are not experiencing *conflicts*, which they often perceive as something akin to a fist fight.

### ***Perceived Success of the Relationship***

This construct was measured using a modified version of a subjective instrument developed by Gupta and Govindrajana (1984) and utilized by Kumar, Subramanian, and Yauger (1997) in their organizational studies. In this measure, the success of a relationship is determined using eight different performance indices (such as ROI, transaction costs, order turnaround time, satisfaction, etc.). Participants were asked to indicate on a 5-point Likert scale first the *importance*, and then their *satisfaction* for each of these eight indices with regard to their specific B2B e-commerce relationship. As outlined by Gupta and Govindrajana (1984), a weighted average was calculated for each indice by multiplying the "importance" score with the "satisfaction" score, then a composite measure was computed as the average of the eight indices ( $\alpha = .80$ ). While objective measures of success are preferable in most cases, past researchers have found a strong correlation between subjective and objective measures (Robinson & Pearce, 1988; Venkatraman & Ramanujam, 1986). A subjective measure of success was selected for three reasons: (a) archival data sources were not available for a number of companies in the study, (b) the noted difficulty in obtaining access to financial information (Covin, Prescott, & Slevin, 1990), and (c) the lack of an accurate representation of performance for specific B2B e-commerce relationships in archival sources, which tend to report aggregated performance results.

### ***Organizational Size***

In order to control variance and reduce the possibility of alternate hypotheses to the relationships, organizational size was used as a control variable. This variable was measured by the number of employees in the organization. This measure was chosen over a more financially oriented one (i.e., total revenue) for reasons similar to those outlined above. Subjects were uniformly reluctant (or in many cases unable) to provide financial data for a specific interorganizational relationship (or for their organization as a whole) that would allow a financial measure to be utilized effectively.

## Results

### Hypotheses Tests

The correlations, means, and standard deviations for major study variables are presented in Table 1. Recall that, Hypotheses 1a and 1b held that subjects interacting within B2B e-commerce community-oriented structures would report more conflict incidents than would subjects in buyer/supplier-oriented B2B e-commerce relational structures. To test these hypotheses, a multivariate analysis of variance (MANOVA) was conducted for the effect of B2B e-commerce structure on the level of process conflict and number of conflict incidents, using organizational size as a covariate. The relationship between B2B structure and level of process conflict was significant,  $F(2, 95) = 4.20$ , ( $p < .05$ ). That significance and a comparison of means indicated that greater process conflict was reported within community-oriented structures than within buyer/supplier-oriented structures. The relationship between B2B structure and the number of conflict incidents was not significant. Therefore, Hypothesis 1a was supported, while Hypothesis 1b was not.

Turning to Hypothesis 2, it states that subjects involved in B2B e-commerce relationships utilizing buyer/supplier-oriented relational structures would report greater perceived success of the relationship than subjects involved in relationships utilizing community-oriented B2B e-commerce structures. To test this hypothesis, an analysis of variance (ANOVA) was conducted, again using organizational size as a covariate. The results were significant,  $F(2, 95) = 17.56$ , ( $p < .001$ ), with an adjusted  $R^2$  of .14. This indicates that subjects of organizations involved in relationships embedded in a buyer/supplier-oriented B2B e-commerce structure reported significantly higher levels of perceived success for their relationship than subjects of organizations involved in relationships embedded in a B2B e-commerce community-oriented structure, as predicted. Therefore, Hypothesis 2 was supported.

Table 1  
Correlations, Means, and Standard Deviations for Major Variables

Variable	M	SD	1	2	3	4	5
(1) B2B e-commerce structure†	1.41	0.49					
(2) Organizational size‡ (no of employees)	4.23	2.05	.001				
(3) Organizational power	2.94	1.60	.307**	.043	(.83)		
(4) Number of conflict incidents	22.73	36.90	-.100	.227*	-.078		
(5) Level of process conflict	2.27	0.84	.223*	.119	.134	.053	(.69)
(6) Perceived success	120.10	36.78	-.398**	.049	-.120	.112	-.221* (.80)

Note. The diagonal contains the coefficient alpha of the survey scale where applicable.

†Coded as 1 = buyer/supplier oriented, 2 = community oriented.

‡Coded as 1 = 25 or less, 2 = 26–100, 3 = 100–200, 4 = 200–500, 5 = 500+, 6 = 1,000+.

\* $p \leq .05$ ; \*\* $p \leq .01$ .

The numbers in brackets represent reliability alphas.

To test for the interaction effect of conflict upon the relationship between B2B e-commerce relational structure and perceived success in Hypotheses 3a and 3b, we followed the procedure recommended by Baron and Kenny (1986) for both the level of process conflict and the number of conflict incidents. Namely, regressions were run to determine whether the independent variable significantly affected the mediating and dependent variables and the mediator significantly affected the dependent variable. The three requisite conditions to test for a mediating effect were only met for the level of process conflict; hence, Hypothesis 3b was not supported. Next, perceived success was regressed on both B2B e-commerce structure and process conflict, with organizational size entered in the first step as a control variable. As shown in Table 2, the effect of the independent variable was decreased in the final regression equation, indicative of a mediating effect. Hypothesis 3a (i.e., process conflict would mediate the relationship between relational structure and perceived success) was therefore supported.

Hypotheses 4a and 4b predicted an interaction between perceived organizational power and B2B e-commerce structure. Specifically, it stated that when the B2B relational structure was community oriented, the impact of perceived organizational power on conflict was weakened, whereas in buyer/supplier-oriented structures, the effect of perceived power remained in place. Once again, hierarchical regression analyses were used to test for this interaction effect (Baron & Kenny, 1986), for both the level process conflict and number of conflict incidents. The control variable (organizational size) was entered first, the predictor variable and the moderator variable were entered second, and an interaction term was entered third. The results of these analyses may be found in Table 3. The effect for number of conflict incidents was supported; however, the hypothesized relationship for level of process conflict was not. Hence, the moderating effect stated in Hypothesis 4a was not supported.

With regard to conflict incidents, the analysis showed that the change in F with the interaction between organizational power and B2B e-commerce structure included was

Table 2  
*Mediating Effect of Level of Process Conflict for B2B e-Commerce Structure on Perceived Success*

Dependent variable (N = 95)	F	R <sup>2</sup>	B
Level of process conflict			
Model 1 (perceived success)	4.36*	.04	-9.23
B2B e-commerce structure			
Model 2 (perceived success)	17.69***	.16	-29.65
Model 3 (level of process conflict)	4.91*	.05	0.379
B2B e-commerce structure and level of process conflict (with organizational size)			
Model 4 (perceived success)	6.66***	.18	-27.39† -5.98‡ 1.18§

Note. Values shown are unstandardized coefficients.  
 †B2B e-commerce structure. ‡Level of process conflict. §Organizational size.  
 \*p ≤ .05; \*\*\*p ≤ .001.

Table 3  
 Analysis of Interaction Effect Among B2B e-Commerce Structure, Organizational Power and Conflict

	Total $R^2$	$B$	$t$	$\Delta R^2$	$\Delta F$
Level of process conflict ( $N = 95$ )					
OrgSize		0.05	1.15		
B2B e-commerce structure		0.34	0.85		
Power		0.03	0.20		
Power $\times$ B2B e-commerce structure		0.00	0.02	.00	0.00
Total $R = .26$	.07				
Number of conflict incidents ( $N = 92$ )					
OrgSize		4.20	2.34*		
B2B e-commerce structure		30.13	1.74†		
Power		14.60	2.00*		
Power $\times$ B2B e-commerce structure		-11.76	-2.35*	.06*	5.54*
Total $R = .35$	.12				

Note. Values shown are unstandardized coefficients.

† $p \leq .10$ ; \* $p \leq .05$ .

significant ( $p < .05$ ) and the change in  $R^2$  was .05 ( $p < .05$ ) for the interaction. The main effect of organizational power was also significant ( $p < .05$ ). This  $R^2$  was lower than we would prefer, even though it is not unusual to find significance with low  $R^2$  values given this type of research. Still, it does indicate the predicted effect. (We will consider what other factors might increase the portion of explained variance in our discussion section below.) Given these results, the intervening effect stated in Hypothesis 4b (i.e., B2B e-commerce relational structure would moderate the relationship between perceived organizational power and the number of conflict incidents reported) was supported.

This interaction is best delineated with a comparison of the conflict incidents means for the two B2B structures. In terms of the buyer/supplier-oriented relationships, there was a mean of 24 conflict incidents reported when subjects perceived their organization's power as weak and a mean of 32 incidents reported when they perceived their power as strong. Therefore, in buyer/supplier-oriented relationships, the perceptions of employees held true to traditional notions of power. In contrast, in the community-oriented structures, participants reported 32 incidents when they perceived their organization's power as weak versus 10 incidents when they perceived their power as strong. This means when employees interacted in relationships embedded in community-oriented structures, the effect of perceived power ran counter to what traditional power theory would predict, as hypothesized in Hypothesis 4b.

Hypothesis 5—which predicts employees in community-oriented structures perceived they have more power—was tested as an ANOVA, with organizational size as a covariate. This prediction was supported,  $F(2, 95) = 4.93$ , ( $p < .01$ ). A comparison of means for the two B2B structures reveals a perceived power mean of 3.53 for community-oriented structures; in contrast, the perceived power mean for buyer/supplier-oriented

relationships was 2.54, indicating that employees perceived themselves to have significantly more power in community-oriented structures than did their counterparts interacting within buyer/supplier-oriented structures.

## Discussion

Typically, B2B e-commerce is viewed through a technological lens; as a way for organizations to interact more effectively. Concomitantly, it is often perceived by practitioners and academics alike as a generic electronic substitute for traditional “brick and mortar” interorganizational interactions. Our research was intended to broaden both perspectives by studying B2B e-commerce as dynamic relationships that have structures, conflict, perceived power, and levels of success. When doing so, we identified two principal B2B e-commerce relational structures; one which reflects more traditional interorganizational relationships and one which represents a relational structure made easier by (and which is more indicative of) the e-commerce environment. Subsequently, we tested the effects of these structures and found that conflicts and employees’ perceptions of success vary depending upon the relational structure.

We found support for the prediction that employees interacting within B2B e-commerce community-oriented structures perceive a higher level of process conflict than do employees in buyer/supplier-oriented relational structures. We also found that employees in buyer/supplier-oriented B2B e-commerce relationships perceived their relationships to be more successful than their community-oriented counterparts. The level of process conflict was found to have a (negative) mediating influence upon the relationship between B2B e-commerce relational structure and perceptions of the relationship’s success. In terms of perceptions of power, our findings also suggest that employees in community-oriented structures perceive themselves as having more organizational power than their buyer/supplier-oriented counterparts.

Perhaps, the most valuable finding concerns the intervening relationship of B2B e-commerce relational structure with perceived power and the number of conflict incidents reported. We theorized that parties in community-oriented structures recognize other alternatives within these relationships and therefore do not easily capitulate to the stronger party(ies). This leads to more incidents of conflict. In contrast, we predicted the buyer/supplier-oriented members perceive fewer alternatives, and therefore are more apt to submit to the stronger party and subsequently create less conflict.

When developing this prediction, we focused upon the actions of the weaker party in the B2B structures in order to streamline the presentation. Now, we expand upon our reasoning by considering the (re)actions of the parties interacting with the weaker maneuvering organizations. As Barry notes in his Dynamic Influence Model (2001), influence agents—when attempting to alter other people’s behaviors—observe the influence target’s behavior and use influence tactics to adjust the target’s behavior whenever it is contrary to the agent’s expectations. The target can comply with these influence attempts or resist. When there is resistance, the agent evaluates this negatively and the relationship between the two becomes less amicable.

Applying this model to the B2B e-commerce community structure, we can theorize that managers facing weaker organizations would probably use their power in the transaction. Faced with this, weaker managers would resist by finding alternatives to the powerful organizations, using information to their advantage and/or building coalitions. This resistance—rather than compliance—would be evaluated negatively by the managers who perceive themselves as more powerful. Finding their power opposed or reduced, these managers would be irritated, view this behavior as threatening, and begin to use punishments (Keltner, Gruenfeld, & Anderson, 2003). In sum, they would engage in conflict behavior more frequently.

### Theoretical Implications

Our study suggests that relational structure of B2B e-commerce relationships affects employee perceptions of conflict, power, and the extent to which these e-commerce relationships are considered successful. This deduction is consistent with the idea of conflict as a complex, context-specific phenomenon (Song, Dyer, & Thieme, 2006). It also supports our earlier assertion that despite the technological nature of these interorganizational relationships, the human, *relational* component inherent in these interactions is still relevant and influential to the effectiveness of such associations.

Power and process issues are possible in any interorganizational relationship, be it B2B e-commerce or the traditional “brick and mortar.” That said, our study provides support for the theoretical notion that the e-commerce context creates and/or exacerbates certain situational factors that impact conflict and perceptions of success within interorganizational relationships of this type. The nature of B2B e-commerce is fast paced and dynamic; things can change quickly. When problems emerge, they emerge quickly, and can grow at an alarming speed because of the technological environment in which they occur. Also, the decision to become engaged in B2B e-commerce is strategic; it can vary in its risk and cost to an organization, but is usually seen as a significant investment, from both a financial and strategic viewpoint. As such, e-commerce relationships and the interactions conducted within them are important to these organizations. This creates fertile ground for conflict. Consider the B2B e-commerce community-oriented structure. While a variation of this networked type of interorganizational relationship existed prior to the introduction of e-commerce, interaction of this sort has been greatly enhanced, facilitated, and altered by e-commerce technology. As our findings suggest, these contextual changes have affected perceptions of power and the nature of conflict within these relationships.

It is worth noting that effective conflict management may help diminish the negative results of conflict and may even lead to increased trust if implemented appropriately and under the proper circumstances. While the management of conflict is beyond the scope of this study—our focus was on the perceived incidents of conflict and level of process conflict as reported by subjects engaged in relationships within this particular context—we will extrapolate somewhat to provide suggestions for practitioners on this management.

## Practical Implications

Our findings indicate that conflict does exist in B2B e-commerce relationships; as such, managers should consider these results as they and their employees engage in these interactions. Furthermore, our results suggest employees' perceptions of these relationships and the nature of the interactions occurring within them may be affected by the relational structure in which the B2B e-commerce takes place. For example, if process conflict is more likely in community-oriented B2B e-commerce relationships, these employees can take steps to enact proactive conflict management techniques that might mitigate negative consequences. The use of conflict resolution tactics similar to those described by Rahim (1997) in his five-style model of conflict handling would be useful to B2B e-commerce managers, especially if coupled with a context-bound, contingency view of conflict (Song et al., 2006, p. 344). With respect to process conflict in particular, facilitation techniques that improve decision making with regard to the assignment of duties, resource distribution, and determining a specific course of action will be particularly beneficial.

In addition, the results that indicate perceptions of relationship success are influenced by relational structure also lend insight to managers. When interacting in community-oriented structures, managers should be aware of the potential for dissatisfaction among employees (and themselves) with their relationships and take proactive steps (such as conflict management and more effective communication techniques) to increase relational satisfaction for their organizational members as well as their B2B partners.

Our findings about perceived power also have the potential to aid B2B e-commerce managers in strategically influencing their B2B e-commerce relationships. For instance, consider a B2B e-commerce manager of a small, likely weak organization. Our findings suggest that this manager would benefit from actively seeking e-commerce relationships within community-oriented structures (vs. a buyer/supplier-oriented one). Perhaps, a smaller company might attempt to partner with other smaller companies in order to collectively create an online B2B community. In contrast, a B2B e-commerce manager of a bigger, more powerful organization might work to establish buyer/supplier-oriented relationships with smaller partner organizations in order to maintain the power advantage.

## Limitations of Study

In terms of limitations, we acknowledge the problems inherent in the use of self-report, such as common method variance (Campbell & Fiske, 1959; Podsakoff & Organ, 1986; Schmitt & Klimoski, 1991). While the nature of the phenomenon we are studying requires us to obtain the perceptions of the people involved, self-report measures are constrained in their effectiveness by the variation of subject experiences and interpretations. Also, while the technique of asking subjects to recall a number of overt conflicts is a common one in conflict research, this technique might be limited by the subject's ability to remember an accurate number of conflict incidents (albeit, from a recent time period). Be that as it may, we attempted to minimize the risk of common method

variance by using established, validated measures. We also structured survey questions to minimize potential response bias by keeping questions relatively short, avoiding double negatives and double-barreled questions, and using both mutually exclusive and exhaustive response categories (Johnson & Christensen, 2008). In addition, we utilized two different measures of conflict. Given the differences in results among our two conflict constructs, this would seem to indicate a lower occurrence of common method bias.

Next, the design of our study does not allow us to make definitive statements of causality; longitudinal data would be required for that purpose. Finally, with regards to generalizability, this study applies only to the context of B2B e-commerce relationships; follow-up studies that involve the comparison of B2B e-commerce relationships to traditional interorganizational relationships are warranted.

### **Future Research**

Our study represents an effort to explore the impact of B2B e-commerce relational structure on human perceptions within these “electronic” relationships. Future research may extend the results from this study by further examining issues regarding B2B e-commerce technology and its impact on relational aspects. It seems worthwhile for scholars to utilize conflict and negotiation theories to advance our understanding of processes and outcomes of B2B e-commerce interactions. Factors to consider might include the nature of the issues (integrative vs. distributive), the presence of constituents, the number of issues, the level of risk, and the number and value of the alternatives. Specifically, additional research could explore what constitutes conflict “triggers” in B2B e-commerce interactions. We found hints of such triggers in our initial study, although not enough to warrant formal hypotheses at this time. For instance, if a company with perceived status and power felt their credibility or reputation was at stake, the likelihood of a conflict escalating was high. Another trigger mentioned was confusion over procedure. Power and process influences were evident in these triggers; however, other influences for triggers are possible as well.

As we mentioned above, research that involves longitudinal study is also appropriate, given the dynamic nature of conflict. This research could explore whether one type of conflict can transform into another and/or cause the emergence of another over time within the B2B e-commerce context. For example, a high level of process conflict in a B2B e-commerce relationship that has initially low relationship conflict may over time cause an increase in relationship conflict. A study that employs more qualitative methodology is also encouraged. This phenomenon is complex and multifaceted; as such, a study using qualitative methods could enhance our understanding further. It may be advisable to attempt such a study using fewer organizations, in order to probe deeper into the experiences of those studied.

Our study focused on two distinct relational structures: buyer/supplier structures and community structures. Additional research could reveal greater insights into the differences between these two forms. For instance, given their make-up, what differences (if any) exist in information flow and other forms of communication?

Are there potential synergistic benefits to be gained from community structures occurring in an e-commerce environment that are difficult to duplicate in buyer/supplier e-commerce structures? If so, what are the implications for perceived relational success and conflict? Also, might there be differences within the two forms? For instance, could there be differences between a buyer-created buyer/supplier relationship and a supplier-created relationship? In addition, different types of community structures exist (e.g., open portal, logistical alliances, etc.); could differences exist among these as well?

Further research could also shed light on factors outside the scope of this study likely to increase explained variance. For example, the presence (or absence) of congruent goals among the B2B partners could influence both the level of conflict and the extent to which the relationship is considered successful. Another aspect of the e-commerce environment that relates to conflict is the redefining of roles and the extent of uncertainty that exists in this context. One subject surveyed discussed (conversationally) the issue of changing roles, both within and between organizations and how uncomfortable it made employees. B2B e-commerce requires change and adaptability with regard to course of action and task allocation, both of which are process related.

The extent to which B2B partners engage in repeated transactions could also provide information into the nature of these relationships. In the course of our study, we asked subjects to report how often their organization conducted e-commerce transactions with the partner organization in that relationship (i.e., daily, weekly, monthly, quarterly, biannually, rarely). Bivariate correlations between this variable and the two conflict measures revealed a significant effect for both process conflict (at the .01 level) and number of conflict incidents (at the .05 level). This finding suggests a positive relationship between the frequency of e-commerce transactions and conflict (both in terms of incidents and type-process). Further study is warranted to clarify and understand this relationship, however.

Finally, future research into B2B e-commerce would benefit from a more cross-cultural perspective, because B2B e-commerce relationships occurring between organizations in diverse cultures likely have different levels of perceived conflict, power, and relational success.

Business-to-business e-commerce relationships between organizations represent an effective way for organizations to increase efficiency and collaboration in a variety of industries; however, these relationships involve conflict which needs to be understood and managed. With this study, we hope to have extended what is known about B2B e-commerce relationships; how they are perceived and how employees may manage and interact within these relationships more effectively.

## References

- Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturing firm working partnerships. *Journal of Marketing*, 54, 42–58.
- Babbie, E. (2007). *The practice of social research* (11th ed.). Belmont, CA: Thomson Wadsworth.

- Bacharach, S. B., & Lawler, E. J. (1980). *Power and politics in organizations*. San Francisco, CA: Jossey-Bass Publishers.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Barry, B. (2001). Influence in organizations from a social expectancy perspective. In A. Lee-Chai & J. Bargh (Eds.), *The use and abuse of power: Multiple perspectives on the causes of corruption* (pp. 19–40). Philadelphia, PA: Psychology Press.
- Bartunek, J. M. (1984). Changing interpretive schemes and organizational restructuring: The example of a religious order. *Administrative Science Quarterly*, *29*, 355–372.
- Bass, B. M., Cascio, W. F., & O'Connor, E. J. (1974). Magnitude estimations of expressions of frequency and amount. *Journal of Applied Psychology*, *59*, 313–320.
- Brass, D. J., & Burkhardt, M. E. (1993). Potential power and power use: An investigation of structure and behavior. *Academy of Management Journal*, *36*, 441–470.
- Callister, R. R. (1996). *Examining conflicts across organizational boundaries: Managed care-provider interactions*. Unpublished doctoral dissertation, University of Missouri.
- Callister, R. R., & Wall, J. A., Jr. (2001). Conflict across organizational boundaries: Managed care organizations versus health care providers. *Journal of Applied Psychology*, *86*, 754–763.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multi-trait-multimethod matrix. *Psychological Bulletin*, *56*, 81–105.
- Chowdhury, S. (2000). *Management 21C*. London, U.K.: Prentice Hall.
- Claycomb, C., Iyer, K., & Germain, R. (2005). Predicting the level of B2B e-commerce in industrial organizations. *Industrial Marketing Management*, *34*, 221–234.
- Coleman, P. T. (2000). Power and conflict. In M. Deutsch & P. T. Coleman (Eds.), *The handbook of conflict resolution: Theory and practice*, (pp. 108–129). San Francisco: Jossey-Bass Publishers.
- Covin, J. G., Prescott, J. E., & Slevin, D. P. (1990). The effects of technological sophistication on strategic profiles, structure, and firm performance. *Journal of Management Studies*, *27*, 485–510.
- Cullen, A. J., & Webster, M. (2007). A model of B2B e-commerce, based on connectivity and purpose. *International Journal of Operations & Production Management*, *27*, 205–225.
- Dahl, R. (1957). The concept of power. *Behavioral Science*, *2*, 202–210.
- Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, *27*, 31–41.
- Galaskiewicz, J. (1985). Interorganizational relations. *Annual Review of Sociology*, *11*, 281–304.
- Geyskens, I., Steenkamp, J.-B. E. M., & Kumar, N. (1999). A meta-analysis of satisfaction in marketing channel relationships. *Journal of Marketing Research*, *36*, 223–238.
- Goffman, E. (1974). *Frame analysis*. Cambridge: Harvard University Press.
- Gupta, A. K., & Govindrajana, V. (1984). Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. *Academy of Management Journal*, *27*, 25–41.
- Hayward, M. L. A., & Boeker, W. (1998). Power and conflicts of interest in professional firms: Evidence from investment banking. *Administrative Science Quarterly*, *43*, 1–16.
- Janssen, O., Van De Vliert, E., & Veenstra, C. (1999). How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management*, *25*, 117–142.

- Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, 40, 256–282.
- Jehn, K. A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly*, 42, 530–557.
- Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal*, 44, 238–251.
- Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly*, 44, 741–764.
- Johnson, B., & Christensen, L. (2008). *Educational research: Quantitative, qualitative, and mixed approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Jones, M. C., & Beatty, R. C. (2001). User satisfaction with EDI: An empirical investigation. *Information Resources Management Journal*, 14, 17–26.
- Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship Theory & Practice*, 28, 209–228.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach and inhibition. *Psychological Reports*, 110, 265–284.
- Kim, K. (2000). On interfirm power, channel climate, and solidarity in industrial distributor-supplier dyads. *Academy of Marketing Science*, 28, 388–405.
- Kim, P. H., Pinkley, R. L., & Fragale, A. R. (2005). Power dynamics of negotiation. *Academy of Management Review*, 30, 799–822.
- Kumar, K. K., Subramanian, R., & Yauger, C. (1997). Performance-oriented: Toward a successful strategy. *Marketing Health Services*, 17, 10–20.
- Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment: Managing differentiation and integration*. Boston: Harvard University.
- Lissitz, R. W., & Green, S. B. (1975). Effect of the number of scale points on reliability: A Monte Carlo approach. *Journal of Applied Psychology*, 60, 10–13.
- Manz, C. C., & Sims, H. P., Jr. (1986). Beyond imitation: Complex behavioral and affective linkages resulting from exposure to leadership training models. *Journal of Applied Psychology*, 71, 571–578.
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York: Wiley.
- Matsuo, M. (2006). Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research*, 59, 242–250.
- Molnar, J. J., & Rogers, D. L. (1979). A comparative model of interorganizational conflict. *Administrative Science Quarterly*, 24, 405–425.
- Mooney, A. C., Holahan, P. J., & Amason, A. C. (2007). Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies*, 44, 733–758.
- Pearson, A. W., Ensley, M. D., & Amason, A. C. (2002). An assessment and refinement of Jehn's (1995) Intragroup Conflict Scale (ICS). *International Journal of Conflict Management*, 13, 110–126.
- Pfeffer, J. (1981). *Power in organizations*. Marshfield, MA: Pitman Publishing Inc.
- Pfeffer, J. (1982). *Organizations and organization theory*. Boston: Pitman.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.

- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*, 531–544.
- Pondy, L. R. (1967). Organizational conflict: Concepts and models. *Administrative Science Quarterly*, *12*, 296–320.
- Pruitt, D. G., & Rubin, J. Z. (1986). *Social conflict*. New York: McGraw-Hill.
- Putnam, L. L., & Poole, M. S. (1987). Conflict and negotiation. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Porter (Eds.), *Handbook of organization communication: An interdisciplinary perspective* (pp. 549–599). Newbury Park: Sage.
- Rahim, M. A. (1983). Measurement of organizational conflict. *Journal of General Psychology*, *109*, 189–199.
- Rahim, M. A. (1997). Styles of managing organizational conflict: A critical review and synthesis of theory and research. *Current Topics in Management*, *2*, 61–77.
- Reynolds, J. (2000). E-commerce: A critical review. *International Journal of Retail & Distribution Management*, *28*, 417–444.
- Robinson, R. B., & Pearce, J. A. (1988). Planned patterns of strategic behavior and their relationship to business-unit performance. *Strategic Management Journal*, *9*, 43–61.
- Rubin, B. (1990). Measuring individual power in organizations. Paper presented at the Academy of Management Meeting, August, 1990 San Francisco, CA.
- Schmitt, N. W., & Klimoski, R. J. (1991). *Research methods in human resource management*. Cincinnati: South-Western Publishing Co.
- Shah, P. R., & Jehn, K. A. (1993). Do friends perform better than acquaintances: The interaction of friendship, conflict, and task. *Group Decision and Negotiation*, *2*, 149–166.
- Sheppard, B. H. (1992). Conflict research as schizophrenia: The many faces of organizational conflict. *Journal of Organizational Behavior*, *13*, 325–334.
- Shrum, W. (1990). Status incongruence among boundary spanners: Structure, exchange, and conflict. *American Sociological Review*, *55*, 496–511.
- Smith, K. G., Carroll, S. J., & Ashford, S. J. (1995). Intra-and interorganizational cooperation: Toward a research agenda. *Academy of Management Journal*, *38*, 7–23.
- Song, M., Dyer, B., & Thieme, R. J. (2006). Conflict management and innovation performance: An integrated contingency perspective. *Journal of the Academy of Marketing Science*, *34*, 341–356.
- Strauss, A. C., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks: Sage Publications.
- U.S. Census Bureau E-Stats. Retrieved November 12, 2009, from [www.census.gov/estats](http://www.census.gov/estats).
- van de Velde, S. (2000). *Transportation e-marketplaces: From spot markets to contract markets*. Paper presented at New York E-commerce Conference, New York, NY.
- Van de Ven, A. H., & Walker, G. (1984). The dynamics of interorganizational coordination. *Administrative Science Quarterly*, *29*, 598–621.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of Management Review*, *11*, 801–814.
- Wall, J. A. Jr., & Callister, R. R. (1995). Conflict and its management. *Journal of Management*, *21*, 515–558.
- Webb, K. L., & Hogan, J. E. (2002). Hybrid channel conflicts: Causes and effects on channel performance. *Journal of Business & Industrial Marketing*, *17*, 338–356.

## Appendix A

### Survey questions by construct.

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Organizational size (control)	Estimated no of employees in your firm: ≤25 ___ 26–100 ___ 100–200 ___ 200–500 ___ 500+ ___ 1000+ ___								
B2B e-commerce relational structure	Subjects were provided a description of the two types of structures and asked which of the two most accurately fit the particular relationship they were discussing  <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%; padding-right: 20px;"><i>Buyer/supplier relational structure:</i> a network of buyers &amp; suppliers, created by and for either a buyer or seller. The primary purpose is to allow the buyer or seller to interact with each counterpart as part of their collective business relationships</td> <td style="vertical-align: top;"><i>Community relational structure:</i> an arena or B2B marketplace in which organizations participate as members, clients, or in an “open” market atmosphere. May be created by firm participating in the marketplace or by a third party organization</td> </tr> </table>	<i>Buyer/supplier relational structure:</i> a network of buyers & suppliers, created by and for either a buyer or seller. The primary purpose is to allow the buyer or seller to interact with each counterpart as part of their collective business relationships	<i>Community relational structure:</i> an arena or B2B marketplace in which organizations participate as members, clients, or in an “open” market atmosphere. May be created by firm participating in the marketplace or by a third party organization						
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Organizational power (6-point Likert scale)	(1) There are other organizations who could adequately replace this organization as a client/supplier/buyer (2) It would NOT be difficult for our organization to replace the other organization in this relationship* (3) The consequences of ending this relationship would be prohibitive*								
Number of conflict incidents	Subject asked to estimate the number of times your organization and the other B2B organization have dealt with problems or issues in the last 6 months.								
Process conflict (6-point Likert scale)	(1) People/organizations had different expectations/ideas about the B2B relationship (2) There were disagreements between the organizations about who should do what regarding various B2B-related tasks (3) People had differing opinions about the B2B relationship between the organizations								
Relationship success (5-point Likert scale) [Verbal descriptors for “importance”: “little, slightly, moderately, quite, and extremely” and for “satisfaction”: “not at all, slightly, moderately, mostly, and highly”.]	Please indicate the degree of <i>importance</i> your organization places on each of the following performance criteria <i>when determining the performance of this B2B relationship for your company</i> Please indicate the extent to which your management are currently <i>satisfied with the performance of this B2B relationship</i> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Return on investment</td> <td>Ability to control production</td> </tr> <tr> <td>Transaction cost</td> <td>Ability to control distribution</td> </tr> <tr> <td>Reduced costs complaints</td> <td>Number of customer</td> </tr> <tr> <td>Turnaround time on ordering process</td> <td>Customer satisfaction/retention</td> </tr> </table>	Return on investment	Ability to control production	Transaction cost	Ability to control distribution	Reduced costs complaints	Number of customer	Turnaround time on ordering process	Customer satisfaction/retention
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Turnaround time on ordering process	Customer satisfaction/retention								

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\*Reversed scored.

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