

A TALE OF TWO PERSPECTIVES ON AN IMPENDING SUPPLY DISRUPTION

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The topic of buyer–supplier relationships has attracted much attention in the extant supply chain management literature, often from a buyer’s perspective. But recently, a number of studies have begun to take a dyadic perspective, acknowledging that both parties in a buyer–supplier relationship may possess divergent perspectives on many issues. Unlike existing dyadic-view studies that have examined perceptual differences in general, we extend this dyadic-view stream of the literature and examine perceptual differences in the face of an impending supply disruption event. Using a scenario-based experiment, our results suggest that suppliers seem to have a greater expectation of both buyer opportunism and relationship continuance than what the buyers actually reported. Our results also indicate that the supplier seems to underestimate the influence of relational norms on relationship continuance more so than the buyer. Also, our results indicate that there is no significant difference between the supplier’s and buyer’s perceptions of the impact of buyer dependence on opportunism. Our findings suggest that both members of an exchange relationship should carefully manage the expectations and norms with their counterparts, particularly when the relationship might be strained by a supply disruption.

Keywords: buyer–supplier relationships; relational norms; dependence; opportunism; relationship continuance; supply disruption; attribution theory; transaction cost economics; experimental design

INTRODUCTION

The topic of buyer–supplier relationships has attracted scholarly attention for several decades (Tepend, Tyler, Krause & Handfield, 2008). While the relevant supply chain management (SCM) literature predominantly adopts a buyer’s perspective, role differences between the buyer and supplier can “have serious repercussions on behavioral intentions and need to be further explored” (Geiger et al., 2012, p. 82). As such, more recent studies on buyer–supplier relationships have begun to adopt a dyadic view. For example, the existing literature contains scholarly works studying both the buyer’s and supplier’s perspectives on topics such as supplier management in product development (Letice, Wyatt & Evans, 2010) and alliance formations (Ellram & Hendrick, 1995), to name a few. One common finding shared by studies taking a dyadic view is the existence of signif-

icant perceptual gaps (Kim, Park & Kim, 1999; Nyaga, Whipple & Lynch, 2010). Surprisingly, not only is it possible for two sides of a dyad to possess different views about the nature of the relationship (Ellram & Hendrick, 1995), such divergent views are even more profound for cooperative relationships as opposed to competitive ones (Forker & Stannack, 2000). These perceptual gaps are noteworthy since scholars have cited many benefits arising from successful buyer–supplier relationships such as cost reductions, improved quality, increased flexibility, and mutual gains (Gulati & Sytch, 2007; Heide & John, 1992; Sanders & Premus, 2005). But the failure to recognize such perception differences may not only prevent firms from actualizing benefits but can result in mismanagement of the existing business relationship itself. Further, such perceptual differences might be magnified when a buyer–supplier relationship is strained—for example, in the case of a supply disruption.

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In light of the dearth of empirical dyadic analyses (Nyaga, Lynch, Marshall & Ambrose, 2013), and even more scarce dyadic studies of the same critical event, this study examines perceptual differences surrounding a potential supply disruption resulting from a labor strike occurring at the supplier's plant. This critical event is described in a pair of experimental vignettes (one from the perspective of the buyer and one from the perspective of the supplier). We employ a supply disruption context because the occurrence of critical events results in relational stressors and may also instigate changes in business relationships, causing deviations from expected and established relationship patterns (Holmlund-Rytkönen & Strandvik, 2005).

Stated explicitly, the main purpose of our investigation is to understand perceptual differences between the buyer and the supplier with regard to their reactions to the same potential supply disruption. In particular, we assess differences with regard to opportunism and relationship continuance—two important outcome variables that have been studied at length in the buyer–supplier relationship literature (Conner & Prahalad, 1996; Morgan & Hunt, 1994; Sako & Helper, 1995). Decisions involving relationship continuance deal directly with the existence of an exchange relationship. Opportunism, which can be defined as self-interest seeking with guile (Williamson, 1985), is of particular importance because perceptual differences may result in improper anticipation of a dyadic partner's behaviors, bringing about unexpected or undesired consequences. We build upon the extant findings by integrating attribution theory, which suggests that the type of attribution—internal versus external—might change the way buyers and suppliers view opportunism and relationship continuance.

LITERATURE REVIEW

Divergent View of Relationships

The bulk of the buyer–supplier relationship literature is comprised of studies that typically capture the perspective of either the buyer or the supplier (Ellram & Hendrick, 1995; Spekman, 1988). This limits the assessment of perceptual similarities between dyadic partners (Anderson & Weitz, 1992). A common finding echoed by many scholarly works adopting a dyadic view is that there exist significant perception gaps between the buyer and supplier firms concerning various aspects of the buyer–supplier relationship (Kim et al., 1999; Nyaga et al., 2010). Some studies have suggested that dyadic partners can experience discrepancies in their perceptions and expectations regarding supply chain relationships (Corsten & Kumar, 2005; Gundlach, Achrol & Mentzer, 1995; Nyaga et al., 2010). Capturing the perceptual differences that

contribute to these perception gaps regarding issues arising within the context of a buyer–supplier dyad is important since such perceptual differences can have detrimental effects on performance by fostering dissatisfaction, conflict, and even relationship dissolution (Anderson & Weitz, 1992; Gundlach et al., 1995; Nyaga et al., 2013; Wang, Kayande & Jap, 2010). Also, successful buyer–supplier relationships are often characterized by mutual trust (Anderson & Weitz, 1989; Liker & Choi, 2004) which refers to the degree to which dyadic partners perceive each other as credible and benevolent (Ganesan, 1994). Earlier scholarly investigations have discovered a strong correlation between trust and relationship success (Monczka, Trent & Handfield, 1998; Whipple & Frankel, 2000). Any significant perception gaps concerning how various events or behaviors are perceived by the other party can contribute to an undermining of this foundation of trust and contribute to the failure of the buyer–supplier dyad.

More recently, studies have investigated the perception gap in various buyer–supplier contexts. For instance, Kim, Park, Ryoo and Park (2010) studied determinants of interorganizational cooperation in buyer–supplier relationships within the Korean telecommunication industry from the perspectives of both the buyer and supplier in corresponding dyads and showed that switching costs and interfirm trust are significant determinants of cooperation for buyers, while technological uncertainty and the reciprocity within the relationship are significant determinants for suppliers. Carter (2000) studied perception differences between buyers and suppliers regarding the ethicality of each other's behaviors and how these affect relationship satisfaction and performance and found that gaps between a buyer's and supplier's perceptions of unethical behavior negatively influence relationship satisfaction and perceptions of performance. Nyaga et al. (2010) studied perception differences between buyers and suppliers on economic and relational factors influencing collaborative relationships and discovered that collaborative activities such as information sharing and dedicated investments lead to trust and commitment, which in turn lead to improved satisfaction and performance. Also, Nyaga et al. (2013) studied the perception differences of buyers and suppliers with regard to power asymmetry, adaptation, and collaboration in dyadic relationships and discovered that the use of power influences partner behavior and operational performance, but the nature of the relationship determines which sources of power are most appropriate. Geiger et al. (2012) investigated how switching costs and relationship value, as perceived by buyers and suppliers, generate bonding forces in dyadic relationships and suggest that for both buyers and suppliers, relationship value has a greater impact than

switching costs on factors such as intentions for relationship enhancement, search for alternatives, and switch intention. Hibbard, Kumar and Stern (2001) examined the consequence of destructive acts in supply chain relationships by researching the perspectives of a focal supplier and its independent dealer distributors and found that dealers' reactions to a supplier's destructive acts are influenced by antecedent factors including perceived intensity of the act, the attributions relative to the act, relationship quality prior to the act, and the level of interdependence between each dealer and supplier. Ellram and Hendrick (1995) investigated the similarities and differences between how buyers and suppliers characterize the strategic nature of their relationships. Chen, Ro and Su (2014) even noted that the two firms in a buyer-supplier dyad may perceive a specific singular event, such as a potential supply chain disruption, differently. And interestingly, Forker and Stannack (2000) discovered that even in mutually cooperative relational dyads, divergent views on the nature or importance of the relationship can be more profound than in competitive relationships. John and Reve (1982) examined the ability of key informants from dyadic relationships in marketing channels to provide accurate reports of the relationships between their firms and discovered that measures used to determine the structure of the dyadic relationship such as formalization and centralization possess convergent and discriminant validity, but the dimensions of dyadic sentiments such as goal compatibility and norms of exchange fail to show adequate validity. Kim et al. (1999) studied the perception gap between a Korean semiconductor manufacturer and its suppliers regarding what each party deemed as critical factors in a successful buyer-supplier relationship and observed differences in some of the perceptions between the manufacturer and its suppliers and among the suppliers according to their production capabilities and product requirements. Finally, Wang et al. (2010) studied expectation discrepancies and incoherence in dyadic exchanges and found that the resulting uncertainty from any discrepancies, positive or negative, has a negative effect on the focal firm's evaluations of relationship performance and its desire to maintain the exchange relationship.

Considering the state of the scholarly literature, the fact that perception gaps do exist in relational exchanges should warrant a careful examination of their impacts on decision-making in supply chain contexts since many benefits arise from successful buyer-supplier relationships. Knowing what perceptual differences to expect and how to address them can help contribute to the successful management of these relationships.

Buyer and Supplier Role Differences and Attributions

Firms maintain exchange relationships either because "they have to" or because "they want to" due to the value generated by the relationship (Geiger et al., 2012; Nahapiet & Ghoshal, 1998). For suppliers, buyers typically represent a source of revenue. As a result, suppliers have a strong incentive to maintain existing relationships with buyers in order to prevent declines in revenue. In contrast, for buyers, suppliers often represent the primary source of purchasing costs. Most manufacturing firms spend over 70% of their total revenues on purchasing materials and components from suppliers (Benton, 2013, p. 15). The strategic priority for buyers is often effective purchasing cost management. This fundamental role difference in the value chain could influence organizational *attributions* when buyers and suppliers infer causes of a particular event faced by both firms (e.g., a potential supply disruption).

Attribution theory, originating from the social psychology literature (Weiner, 1985), deals with people's sense-making regarding the occurrence of events (Heider, 1958). Attribution theory explains how individuals interpret events by attributing the causes of events and also how attributed causes of events relate to subsequent behaviors. The perceived attributions are presumed to motivate and guide positive or negative behaviors (Weiner, 1985). Typically, negative events provoke more attributional searching for causes than do positive events (Folkes, 1984).

Several studies have applied attribution theory in different buyer-supplier contexts. Folkes and Kotsos (1986) investigated the attributional differences between buyer and seller regarding product failures. Chung-Herrera, Goldschmidt and Hoffman (2004) drew on attribution theory to explain the perceptual differences between customers (buyers) and service providers (suppliers) when a critical service failure occurred. Studying buyers' responses to suppliers' expected performance, Oflaç, Sullivan and Baltacıoğlu (2012) applied attribution theory to understand customers' responses toward third party logistics providers when service fails to meet customer expectations. Similarly, Selnes and Gønhaugb (2000) argue that buyers attribute a supplier's negative deviation from expected performance to the supplier but attribute a supplier's positive deviation from expected performance to the buyer themselves.

In interpreting (attributing) the causes of events, the locus of causality, which refers to whether the perceived cause of an outcome is internal or external to the actor, is the most commonly studied attributional dimension (Heider, 1958; Weiner, 1985). According to Folkes (1984), the main consideration in locus is

whether the perceived cause is related to the buyer or is located somewhere in the production or distribution of the product (supplier). Consequently, attributions in business relationships are often classified into internal (self) and external (others) causes. Internal attributions link characteristics of the individual entity (e.g., capability, attitude, effort) for causing certain events, while external attributions associate external factors (e.g., other parties, task characteristics, luck). Some researchers went beyond attributing causes of events and look for linkages between causes of events and subsequent actions. For example, in a study of dealers' (buyers') reactions to suppliers' destructive acts in channel relationships, Hibbard et al. (2001) found that when dealers attributed the causes of the destructive acts to themselves (internal attributions), they became more likely to disengage from the relationship, or "throw up one's hands." In contrast, attribution to external causes often triggered a less negative punitive response. In the example of Hibbard et al. (2001), it was discovered that a buyer was more likely to respond positively toward a supplier through constructive discussion as the dealer attributes the causes of the destructive acts to the suppliers (external attributions).

In summary, past literature indicates that a negative event (e.g., unexpected delivery delay) arouses attributional searches among buyers and suppliers. Buyers and suppliers may perceive the causes differently due to the locus of causality. Different attributions then motivate subsequent behaviors, which become the source of perception differences.

In the following sections, we first develop the baseline hypotheses (H1a, H1b) regarding perceptual differences of two relational outcomes: opportunism and continuance between the buyer and supplier, namely the extent of the buyer's stated opportunism (continuance) and the supplier's expectations of the buyer's opportunism (continuance). Next, we specifically focus on comparing the buyer's and supplier's perceived effects of relational norms (H2a, H2b) and dependence (H3a, H3b) on relational outcomes, which past studies have not yet considered.

HYPOTHESIS DEVELOPMENT

Relational Norms and Dependence

Prior to developing any relevant hypotheses for our study, relational norms and dependence are introduced as they serve as the treatments in our behavioral experiment. Relational norms are described as the values shared among exchange partners regarding what is deemed appropriate behavior in a relationship (Heide & John, 1992; Noordewier, John & Nevin, 1990). When buyer-supplier relationships exist in a context characterized by a high level of relational

norms, firm partners are more committed to one another (Gundlach et al., 1995) and display a long-term orientation toward the relationship (Ganesan, 1994). Buyer-supplier relationships with high relational norms are often characterized by collaboration, mutual trust, joint problem solving, and increased communication (Monczka et al., 1998; Whipple & Frankel, 2000). Relationships with a low level of relational norms, on the other hand, are often adversarial, short term in duration, and competitive in nature (Helper & Sako, 1995; Hirschman, 1970). Such relationships have been described as coercive (Adler, 1999) with cost reduction and price pressures being the norm. Legal contracts are often used to govern relationships with low relational norms and aggressive bargaining tactics are used to resolve disagreements.

Concerning dependence, Emerson (1962) relates the notion of firm power to firm dependence. If one party depends upon another party, the other party has the power, which is the ability to control or influence the dependent party. Dependence is the result of power distribution among organizations (Pfeffer & Salancik, 1978). According to the transaction cost economics (TCE) literature (Williamson, 1991), dependence is regarded as the cost of replaceability (Heide & John, 1988) and a firm that expects to incur large termination and switching costs with a particular partner in an exchange is considered to be dependent on that particular firm.

As mentioned earlier, the two experimental vignettes adopted in our study were written from both the buyer's and supplier's perspectives regarding the same critical event: A labor strike occurring at a supplier's manufacturing facility threatens the shipment of critical components and gives rise to a potential supply disruption. For our experimental vignettes, we adopted Joshi and Arnold's (1997, 1998) previously validated buyer-supplier relationship scenario (written from the perspective of the buying firm). We then adopted the revised version of the same scenario written from the perspective of the supplier firm (Chen et al., 2014) (see Appendices A and B for both vignette versions). In the original validated vignette (Joshi & Arnold, 1997, 1998), subjects were asked to assume the role of a purchasing manager at a midsize electronics equipment manufacturer responsible for the purchase of microchips from an external supplier partner. In the modified vignette written from the supplier's perspective, subjects were asked to assume the role of an account manager within the key supplier firm for the electronic equipment manufacturer (the OEM).

Supplier Expectations of Buyer Behaviors

Prior research indicates that buyers and suppliers can demonstrate perceptual differences regarding a

specific incident. We draw on attribution theory to better understand the differences between a buyer's stated opportunism and a supplier's anticipation of the buyer's opportunism. Accordingly, since self-attribution tends to yield a more destructive response than external attribution (Harvey, Harris, Gillis & Martinko, 2014; Hibbard et al., 2001), we posit that the supplier blames itself for the labor strike occurring at its own plant and is more likely to disengage from the partnership, resulting in a deteriorating firm relationship. In contrast, buyers, which attribute the potential supply disruption to external factors, exhibit a lesser intention to show punitive outcomes. This self-attribution from the supplier's perspective may likely cause the supplier to withdraw from the existing relationship, deteriorating it. With this relationship deterioration, the supplier may anticipate a higher likelihood of buyer opportunism. External attribution from the buyer's viewpoint, in contrast, may bring about a more benign response from the buyer regarding the potential supply disruption, causing the buyer to either levy a lighter punishment on the supplier or engage in more constructive actions as far as the relationship is concerned. As a result, we posit that suppliers would anticipate a punitive outcome by anticipating that buyers will exhibit a high degree of opportunism while the buyers' stated opportunism level is not as high, which leads to our study's first hypothesis:

H1a: The supplier's expectation of buyer opportunism is greater than the buyer's stated opportunism.

In addition to the perception differences that can exist between buyers and suppliers with regard to opportunism, there may also exist differences between perception and reality with regard to the continuance of a given buyer-supplier relationship. For instance, suppliers can fall prey to false consensus bias (Ross, Greene & House, 1977) and presume that the manner in which they perceive a relationship or issue is shared among their buyer counterparts. The extant literature has illustrated that, in general, a supplier might value the importance of an existing buyer-supplier relationship more than the buyer since for suppliers, customer retention is a major marketing goal from which they deviate only in very poor relationship conditions (Geiger et al., 2012).

Even if an exchange relationship with a buyer is unprofitable, many suppliers still tend to hold onto the relationship (Helm, Rolfes & Günter, 2006). Consequently, due to false consensus bias, the supplier may impose its propensity toward relationship continuance onto the buyer and presume that the buyer will behave the same in return, even in the face of a

potential supply disruption. As a result, this line of reasoning leads us to our next hypothesis:

H1b: The supplier's expectation of relationship continuance is greater than the buyer's stated relationship continuance.

Supplier Perceptions vs. Buyer Perceptions

Prior research indicates that building relational norms is an effective way to curb buyer opportunism. A high level of relational norms between a buyer and supplier has been found to reduce buyer opportunism (Joshi & Arnold, 1997; Tangpong, Hung & Ro, 2010). However, very few studies examine the differences in impact that the buyer and supplier each perceive of relational norms on opportunism despite the fact that scholarly research has discovered perceptual differences regarding this association between the two sides of a buyer-supplier dyad (Chen et al., 2014). Per H1a and H1b, suppliers might react more negatively than buyers with regard to their perceptions of the existing relationship and the labor strike due to the locus of attribution. We posit that suppliers may become more suspicious or pessimistic about the future of the relationship than buyers due to internal attribution of any schedule delay brought about by a supply disruption. Buyers, on the other hand, attribute the labor strike to external causes and are therefore likely to react more constructively toward the supplier (Hibbard et al., 2001). Since external attribution causes buyers to be more prone to constructive behaviors in light of a potential supply disruption resulting from a labor dispute at the supplier's site (Hibbard et al., 2001), they would be less likely to engage in opportunistic behavior even when it is anticipated. It is more likely that the suppliers would discount the effect of relational norms since they could harbor a more negative view about the relationship in the face of a potential supply disruption brought about by a labor strike while the buyers might perceive the same situation less negatively due to external attribution. Since the effect of attribution moderates the effect of relational norms on buyer opportunism, we introduce our study's next hypothesis:

H2a: The supplier perceives a weaker effect of relational norms on buyer opportunism than the buyer.

Extant research has also shown that relational norms can play a role in the continuation and dissolution of existing buyer-supplier relationships. Scholarly evidence suggests that the presence of high relational norms in a buyer-supplier relationship facilitates relationship continuance and discourages relationship dissolution (Gassenheimer & Manolis, 2001; Morgan &

Hunt, 1994; Sako & Helper, 1995). If a firm relationship is characterized by low relational norms, the buyer is more likely to dissolve the partnership (Joshi & Arnold, 1998).

According to the locus of attribution, the buyer may likely be more sympathetic to the supplier due to external attribution since the buyer believes the supplier to be responsible for the disruptive event and will be motivated to react constructively in order to prevent such an event from reoccurring (Hibbard et al., 2001). Due to internal attribution, on the other hand, the supplier may be inclined to believe that the disruptive event is somehow their fault and may think that the buyer is displeased with the state of the relationship. This creates a situation where the supplier may discount the beneficial influence of high relational norms on relationship continuance more than the buyer. And in a low relational norms case, the internal attribution of the supplier may cause the supplier to feel even more inclined to disengage from the relationship. Since the effect of attribution moderates the effect of relational norms on relationship continuance, the next hypothesis in our study is as follows:

H2b: The supplier perceives a weaker effect of relational norms on relationship continuance than the buyer.

With regard to the impact of buyer dependence on buyer opportunism, scholars have discovered no definitive relationship. For example, Joshi and Arnold (1997), when investigating the impact of dependence on opportunism, reported an inconclusive finding regarding the relationship between the two. Tangpong and Ro (2009) also reported a nonsignificant relationship between buyer dependence and buyer opportunism. Taking a supplier's perspective, Chen et al. (2014) did not find any significant effect between buyer dependence and the supplier's perception of buyer opportunism. While past studies have not determined a definitive effect of dependence on opportunism, it cannot be readily concluded from the literature whether any perception differences between the buyer and supplier would or should exist. As a result, we hypothesize the following:

H3a: There is no significant difference between the supplier's and buyer's perceptions of the impact of buyer dependence on opportunism.

Lastly, extant research has also shown that dependence can play a role in the continuance of extant buyer-supplier relationships (Joshi & Arnold, 1998; Tangpong & Ro, 2009). When buyer-supplier relationships are characterized by low dependence and a lack of knowledge and communication, the relationships

tend to become fragile and more easily discontinued (Hallén & Johanson, 2004) while relationships that are characterized by high dependence tend to be more stable and experience greater relational continuity (Tangpong & Ro, 2009).

According to TCE, the relationship between buyer dependence and relationship continuance can be explained in terms of switching costs (Williamson, 1991). If a buyer is heavily dependent on a supplier due to lack of alternatives in the supply base, the cost of switching can be high. To circumvent large switching costs, the buyer might readily take on short-term disadvantages and continue in the existing relationship. But if switching costs are low, the buyer may terminate the existing relationship and switch suppliers since the buyer is less dependent on the supplier. For a supplier, the value of an existing buyer-supplier relationship and switching costs may also influence the continuation of the existing relationship, but perhaps to a lesser degree. For a supplier, discontinuing a relationship with a buyer deviates from the principle of customer retention and is usually enacted only in the presence of serious relationship stressors (Geiger et al., 2012). In fact, regardless of the level of dependence, a supplier often has greater incentive than the buyer to continue in an existing relationship, even in the presence of relationship stressors (Geiger et al., 2012). As a result, the supplier perceives dependence to be less influential than the buyer with regard to relationship continuance. This line of reasoning leads us to our study's final hypothesis:

H3b: The supplier perceives a lesser impact of buyer dependence on relationship continuance than the buyer.

RESEARCH METHODS

Overview

We use a scenario-based experimental approach to test differences between the supplier's anticipation of the buyer's behaviors and the buyer's stated behaviors under the same supply disruption event. Besides its proven empirical validity (Key, 1997), a scenario-based experimental approach provides two major advantages over survey research. First, a scenario-based experiment permits researchers to study stated choices and decisions, particularly under situations where companies are normally unwilling to share (Eckerdt & Bendoly, 2011; Pilling, Crosby & Jackson, 1994; Rungtusanatham, Wallin & Eckerdt, 2011; Stevens, 2011). A situation of supply disruption (our studied context) is destructive in nature; it would be unethical (if not virtually impossible) to actually and practically disrupt a firm to collect data. Moreover, opportunistic

behaviors have negative connotations and thus may discourage participants from sharing information. The use of a scenario-based experiment overcomes both issues. Second, while it is possible to conduct retrospective studies and survey firms that have experienced supply disruptions, the use of a scenario-based experiment can generate more reliable data for studying respondent attitudes than using surveys to solicit opinions (Alexander & Becker, 1978) because participants can indicate their responses right after reading scenarios, minimizing retrospective biases and memory loss (Wathne, Biang & Heide, 2001).

In our current investigation, we conduct two separate experiments—one from the buyer's perspective (Experiment 1) and the other from the supplier's perspective (Experiment 2). Within each experiment, a full factorial design approach is adopted: Two factors (relational norms and dependence) are manipulated with each factor having two levels (high or low). This 2×2 full factorial design yields four letter subscripted scenario versions within each study: I (high on both factors), J (high on relational norms and low on dependence), K (low on relational norms and high on dependence), and L (low on both factors), respectively. Within each subscripted version, a letter prefix (either B or S) is used to indicate the respective perspective (B for buyer, S for supplier). Instead of letters A through D, we use letters I through L to avoid any potential social desirability bias (Fisher, 1993) that is often attached to the former with A being perceived as being "superior" in some fashion to B, and B being perceived as "superior" to C, and so on.

Participants

Our participants were full-time working professionals, with some of them having purchasing or related work experience. The average work experience of our buyer sample is 8.31 years of work experience ($SD = 6.79$); among those who possess purchasing-related work experience, the average purchasing-related experience is 4.69 years ($SD = 5.68$). As for the supplier sample, the average work experience is 5.45 years ($SD = 4.57$); among those who possess purchasing-related work experience, the average purchasing-related experience is 2.75 years ($SD = 2.22$). Altogether, the average work experience of our participants is 6.9 years ($SD = 5.97$); among those who profess purchasing-related work experience, the average purchasing-related experience is 3.91 years ($SD = 4.69$).

Separate ANOVA test results using demographic variables as grouping variables show that none of the demographic variables yield significant differences in decision-making (as reflected by the two outcome variables, relationship continuance and opportunism) in our experiment. Specifically, for the buyer sample,

neither gender ($p = .427$ for relationship continuance, $p = .566$ for opportunism) nor race ($p = .189$ for DV = relationship continuance, $p = .241$ for DV = opportunism) appeared to result in any systemic differences. There is also no significant difference between those who have purchasing-related work experience ($n = 71$) versus those who have work experience but not related to the purchasing or supply chain domain ($n = 67$), $p = .786$ (DV = relationship continuance) and $.60$ (DV = opportunism), respectively. Similar results were obtained for the supplier sample. Specifically, neither gender ($p = .083$ for relationship continuance and $p = .693$ for opportunism, respectively) nor ethnicity ($p = .234$ for DV = relationship continuance, $p = .229$ for DV = opportunism) appeared to be significant. There is also no significant difference between those who have purchasing-related work experience ($n = 48$) versus those who have work experience but not related to the purchasing or supply chain domain ($n = 83$), $p = .415$ (DV = relationship continuance) and $.278$ (DV = opportunism), respectively. Since none of the demographic variables nor the nature of work experience (purchasing related vs. nonpurchasing related) make a difference in the response variables, we group the data together. We next describe the two experiments and the respective manipulation checks to ensure validity prior to our hypothesis testing.

Experimental Checks

Buyer's Perspective. The study's dependent variables, relationship continuance and opportunism, were measured using scale items adopted from the literature (Joshi & Arnold, 1997, 1998). The Cronbach's (1951) alpha was .905 for relationship continuance and .786 for opportunism. Participants in the high relational norms condition reported higher levels of perceived relational norms than those in the low relational norms condition (5.81 vs. 2.18, $p < .001$). Similarly, the reported average dependence for the high dependence condition is significantly higher than that for the low dependence condition (5.81 vs. 3.30, $p < .001$). While our full factorial design avoids confounding effects, we verified the orthogonality of the manipulations: The mean relational norms reported by participants in the high versus low dependence conditions are not statistically different (4.67 vs. 4.52, $p = .64$), nor are the mean dependence reported by participants in the high versus low relational norms conditions (4.07 vs. 4.00, $p = .85$).

Similarly, while we adopted a scenario that was previously validated (Joshi & Arnold, 1997, 1998), we assessed whether participants perceived the scenarios to be realistic and took the role seriously in the experiment (Louviere, Hensher & Swait, 2000) using the 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

agree) developed by Pilling et al. (1994). The results indicated that the participants found the scenario realistic ($\mu = 4.25$, $SD = .67$) and took their role seriously ($\mu = 4.58$, $SD = .59$).

Supplier's Perspective. We adopted the experimental vignette of supplier versions from the literature (Chen et al., 2014). The two response variables in the supplier versions of the experimental vignette were revised to mirror those of the buyer's: The *relationship continuance* in the supplier's version measures the *supplier's anticipation of the buyer's likelihood of relationship continuance*, whereas the *opportunism* in the supplier's version measures the *supplier's anticipation of the buyer's likelihood of opportunism*. The Cronbach's (1951) alpha values were .797 and .827, respectively.

We performed similar manipulations and orthogonality checks of the manipulations. None of the results indicated concern pertaining to the validity of the experiment. As for the realism checks, the results indicated that the participants found the scenario realistic ($\mu = 4.29$, $SD = .657$) and took their role seriously ($\mu = 4.54$, $SD = .626$; Table 1).

Analysis and Results

To test the first set of hypotheses (i.e., H1a and H1b), we performed two one-way ANOVA tests—one to compare between the buyer's stated opportunism and the supplier's expectation of buyer opportunism, and the other to compare between the buyer's relationship continuance and the supplier's expectation of the same. The results indicate that the average supplier's expectation of buyer opportunism ($\mu = 3.71$, $SD = 1.61$) is greater than the buyer's stated opportunism ($\mu = 2.83$, $SD = 1.52$), $p < .0001$. Similarly, the average supplier's expectation of buyer relationship continuance ($\mu = 5.08$, $SD = 1.17$) is also greater than that indicated by buyers ($\mu = 4.81$, $SD = 1.57$), $p = .049$. Namely, both H1a and H1b are supported.

To test Hypotheses 2a and 2b, we first performed separate regression analyses using the level of relational norms as the independent variable and opportunism (H2a) and continuance (H2b) as dependent variables, respectively. The buyer's model examines whether relational norms have an effect on the buyer's stated opportunism. The supplier's model examines whether relational norms have an effect on the supplier's expectation of buyer opportunism (Table 2, panel a). The second step compares the regression coefficients of suppliers with buyers to test the null hypothesis $H_0: \beta_B = \beta_S$, where β_B is the regression coefficient for the buyer's model and β_S is the regression coefficient for supplier's model obtained from step 1. We create a dummy variable called "perspective" that is coded as 0 for the buyer and 1 for the supplier, and another variable that is the product of

the perspective variable and level of relational norms. The business perspective (buyer vs. supplier), level of relational norms, and product term are entered as predictors in the regression equation. The product of perspective and (level of) relational norms tests the null hypothesis, $H_0: \beta_B = \beta_S$, which indicates the difference between the slopes for the buyer and supplier. The coefficient of the product term is $-.476$, indicating the slope for the supplier is smaller than that for the buyer, as hypothesized (Table 2, panel b). However, it is not significant, $p = .63$, leading to a rejection of the null hypothesis, $H_0: \beta_B = \beta_S$. That is, while the effect of relational norms on the supplier's expectation of buyer opportunism is smaller, the effect size is not significantly different from the effect of relational norms on the buyer's stated opportunism. Therefore, we conclude that H2a is not supported. On the other hand, the test results support H2b, which hypothesized that the supplier perceives a weaker effect (-2.227) of relational norms on relationship continuance than the buyer ($p = .027$).

We follow similar steps to test Hypotheses 3a and 3b with the level of dependence as the independent variable and opportunism (H3a) and continuance (H3b) as dependent variables for the two separate regression models. The results support H3a, indicating no significant difference between the supplier's and buyer's perceptions of the effect of buyer dependence on opportunism ($p = .212$). While the supplier does perceive a smaller effect of buyer dependence on relationship continuance than the buyer (the slope for supplier—the slope for buyer = $-.299$), such a difference is not statistically significant ($p = .327$), leading to a rejection of H3b. Table 2 summarizes the results and Figure 1 summarizes plots of the two experiments (buyer vs. supplier).¹

DISCUSSION AND CONCLUSION

To summarize our findings, we find support for the majority of our hypotheses. Specifically, support is found for Hypotheses 1a, 1b, 2b, and 3a. Hypotheses 2a and 3b, however, are not supported by our results. Table 3 displays our study's hypotheses and summarizes the results of our analysis.

In light of our study's results, we offer the following observations. With regard to the main effects of our study (Hypotheses 1a and 1b), we find support for

¹As a robustness check, we also performed two separate MANOVA analyses, one for Hypothesis 2 and the other for Hypothesis 3, that account for both dependent variables (Opportunism and Relationship Continuance) in one single model. Because the results are the same and we are not particularly interested in the relationships between the two dependent variables, we do not include MANOVA results in the table. The results of our MANOVA analyses are available upon request.

TABLE 1
Manipulation Check and Orthogonality of the Manipulations

Variables Level Versions	Dependence		Relational Norms		F and p-value
	High I, K	Low J, L	High I, J	Low K, L	
(a) Buyer Versions					
Averaged perceived dependence	5.81 (1.02)	3.30 (1.76)	4.67 (1.77)	4.52 (2.03)	F(1, 143) = .219, p = .64
Averaged perceived relational norms	4.07 (2.21)	4.00 (2.04)	5.81 (1.07)	2.18 (1.12)	F(1, 143) = .035, p = .85
Mean		4.60 (1.90)		4.03 (2.12)	
(b) Supplier Versions					
Averaged perceived dependence	5.42 (1.34)	3.11 (1.45)	4.44 (1.69)	4.04 (1.93)	F(1, 146) = 1.814, p = .18
Averaged perceived relational norms	4.24 (1.62)	4.01 (1.63)	5.13 (1.05)	2.97 (1.37)	F(1, 146) = 116.735, p < .0001
Mean	4.25 (1.81)		4.13 (1.62)		

Note. The unbolded cells present the results of the manipulation check. The bolded cells present the test results of the orthogonality of the manipulation.

TABLE 2
Hypothesis Testing for H2 and H3

(a) Step 1: Two Separate Regression Models		Supplier Models (p-value)		Buyer Models (p-value)	
Dependent Variable (DV)	Supplier Perceived Buyer Opportunism	Supplier Perceived Buyer Relationship Continuity	Buyer Stated Opportunism	Buyer Stated Relationship Continuity	
H2					
Intercept	4.227 (<.0001)	4.783 (<.0001)	3.235 (<.0001)	4.183 (<.0001)	
Norms	-.961 (<.0001)	.555 (.004)	-.793 (.001)	1.231 (<.0001)	
H3					
Intercept	3.711 (<.0001)	4.702 (<.0001)	2.59 (<.0001)	4.262 (<.0001)	
Dependence	.006 (.983)	.764 (<.0001)	.463 (.067)	1.063 (<.0001)	
(b) Step 2: Testing Whether Coefficients between Buyer and Supplier Models Are Significantly Different. H ₀ : β _B = β _S					
	H2a (DV = Opportunism)		H2b (DV = Continuity)		H3b (DV = Continuity)
	Unstandardized Coefficients (β)	T (p-value)	Unstandardized Coefficients (β)	T (p-value)	Unstandardized Coefficients (β) T (p-value)
Intercept	3.235	18.075 (<.0001)	4.183	27.15 (<.0001)	4.262 27.359 (<.0001)
Perspective ^a	.992	3.893 (<.0001)	.600	2.732 (.007)	.44 2.033 (.043)
Relational Norms ^b	-.793	-3.167 (.002)	1.231	5.709 (<.0001)	— —
Dependence ^b	—	—	—	—	—
Perspective × Norms	-.168	-.476 (.634)	-.676	-2.227 (.027)	1.063 4.905 (<.0001)
Perspective × Dependence	—	—	—	—	—
F-value	—	—	—	—	-.299 -.981 (.327)
(p-value)	F(3, 289) = 16.722 (<.0001)	F(3, 289) = 14.143 (<.0001)	F(3, 289) = 8.866 (<.0001)	F(3, 289) = 13.286 (<.0001)	

^aWhen the level of relational norms (dependence) is low, it is coded as 0. When the level of relational norms (dependence) is high, it is coded as 1.

^bBuyer is coded as 0, whereas supplier is coded as 1.

FIGURE 1
2 × 2 Plots of Hypotheses

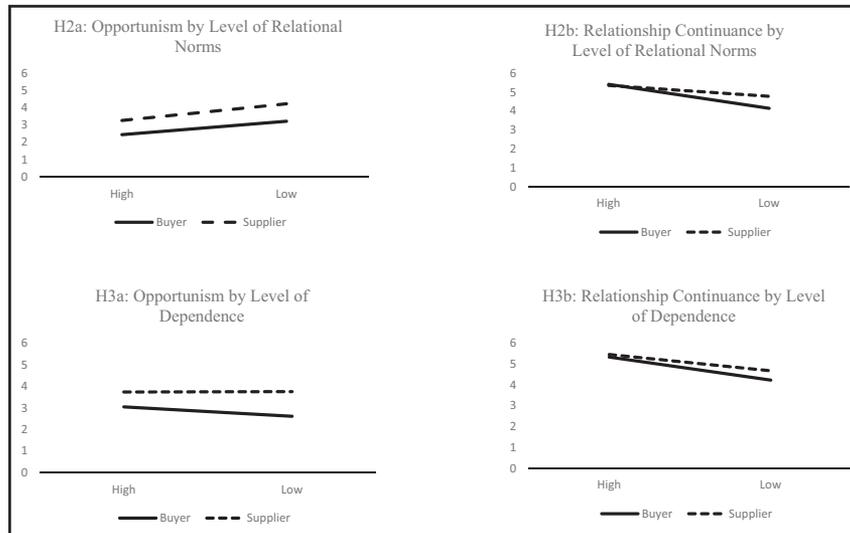


TABLE 3

Summary of Hypotheses and Results

Hypothesis	Result
H1a: The supplier's expectation of buyer opportunism is greater than the buyer's stated opportunism.	Supported
H1b: The supplier's expectation of relationship continuance is greater than the buyer's stated relationship continuance.	Supported
H2a: The supplier perceives a weaker effect of relational norms on buyer opportunism than the buyer.	Not Supported
H2b: The supplier perceives a weaker effect of relational norms on relationship continuance than the buyer.	Supported
H3a: There is no significant difference between the supplier's and buyer's perceptions of the impact of buyer dependence on opportunism.	Supported
H3b: The supplier perceives a lesser impact of buyer dependence on relationship continuance than the buyer.	Not Supported

our study's first two hypotheses. We observe that suppliers did seem to have a greater expectation of buyer opportunism, in lieu of a potential supply disruption

resulting from a labor dispute at the supplier's plant, than did buyers (Hypothesis 1a). This suggests that the internal attribution on the part of the supplier

concerning the labor strike causes the supplier to anticipate punitive action from the buyer, while the external attribution on the part of the buyer concerning the labor strike causes the buyer to act more benevolently toward the supplier, reducing the likelihood of stated opportunistic behavior. We also observe that suppliers seem to have a greater expectation of relationship continuance than what the buyers actually reported (Hypothesis 1b). This suggests that the supplier may be vulnerable to false consensus bias since the supplier is more prone to holding onto the existing relationship than the buyer (Ross et al., 1977). In such a case, as indicated earlier, the supplier would overestimate the buyer's intention to continue the relationship.

Our results also show that the supplier actually *did not* underestimate the effects of relational norms on buyer opportunism (Hypothesis 2a). Rather, no differences were observed between how the buyer and supplier perceived the influence of relational norms on opportunism. Although H1a was supported, H2a was not, and this seems to suggest that attribution is less influential than the main effect of relational norms, at least with regard to buyer opportunism. In addition, our results also indicate that the supplier seems to underestimate the influence of relational norms on relationship continuance more so than the buyer (Hypothesis 2b), again suggesting that the internal attribution of a potentially disruptive event may compel the supplier to discount the effectiveness of relational norms on preventing the buyer's disengagement from the relationship.

Hypothesis 3a was supported, indicating that at least with regard to our study, the buyer and supplier perceive no differences concerning the effect of dependence. Our results also indicate that the main effect of buyer dependence is not significant ($\beta = 1.782$, $p = .076$), which is consistent with other scholarly works (Tangpong & Ro, 2009) that also failed to determine a significant effect of dependence on opportunism. Moreover, we find no significant difference in the perceived effects of dependence on opportunism between the buyer and supplier. In other words, both parties perceive no significant effect of buyer dependence on opportunism. Hypothesis 3b, however, was not supported by our findings. This suggests that for the buyer and the supplier, the issue of buyer dependence and its influence on the continuity of the existing relationship is *not* perceived differently by the two parties. The main effect of dependence on continuance is still positive and significant, which is consistent with the prediction of TCE ($\beta = 4.905$, $p < .0001$). That is, both parties recognize and perceive similar strong effects of buyer dependence on continuance.

Theoretical Contributions

In light of our study's findings, we offer the following theoretical contributions. First, we bring attribution theory into the argument surrounding relational norms and dependence with regard to their impacts on opportunism and continuance—two commonly studied outcome variables in the buyer–supplier relationship literature. Our study suggests that attribution can influence a firm's perspective regarding the effect of relational norms on these outcome variables. When considering our study's results involving the supplier's perspective, it is possible that the influence of an internal attribution (due to a potential disruption occurring at the supplier's site) depends on the characteristics of different outcomes. For suppliers, buyer opportunism is an unfavorable outcome and continuance is a favorable outcome. Contrary to our expectation in the case of buyer opportunism, internal attribution on the part of the supplier does not lead to any differences concerning the perceived impacts of relational norms on opportunism (due to the lack of support for H2a). As expected in the case of relational continuance, due to the support for H2b, internal attribution on the part of the supplier leads to an underestimation of the perceived effects of relational norms. It may actually be easier for suppliers to rationalize the relationship between internal attributions triggered by a negative event and favorable outcomes (H2b) than linking internal attributions to unfavorable outcomes (H2a). This difficulty could create a bias that leads to the pattern of underestimation observed in our study.

To the best of our knowledge, our study is among the very first to investigate magnitude differences with regard to the perceived effects of relational norms and dependence between the buyer and supplier. Our study's findings seem to suggest that perception gaps exist more concerning the effects of relational norms than dependence. Our research also provides an initial look at the exploration of the applicability of attribution theory in a buyer–supplier relationship context. The effect of attribution, at least in the case of our current study, does not influence the perceived effect of relational norms on opportunism (H2a). In other words, suppliers are no more or less skeptical than buyers when it comes to evaluating the effect of relational norms on opportunism. However, it is not quite so clear when it comes to relational continuance. Our results support the notion that the supplier would be more skeptical about the effectiveness of relational norms than the buyer with regard to relationship continuance (H2b). The supplier may incur doubts about an existing buyer–supplier relationship and perceive that things may be "too good to be true." This attitudinal disposition may cause the

supplier to discount any benevolent overtures that the buying firm may make to increase relational norms.

Interestingly, the lack of support in our results for Hypothesis 3b brings into question the perspective differences between buyer and supplier with regard to the impact of buyer dependence on relationship continuance. Since no magnitude differences were perceived between buyer and supplier, this would suggest that dependence, as a form of governing mechanism, is equally effective in its impact on relationship continuance as perceived by both buyers and suppliers. That is, although suppliers often possess greater incentive than buyers to continue the relationship as we hypothesized, this inclination would not affect the supplier's perceived effectiveness of dependence. It could be that the buyer and supplier often rely on objective measures to assess the state of dependence between them (e.g., by sales volume, technology investment amounts, number of suppliers, or product complexity). Therefore, there is less room for open interpretation regarding the state of dependence and its effectiveness on relational outcomes.

Managerial Implications

Based on our findings, both parties may possess fairly similar ideas about the effect of dependence but different ideas about the effect of relational norms. As a result, relational norms may be misinterpreted more than dependence. Thus, perception gaps in relational norms may contribute to dissolution more than perception gaps in dependence. This suggests that supply chain managers on both sides of the exchange dyad should manage expectations and norms with their counterparts. Concerning dependence, the perceived effects of dependence might be the same among managers who work for both the buyer and supplier. Therefore, dependence becomes an unambiguous construct that both buyer and supplier can try to utilize without much chance of misinterpretation. Also, since the perceived effects of relational norms is more subject to differences between the buyer and supplier, both managers across a dyad should work diligently to ensure that norms in a continuing relationship are managed carefully. Constant communication and feedback between managers in the dyad can foster trust and reduce any potential misunderstandings caused by perspective differences. Yet another implication for managers is the realization that the notion of internal versus external attribution also lies within the realm of perspective. As relational norms is a construct perceived by both parties in a dyad (whether equivalently or not), attribution is also a construct perceived by both parties. As a result, the sense of attribution of a firm concerning the responsibility for a potential supply disruption may also be subject to variability in perception. Whether attribution is assigned internally or

externally could be a matter of perspective—a sort of “blame game” between the buyer and supplier concerning a potential supply disruption. But the issue of which party is more dependent on the other within a dyad appears to be more definitive and less ambiguous; it is clearer in a relationship which member is more dependent on the other.

Future Research

Several future research considerations could be extended from this study. Our study utilizes attribution theory to argue the perceptual difference between buyer and supplier. Future research can develop more finely grained scenarios to investigate the detailed components of dependence and relational norms such as asset specificity, trust, or previous interactions to garner a more detailed understanding of perception differences. Also, culture may play a role in perception differences. We encourage future research to replicate our study in a different cultural environment, especially in emerging countries such as China or India, and compare those results with our current findings to further our understanding about the perception differences between buyers and suppliers.

REFERENCES

- Adler, P. S. (1999). Building better bureaucracies. *Academy of Management Executive*, 13(4), 36–47.
- Alexander, C. S., & Becker, H. J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly*, 42(1), 93–104.
- Anderson, E., & Weitz, B. (1989). Determinants of continuity in conventional industrial channel dyads. *Marketing Science*, 8(4), 310–323.
- Anderson, E., & Weitz, B. (1992). The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research*, 29(1), 18–34.
- Benton, W. C. (2013). *Purchasing and supply management* (3rd ed.). New York, NY: McGraw-Hill/Irwin.
- Carter, C. R. (2000). Ethical issues in international buyer-supplier relationships: a dyadic examination. *Journal of Operations Management*, 18(2), 191–208.
- Chen, Y. S., Ro, Y. K., & Su, H. C. (2014). Mirror, mirror on the wall... Who's the most opportunistic and compliant of them all? *American Journal of Business*, 29(1), 43–60.
- Chung-Herrera, B. G., Goldschmidt, N., & Hoffman, K. D. (2004). Customer and employee views of critical service incidents. *Journal of Services Marketing*, 18, 241–254.
- Conner, K. R., & Prahalad, C. K. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7, 477–501.
- Corsten, D., & Kumar, N. (2005). Do suppliers benefit from collaborative relationships with large retail-

- ers? An empirical investigation of efficient consumer response adoption. *Journal of Marketing*, 69(3), 80–94.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334.
- Eckerd, S., & Bendoly, E. (2011). Introduction to the discussion forum on using experiments in supply chain management research. *Journal of Supply Chain Management*, 47(3), 3–4.
- Ellram, L. M., & Hendrick, T. E. (1995). Partnering characteristics: A dyadic perspective. *Journal of Business Logistics*, 16(1), 41–64.
- Emerson, R. M. (1962). Power–dependence relations. *American Sociological Review*, 27(1), 31–41.
- Fisher, R. J. (1993). Social desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, 20, 303–315.
- Folkes, V. S. (1984). Consumer reactions to product failure: An attributional approach. *Journal of Consumer Research*, 10, 398–409.
- Folkes, V. S., & Kotsos, B. (1986). Buyers' and sellers' explanations for product failure: Who done it? *Journal of Marketing*, 50(2), 74–80.
- Forker, L. B., & Stannack, P. (2000). Cooperation versus competition: Do buyers and suppliers really see eye-to-eye? *European Journal of Purchasing & Supply Management*, 6(1), 31–40.
- Ganesan, S. (1994). Determinants of long-term orientation in buyer–seller relationships. *Journal of Marketing*, 58(2), 1–19.
- Gassenheimer, J. B., & Manolis, C. (2001). The influence of product customization and supplier selection on future intentions: The mediating effects of salesperson and organizational trust. *Journal of Managerial Issues*, 13, 418–435.
- Geiger, I., Durand, A., Saab, S., Kleinaltenkamp, M., Baxter, R., & Lee, Y. (2012). The bonding effects of relationship value and switching costs in industrial buyer–seller relationships: An investigation into role differences. *Industrial Marketing Management*, 41(1), 82–93.
- Gulati, R., & Sych, M. (2007). Dependence asymmetry and joint dependence in interorganizational relationships: Effects of embeddedness on a manufacturer's performance in procurement relationships. *Administrative Science Quarterly*, 52(1), 32–69.
- Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment in exchange. *Journal of Marketing*, 59(1), 78–92.
- Hallén, L., & Johanson, M. (2004). Integration of relationships and business network development in the Russian transition economy. *International Marketing Review*, 21, 158–171.
- Harvey, P., Harris, K. J., Gillis, W. E., & Martinko, M. J. (2014). Abusive supervision and the entitled employee. *The Leadership Quarterly*, 25, 204–217.
- Heide, J. B., & John, G. (1988). The role of dependence balancing in safeguarding transaction-specific assets in conventional channels. *Journal of Marketing*, 52(1), 20–35.
- Heide, J. B., & John, G. (1992). Do norms matter in marketing relationships? *Journal of Marketing*, 56(2), 32–44.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Psychology Press.
- Helm, S., Rolfes, L., & Günter, B. (2006). Suppliers' willingness to end unprofitable customer relationships: An exploratory investigation in the German mechanical engineering sector. *European Journal of Marketing*, 40, 366–383.
- Helper, S., & Sako, M. (1995). Supplier relations in Japan and the United States: Are they converging? *Sloan Management Review*, Spring(3), 77–84.
- Hibbard, J. D., Kumar, N., & Stern, L. W. (2001). Examining the impact of destructive acts in marketing channel relationships. *Journal of Marketing Research*, 38(1), 45–61.
- Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.
- Holmlund-Rytkönen, M., & Strandvik, T. (2005). Stress in business relationships. *Journal of Business & Industrial Marketing*, 20(1), 12–22.
- John, G., & Reve, T. (1982). The reliability and validity of key informant data from dyadic relationships in marketing channels. *Journal of Marketing Research*, 19, 517–524.
- Joshi, A. W., & Arnold, S. J. (1997). The impact of buyer dependence on buyer opportunism in buyer–supplier relationships: The moderating role of relational norms. *Psychology & Marketing*, 14, 823–845.
- Joshi, A. W., & Arnold, S. J. (1998). How relational norms affect compliance in industrial buying. *Journal of Business Research*, 41(2), 105–114.
- Key, S. (1997). Analyzing managerial discretion: An assessment tool to predict individual policy decisions. *International Journal of Organizational Analysis*, 5(2), 134–155.
- Kim, B., Park, K., & Kim, T. (1999). The perception gap among buyers and suppliers in the semiconductor industry. *Supply Chain Management: An International Journal*, 4, 231–241.
- Kim, K. K., Park, S.-H., Ryoo, S. Y., & Park, S. K. (2010). Inter-organizational cooperation in buyer–supplier relationships: Both perspectives. *Journal of Business Research*, 63, 863–869.
- Lettice, F., Wyatt, C., & Evans, S. (2010). Buyer–supplier partnerships during product design and development in the global automotive sector: Who invests, in what and when? *International Journal of Production Economics*, 127, 309–319.
- Liker, J. K., & Choi, T. Y. (2004). Building deep supplier relationships. *Harvard Business Review*, 82(12), 104–113.
- Louviere, J. J., Hensher, D. A., & Swait, J. D. (2000). *Stated choice methods: Analysis and applications*. Cambridge: Cambridge University Press.
- Monczka, R., Trent, R., & Handfield, R. (1998). *Purchasing and supply chain management*. Cincinnati, OH: South-Western College Publishing.

- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23, 242–266.
- Noordewier, T. G., John, G., & Nevin, J. R. (1990). Performance outcomes of purchasing arrangements in industrial buyer–vendor relationships. *Journal of Marketing*, 54(4), 80–93.
- Nyaga, G. N., Lynch, D. F., Marshall, D., & Ambrose, E. (2013). Power asymmetry, adaptation and collaboration in dyadic relationships involving a powerful partner. *Journal of Supply Chain Management*, 49(3), 42–65.
- Nyaga, G. N., Whipple, J. M., & Lynch, D. F. (2010). Examining supply chain relationships: Do buyer and supplier perspectives on collaborative relationships differ? *Journal of Operations Management*, 28(2), 101–114.
- Oflaç, B. S., Sullivan, U. Y., & Baltacıoğlu, T. (2012). An attribution approach to consumer evaluations in logistics customer service failure situations. *Journal of Supply Chain Management*, 48(4), 51–71.
- Pfeffer, J., & Salancik, G. (1978). *The external control of organizations*. New York, NY: Harper and Rowe.
- Pilling, B. K., Crosby, L. A., & Jackson, Jr, D. W. (1994). Relational bonds in industrial exchange: An experimental test of the transaction cost economic framework. *Journal of Business Research*, 30, 237–251.
- Ross, L., Greene, D., & House, P. (1977). The “false consensus effect”: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13, 279–301.
- Rungtusanatham, M., Wallin, C., & Eckerd, S. (2011). The vignette in a scenario-based role-playing experiment. *Journal of Supply Chain Management*, 47(3), 9–16.
- Sako, M., & Helper, S. (1995). *Supplier relations and performance in the auto industry: European–Japanese–US comparisons of the voice/exit choice*. Cambridge, MA: International Motor Vehicle Program, Massachusetts Institute of Technology.
- Sanders, N. R., & Premus, R. (2005). Modeling the relationship between firm IT capability, collaboration, and performance. *Journal of Business Logistics*, 26(1), 1–23.
- Selnes, F., & Gønhaug, K. (2000). Effects of supplier reliability and benevolence in business marketing. *Journal of Business Research*, 49, 259–271.
- Spekman, R. E. (1988). Strategic supplier selection: Understanding long-term buyer relationships. *Business Horizons*, 31(4), 75–81.
- Stevens, C. K. (2011). Questions to consider when selecting student samples. *Journal of Supply Chain Management*, 47(3), 19–21.
- Tangpong, C., Hung, K. T., & Ro, Y. K. (2010). The interaction effect of relational norms and agent cooperativeness on opportunism in buyer–supplier relationships. *Journal of Operations Management*, 28, 398–414.
- Tangpong, C., & Ro, Y. K. (2009). The role of agent negotiation behaviors in buyer–supplier relationships. *Journal of Managerial Issues*, 21(1), 58–79.
- Terpend, R., Tyler, B. B., Krause, D. R., & Handfield, R. B. (2008). Buyer–supplier relationships: Derived value over two decades. *Journal of Supply Chain Management*, 44(2), 28–55.
- Wang, Q., Kayande, U., & Jap, S. (2010). The seeds of dissolution: Discrepancy and incoherence in buyer–supplier exchange. *Marketing Science*, 29, 1109–1124.
- Wathne, K., Biong, H., & Heide, J. (2001). Choice of supplier in embedded markets: Relationship and marketing program effects. *Journal of Marketing*, 65(2), 54–66.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548–573.
- Whipple, J. M., & Frankel, R. (2000). Strategic alliance success factors. *Journal of Supply Chain Management*, 36(3), 21–28.
- Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational contracting*. New York, NY: The Free Press, Simon and Schuster.
- Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269–296.



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APPENDIX A
 Supply Disruption Scenario (Supplier's Perspective)*

Introduction

You are a key account manager responsible for the production and delivery of microchips to a midsize electronic equipment manufacturer. Microchips are an important component for the equipment that the manufacturer produces; therefore, they need to be delivered on a regular basis. You are the one existing supplier for this component.

<p>High Dependence</p> <p>Being responsible for the purchase of microchips, the manufacturer finds itself in a situation wherein it is difficult for them to find a suitable replacement for your company. If the manufacturer decides to stop purchasing from your company, they could not easily replace their volume with purchases from alternative suppliers. There are very few, if any, competitive suppliers for microchips and the manufacturer cannot switch to them without incurring significant search and verification costs. Switching suppliers is also going to have negative effects on the quality or design of the equipment that they manufacture. Their production system cannot be easily adapted to use components from a new supplier. The procedures and routines that the manufacturer has developed are unique and hence they are not applicable with any other supplier of this component. The skills that their people have acquired in the process of working with your company cannot easily be changed to fit another supplier's situation. The manufacturer cannot therefore terminate their relationship with your company without incurring significant costs.</p>	<p>Low Dependence</p> <p>Being responsible for the purchase of microchips, the manufacturer finds itself in a situation wherein it is not difficult for them to find a suitable replacement for your company. If the manufacturer decides to stop purchasing from your company, they could easily replace their volume with purchases from alternative suppliers. There are many competitive suppliers for microchips and the manufacturer can switch to them without incurring significant search and verification costs. Switching suppliers is not going to have any negative effects on the quality or design of the equipment that they manufacture. Their production system can be easily adapted to use components from a new supplier. The procedures and routines that the manufacturer has developed are standard and they are equally applicable with any other supplier of this component. The skills that their people have acquired in the process of working with your company can easily be changed to fit another supplier's situation. The manufacturer can therefore terminate their relationship with your company without incurring significant costs.</p>
<p>High Relational Norm</p> <p>Both you and your manufacturer bring an open and frank orientation to the relationship. Exchange of information in this relationship takes place frequently, informally, and not only according to the terms of a prespecified agreement. They keep you informed of any event or change that might affect your company. Flexibility is a key characteristic of this relationship. Both sides make ongoing adjustments to cope with the changing circumstances. When some unexpected situation arises, both of you would rather work out a new deal than hold each other responsible to the original terms. You tend to help each other out in case of unexpected crises. If your company is unable to fulfill an order,</p>	<p>Low Relational Norm</p> <p>Both you and your manufacturer bring a formal and contract-governed orientation to the relationship. Exchange of information in this relationship takes place infrequently, formally, and in accordance with the terms of a prespecified agreement. Even if they do know of any event or change that might affect your company, the manufacturer does not divulge this information to you. Strict adherence to the terms of the original agreement characterizes your relationship with this manufacturer. Even in the face of unexpected situations,</p>

(continued)

you recommend an alternative source of supply for the same. Above all, the manufacturer has a sense that your company is committed to them and that your company works with them keeping their best interests in mind. You see each other as partners, not rivals.

rather than modifying the contract, both of you adhere to the original terms. The manufacturer has a distant “arm’s length” relationship with your company. They do not think that your company is committed to their organization—in fact, they think that if they did not carefully monitor your company’s performance, you would slack off from the original terms. Above all, the manufacturer sees your company as an external economic agent with whom they have to bargain in order to get the best deal for themselves.

Conclusion

Recently, you informed the manufacturer that your company is involved in a labor dispute. Consequently, you are temporarily unable to guarantee on-schedule delivery. This creates some uncertainty for the manufacturer. Delayed delivery of microchips may, for example, cause problems for the manufacturer in meeting delivery schedules to customers. Your company has called the manufacturer to get your regular order. Drawing from experience, how would you expect the manufacturer to most likely react in this situation?

*Adopted from Chen et al. (2014).

**APPENDIX B
Supply Disruption Scenario (Buyer’s Perspective)***

Introduction

You are a purchasing manager responsible for the purchase of microchips for a midsize electronic equipment manufacturer. Microchips are an important component for the equipment that you manufacture; therefore, they need to be purchased on a regular basis. You have one existing supplier for this component.

High Dependence

As purchasing manager responsible for microchips, you find yourself in a situation wherein it is difficult for you to find a suitable replacement for the existing supplier. If you decide to stop purchasing from this supplier, you could not easily replace their volume with purchases from alternative suppliers. There are very few, if any, competitive suppliers for microchips and you cannot switch to them without incurring significant search and verification costs. Switching suppliers is also going to have negative effects on the quality or design of the equipment that you manufacture. Your production system cannot be easily adapted to use components from a new supplier. The procedures and routines that you have developed are unique and

Low Dependence

As purchasing manager responsible for microchips, you find yourself in a situation wherein it is not difficult for you to find a suitable replacement for the existing supplier. If you decide to stop purchasing from this supplier, you could easily replace their volume with purchases from alternative suppliers. There are many competitive suppliers for microchips and you can switch to them without incurring any search costs. Switching suppliers is not going to have any negative effects on the quality or design of the equipment that you manufacture. Your production system can be easily adapted to use components from a new supplier. The procedures and routines that you have developed are standard

(continued)

APPENDIX B (continued)

hence they are not applicable with any other supplier of this component. The skills that your people have acquired in the process of working with the supplier cannot easily be changed to fit another supplier's situation. You cannot therefore terminate your relationship with your present supplier without incurring significant costs.

High Relational norm

Both you and your supplier bring an open and frank orientation to the relationship. Exchange of information in this relationship takes place frequently, informally, and not only according to a prespecified agreement. You keep each other informed of any event or change that might affect the other party. Flexibility is a key characteristic of this relationship. Both sides make ongoing adjustments to cope with the changing circumstances. When some unexpected situation arises, the parties would rather work out a new deal than hold each other responsible to the original terms. You tend to help each other out in case of unexpected crises. If your supplier is unable to fulfill an order, they recommend an alternative source of supply for the same. Above all, you have a sense that your supplier is committed to your organization and that they work with you keeping your best interests in mind. You see each other as partners, not rivals.

and they are equally applicable with any supplier of this component. The skills that your people have acquired in the process of working with the supplier can easily be changed to fit another supplier's situation. You can therefore terminate your relationship with your present supplier without incurring any costs.

Low Relational Norm

Both you and your supplier bring a formal and contract-governed orientation to the relationship. Exchange of information in this relationship takes place infrequently, formally, and in accordance with the terms of a prespecified agreement. Even if you do know of any event or change that might affect the other party, you do not divulge this information to you. Strict adherence to the terms of the original agreement characterizes your relationship with this supplier. Even in the face of unexpected situations, rather than modifying the contract, you adhere to the original terms. You have a distant "arm's length" relationship with your supplier. You do not think that the supplier is committed to your organization—in fact, you think that if you did not carefully monitor this supplier's performance, they would slack off from the original terms. Above all, you see your supplier as an external economic agent with whom you have to bargain in order to get the best deal for yourself.

Conclusion

Recently, the supplier informed you that they are involved in a labor dispute. Consequently, they are temporarily unable to guarantee on-schedule delivery. This creates some uncertainty for your organization. Delayed delivery of microchips may, for example, cause problems for your organization in meeting delivery schedules to customers. The supplier has called to get your regular order. Drawing from experience, how would you be most likely to react in this situation?

*Adopted from Joshi and Arnold (1997, 1998).