

An examination of trust dimensions across high and low dependence situations

By: W. Randy Clark, Pam Scholder Ellen, and [James S. Boles](#)

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Abstract:

Purpose: Relationship marketing literature has provided support of a multidimensional trust construct; however, there is little consensus on its structure. This article builds on existing theory to propose and empirically test a three-dimensional trust construct including ability, integrity, and benevolence dimensions. Furthermore, the article examines this conceptualization of the construct across different relationship types as established by dependence form. **Methodology:** We choose to use a scenario/survey data collection method to replicate specific relationship types for a national purchasing agent sample. This method allows us to obtain adequate sample sizes to compare the relative importance of trust dimensions using structural equation modeling. **Findings:** We found empirical evidence to support a three-dimensional trust construct for use in further examination of buyer–seller relationships. In addition, we found differential importance of those dimensions across different relationship forms. **Research Implications:** By providing empirical support for a multidimensional trust construct and further specifying the importance of each dimension in various relationship forms, we hope to provide a strong foundation on which to build further trust research. **Practical Implications:** In examining trust among purchasing agents, we hope to provide a strong foundation for salespeople to understand how their actions impact their long-term relationships. Understanding that trust in a relationship involves more than simple integrity or completing promises should help boundary spanners develop stronger ties. **Contribution:** The main contribution of the article is the concept that trust needs to be researched in ways other than simply asking "Do you trust your supplier?"

Keywords: trust | dependence | relationships | scenarios | structural equation modeling

Article:

Research on trust in business relationships has been numerous and varied during the past twenty years (Das and Teng 2004; Dirks and Ferrin 2001; Eastlick, Lotz, and Warrington 2006; Fang et al. 2008; Gao, Sirgy, and Bird 2005; Gounaris 2005; Hadjikhani and Thilenius 2005; Hess and Story 2005; Hewett and Bearden 2001; Izquierdo and Cillan 2004; Liu, Li, et al. 2008; Nevin

and Money 2008; Pappas and Flaherty 2008; Razzaque and Boon 2003; Ryu, Min, and Zushi 2008; Singh and Sirdeshmukh 2000; Wells and Kipnis 2001; Young 2006). Morgan and Hunt (1994: 20) agree that the role of the relationship has increased in importance: “The past decade has witnessed the inception of a major directional change in both marketing theory and practice; the turn is toward relationship marketing.” The increased focus on the study of business relationships has led to a number of studies examining constructs that produce effective relationships (Kumar, Scheer, and Steenkamp 1995a, 1995b; Sheth and Parvatiyar 1995).

Trust has proven to be an influential and important construct in the relationship marketing paradigm (Garbarino and Johnson 1999; Kumar, Scheer, and Steenkamp 1995a; Wilson 1995). Wilson (1995: 337) claims that “trust is a fundamental relationship model building block.” Kumar, Scheer, and Steenkamp (1995a: 55) agree that “although there is no consensus on which constructs comprise relationship quality, the critical importance of trust and involvement with the supplier in developing long-term relationships has been emphasized.” Also, Zaheer, McEvily, and Perrone (1998: 21) argue that “trust is one factor that has been strongly suggested as having an important role in facilitating closer buyer–supplier relationships by reducing the tendency of firms to take advantage of each other.”

“The benefits of interfirm trust ... seem wide ranging in character, including lowering transaction costs, inducing desirable behavior, reducing the extent of formal contracts, and facilitating dispute resolution” (Das and Teng 1998: 494). Research has also shown that higher levels of trust increase cooperation (Morgan and Hunt 1994), lead to improved relationship coordination (Fang et al. 2008), help to minimize opportunism (Singh and Sirdeshmukh 2000), lead to the exertion of more effort by relationship partners (Doney and Cannon 1997; Pappas and Flaherty 2008), and increase the level of commitment or long-term orientation of a relationship (Liu, Tao, et al. 2008; Moorman, Deshpande, and Zaltman 1993; Zhao and Cavusgil 2006). For a detailed review of the consequences of trust, see Dirks and Ferrin (2001).

“Yet despite widespread recognition of the importance of trust, conceptualization of ‘trust’ in business relationship literature remains limited” (Young 2006: 439). More than fifteen years ago, Moorman, Deshpande, and Zaltman (1993: 81) called for more work in the area: “Very little academic research has attempted to document empirically the factors that affect trust in marketing relationships.” While empirical evidence has grown throughout the past fifteen years (see Das and Teng 2004 for a discussion of the growing trust research), the state of research on the trust construct is still lacking (Young 2006). Even though many have argued for a multidimensional trust construct, much recent research has still examined trust as a single dimension construct (Eastlick, Lotz, and Warrington 2006; Fang et al. 2008; Gao, Sirgy, and Bird 2005; Gounaris 2005; Hadjikhani and Thilenius 2005; Hess and Story 2005; Hewett and Bearden 2001; Izquierdo and Cillan 2004; Leonidou, Talias, and Leonidou 2008; Lohtia, Bello, and Porter 2009; Nevin and Money 2008; Pappas and Flaherty 2008; Razzaque and Boon 2003; Ryu, Min, and Zushi 2008; Wells and Kipnis 2001; Zhao and Cavusgil 2006). Given the varied points of view from which the trust construct has developed, it is not surprising that many researchers have found a great deal of complexity in its study (Dirks and Ferrin 2001). Bigley and Pearce (1998: 417) state that “the area seems to be fundamentally fragmented in its problems and approaches.”

The goal of this study is twofold. First, a multidimensional conceptualization of trust is tested. Specifically, this article builds on the conceptual but relatively untested work (see Gill et al. 2005) of Mayer, Davis, and Schoorman (1995), which proposes a model of three factors of perceived trustworthiness. Second, this study also builds on the works of Sheppard and Sherman (1998) and Pfeffer and Salancik (1978) by examining the relative importance of the trust dimensions across differing relationships as established by different levels of dependence. Sheppard and Sherman (1998) propose that dependence types and levels in a relationship will determine the type of risk involved in the relationship and, therefore, will influence the trust processes in that relationship. Similarly, Pfeffer and Salancik's (1978) discussion of resource dependency theory emphasizes the role that dependence plays in reducing uncertainties and building strong business-to-business relationships.

TRUST IN THE MARKETING LITERATURE

While the construct of trust has taken on a more significant role in the marketing literature during the past fifteen years (Fang et al. 2008; Liu, Tao, et al. 2008; Morgan and Hunt 1994; Moorman, Deshpande, and Zaltman 1993; Moorman and Zaltman 1992; Nevin and Money 2008; Singh and Sirdeshmukh 2000), research on the construct of trust itself has been very diverse and has had little cohesion (Young 2006). Some have studied the nature of trust in relationships (Liu, Tao, et al. 2008; Mayer, Davis, and Schoorman 1995; McKnight, Cummings, and Chervany 1998; Mishra 1996), while others have studied it as an antecedent condition necessary to build a quality relationship (Anderson and Narus 1990; Liu, Li, et al. 2008; Mohr and Spekman 1994; Moorman and Zaltman 1992; Morgan and Hunt 1994; Ryu, Min, and Zushi 2008; Smith and Barclay 1997; Zhao and Cavusgil 2006), and others have studied its impact on cross-cultural relationships (Leonidou, Talias, and Leonidou 2008; Lohtia, Bello, and Porter 2009; Nevin and Money 2008). Many early operational definitions of trust were very simplistic and were built around a single item that asked overall questions such as, "Do you trust your relationship partner?" In recent years, there has been an effort to more fully explicate the construct. Even with the added emphasis on the multidimensional nature of the construct, Dirks and Ferrin (2001: 451) argue that many studies measure trust "as a unidimensional psychological state."

What Is Trust?

Mayer, Davis, and Schoorman (1995: 712) state that trust is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party." Rousseau et al. (1998: 395) define trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another." These two definitions make evident the important role of perceived vulnerability in a relationship. Mayer, Davis, and Schoorman (1995) argue that not only does vulnerability exist in a relationship, but also it is willingly accepted when there are reasons to have positive expectations of the partner's behavior. Rousseau et al. (1998) also feel that the basic elements in the construct of trust are similar across research that examines relationships both between and within firms. This thought is important when considering the many diverse trust streams of research. From these previous definitions, we define trust in this article as

the willingness of a party to accept perceived vulnerability to the actions of another party based on the expectation that the other has the ability, benevolence, and integrity to perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.

This definition emphasizes the willingness to accept vulnerability in relationships with or without assurances. As pointed out by previous researchers, trust only becomes important in the presence of dependence and vulnerability. Also evident in the definition are the three dimensions of trust proposed in this study. Instead of just mentioning intentions or behaviors, it is important to thoroughly discuss the specific areas in which trust may have an impact given the differential nature of relationships.

Dimensions of Trust

There is substantial agreement that “trust is a multidimensional construct” (Kramer 1996: 221; see also Bhattacharya, Devinney, and Pillutla 1998; Brashear et al. 2003; Doney and Cannon 1997; Kumar et al. 1995a; Liu, Tao, et al. 2008; Liu, Li, et al. 2008b; Morgan and Hunt 1994; Siguaw, Simpson, and Baker 1998; Sirdeshmukh, Singh, and Sabol 2002; White 2005; Young 2006). Young (2006: 441) argues for a “mixing pot” of trust concepts, but ultimately breaks it down into an emotional mix and an assessment mix. Similarly, Chowdhury (2005) examines affect-based and cognition-based trust. Affect-based trust relies on “emotional ties linking individuals” (p. 313), while cognition-based trust is built on reliable performance and credibility. Also, Liu, Tao, et al. (2008) build on a competence trust dimension and an affect-based (goodwill trust) dimension, while Liu, Li, et al. (2008) discuss honesty, trust, and benevolence trust dimensions.

Mayer, Davis, and Schoorman (1995) go further to propose three dimensions of trust, called factors of perceived trustworthiness. They match Young's (2006: 717) concept of assessment with their ability dimension, defined as “that group of skills, competencies, and characteristics that enable a party to have influence within some specific domain.” In addition, Mayer, Davis, and Schoorman (1995) account for Young's (2006) emotional mix with benevolence and integrity dimensions. “Benevolence is the extent to which a trustee is believed to want to do good for the trustor, aside from an egocentric profit motive” (p. 718). Integrity is the “perception that the trustee adheres to a set of principles that the trustor finds acceptable” (p. 719). Mayer, Davis, and Schoorman's (1995) ability dimension would incorporate the same issues as Chowdhury's (2005) cognition-based trust relying on reliability and performance credibility. The integrity and benevolence dimension would be more affect-based in nature. They are determined more by social interaction and citizenship behaviors. Chowdhury's (2005) trust items relate very closely to Mayer, Davis, and Schoorman's (1995) benevolence and ability dimensions. Gill et al. (2005) examine Mayer, Davis, and Schoorman's (1995) three dimensions as antecedent conditions of trust and found that all three were significant predictors of an individual's intention to trust (see Svensson 2004 for a discussion of proposed trust dimensions).

Other recent work in the academic literature examines similar dimensions of trust, often either credibility, competence, or benevolence (Cho 2006; Doney and Cannon 1997; Ganesan 1994; Kim et al. 2006; Liu, Tao et al. 2008; Morgan and Hunt 1994; Siguaw, Simpson, and Baker 1998; Singh and Sirdeshmukh 2000; and Sirdeshmukh, Singh, and Sabol 2002). Based on

the nature of the definitions provided from previous research, the competence dimension is essentially the same as Mayer, Davis, and Schoorman (1995) ability dimension. Brashear et al. (2003) measure trust with benevolence and honesty dimensions. Their results also support the inclusion of a competence or ability dimension. “When reviewing the findings of this study, the fact that competence is not included as a dimension of trust should be considered” (Brashear et al. 2003: 190). Many of the previously mentioned studies of trust examine the same items as the Mayer, Davis, and Schoorman's (1995) work; however, they include the items in different dimensions. For example, Tyler and DeGoey (1996) include six items that measure honesty and fairness in their eight-item measure of benevolent intentions. Here the concepts of honesty and character are included in a third dimension called integrity.

TABLE 1. Multidimensional Trust from Previous Research

Author(s)	Year	Trust dimensions
Brashear et al.	2003	Benevolence and honesty
Cho	2006	Competence and benevolence
Chowdhury	2005	Affect-based and cognition-based
Doney and Cannon	1997	Calculative, prediction, capability, intentionality, and transference
Ganesan	1994	Credibility and benevolence
Gill et al.	2005	Ability, benevolence, and integrity
Kim et al.	2006	Competence and integrity
Kramer	1996	Relational trust and task-focused trust
Kumar, Scheer, and Steenkamp	1995a,b	Honesty and benevolence
Liu, Tao, et al.	2008	Competence and goodwill
Liu, Li, et al.	2008	Honesty and benevolence
Mayer, Davis, and Schoorman	1995	Ability, benevolence, and integrity
Mishra	1996	Competence, concern, openness, and reliability
Moorman, Deshpande, and Zaltman	1993	Expertise, willingness to reduce uncertainty, sincerity, integrity, dependability, collective orientation, tactfulness, timeliness, confidentiality, congeniality
Morgan and Hunt	1994	Reliability and integrity
Siguaw, Simpson, and Baker	1998	Credibility and benevolence
Singh and Sirdeshmukh	2000	Competence and benevolence
Sirdeshmukh, Singh, and Sabol	2002	Competence and benevolence
Svensson	2004	Dependable, honest, competent, orientation, and likeable
White	2005	Benevolence and expertise
Young	2006	Emotional and assessment

Mishra (1996) also uses concepts related to Mayer, Davis, and Schoorman's (1995) in their four dimension conceptualization that includes competence (similar to ability) and concern (similar to benevolence). Their third dimension, openness, includes honesty and encompasses many of the same elements as the Mayer, Davis, and Schoorman (1995) dimension of integrity. The fourth dimension, called reliability and mentioned previously by Morgan and Hunt (1994), deals with the consistency between words or actions. While this dimension seems as if it would play a valuable role in creating trust, it is likely that the issues that make up this dimension are included in other dimensions. For instance, since reliability is the consistency between words and action,

it can be argued that the consistent actions are measured in the ability (competence) dimension and the consistent words are found in the intentions to do what is best for the partner, or benevolence. Although Mishra (1996) identifies four dimensions discussed in the literature, these four dimensions are not often included in studies together, thus not providing an empirical test of them. Additionally, Moorman, Deshpande, and Zaltman (1993) found that abilities, motivations, sincerity, and integrity are significant predictors of trust. For a summary of trust dimensions of previous literature, see Table 1. These predictors can be summed up with the concepts of competence (ability), benevolence, and integrity. Based on the previous discussions of the role each trust dimension plays in the establishment of trust:

H₁: The construct of trust is made up of three separate dimensions: ability, integrity, and benevolence.

THE ROLE OF VULNERABILITY AND DEPENDENCE

Without vulnerability or uncertainty, the need for trust does not exist (Moorman, Deshpande, and Zaltman 1993) or cannot be proven to be operational (Doney and Cannon 1997). "Trust reduces the perceived uncertainty and hence the perceived vulnerability associated with using marketing information" (Moorman and Zaltman 1992: 314). Yilmaz and Hunt (2001: 339) agree that "trust reduces perceived uncertainty, facilitates risk-taking behavior, and fosters a cooperative and/or constructive orientation." Bigley and Pearce (1998: 407) state that "when the terms trust and distrust have been evoked in the social sciences, they almost always have been associated with the idea of actor vulnerability." In addition, Das and Teng (1998: 494) state that "to trust essentially means to take risk and leave oneself vulnerable to the actions of trusted others." Mayer, Davis, and Schoorman's (1995: 712) definition of trust clearly emphasizes the importance of vulnerability with the phrase "the willingness of a party to be vulnerable to the actions of another party." Vulnerability exists when there is a perceived dependence on someone. Therefore, an appropriate condition for testing the dimensions of trust is in a condition of vulnerability, specifically under a condition of relational dependence.

Emerson (1962) argues that the importance of dependence is that it establishes power in the relationship. "Power resides implicitly in the other's dependency" (p. 32). Dependence is considered a unilateral measurement of power. Furthermore, Emerson states that "an unbalanced relationship is unstable for it encourages the use of power" (p. 34). Kumar, Scheer, and Steenkamp (1995b) agree that relationships that are characterized by highly unbalanced dependence are less stable and more likely to engage in safeguarding tactics. Emerson also argues that, in an unbalanced dependent relationship, the parties might initiate balancing operations. One form of a balancing operation is matching the goals of the relationship partners by building of trust among partners. These cost reductions tend to "deepen and stabilize social relations" (p. 35).

Resource dependency theory also establishes the importance of managing uncertainties and dependencies within a business relationship. "Resource dependency theory views interfirm governance as a strategic response to conditions of uncertainty and dependence" (Heide 1994: 72). The reduction of uncertainty and management of dependence is done by establishing formal links with other parties through contracts or joint ventures (Cannon and Perreault

1999). Izquierdo and Cillan (2004) attempt to combine the principles of resource dependency theory and transaction cost analysis with relational marketing and conclude that trust has an influence on the desire to maintain a relationship particularly in situations on dependence asymmetry. Although there has been little discussion within the resource dependency framework of relational variables, such as trust or commitment, by including dependence as an antecedent variable to trust, this article provides a connection between the resource dependency framework and these relational variables that can help to reduce uncertainty.

Dependence Dimensions

Heide and John (1988) argue that dependence can be determined through four means: magnitude, munificence, opportunity for other partners, and partner expertise. Kumar, Scheer, and Steenkamp (1995b) discuss magnitude as being the amount of business provided by one firm. When a supplier provides a larger portion of a firm's business, that firm is more dependent on that supplier. Second, munificence is "the availability of critical resources" (Dowling et al. 1996: 159). Dependence is increased when there are fewer alternate sources. Third, a firm is more dependent on its partner when there are fewer other potential partner firms. If a firm needs to operate in a partnership and there is only one firm that provides that potential for partnership, then the firm is dependent on that partner. Finally, dependence increases because of partner expertise. When a supplier provides the best alternative for job completion, or when it is the only firm that can accomplish a task, a firm is more dependent on that supplier.

THE RELATIONSHIP BETWEEN DEPENDENCE AND TRUST

Hewett and Bearden (2001) argue that relational behaviors such as trust help to balance power imbalances that are the result of excessive dependence. Also, Razzaque and Boon (2003) examine the relationship between dependence and trust in impacting relational variables such as commitment, satisfaction, and cooperation. Additionally, Sheppard and Sherman (1998) and Andaleeb (1996) establish a relationship between dependence and trust. Sheppard and Sherman (1998) argue that the dependence structure in a relationship should be tested as a moderator of trust. They claim that trust comes in four different forms that are determined by the "nature and depth of the interdependence in a given relationship" (p. 422). They conceptualized four dependence forms based on whether the relationship dependence was unidirectional or bidirectional and shallow or deep.

As Sheppard and Sherman (1998) propose, the combinations of the nature and depth of the relationship results in four relationship forms: shallow dependence, shallow interdependence, deep dependence, and deep interdependence. Shallow dependence, from the perspective of the person engaged in trusting behaviors, is unidirectional and of limited importance based on few contacts in the relationship. A second form, shallow interdependence is achieved when there is low importance and few contacts in the relationship, and when there is bilateral dependence in the relationship. This is not to say the partners are equally dependent on each other, just that for each party there is some means of dependence on the other. Deep dependence relationships are those in which the dependence on a business partner is unidirectional, and the importance of the relationship is relatively high. A deep interdependence relationship is one in which both parties feel dependent on each other and the importance of the relationship is high for both

parties. Andaleeb (1996) agrees, in part, with this conceptualization including high- and low-dependence situations. The focus of this study rests in identifying dimensions of trust and their importance on one side of a dependent business relationship. Razzaque and Boon (2003) argue that the differences between symmetric dependence and asymmetric dependence may lead to attitudinal differences in relational constructs. This may result in measurement differences in a dependent versus interdependent relationship. Therefore, we will limit the measurement of dependence forms here to shallow and deep. For a summary of the previous discussion and the proposed effects on trust, see Table 2 adapted from Sheppard and Sherman (1998).

TABLE 2. Form of Dependence, Risk, and Qualities of Trustworthiness (Adapted from Sheppard and Sherman 1998)

Form of dependence	Level of dependence	Risks	Qualities of trustworthiness
Dependence	Shallow	Indiscretion	Discretion
		Unreliability	Reliability/competence
	Deep	Cheating	Integrity
		Abuse	Concern
Interdependence	Shallow	Neglect	Benevolence
		Self-esteem	
	Deep	Poor coordination	Predictability/consistency
		Misanticipation	Foresight/intuition/empathy

TABLE 3. Summary of Key Dependence-Trust Research

Author(s)	Year	Summary
Andaleeb	1996	Forms of trust have a differential impact on relationships in dependent business relationships.
Emerson	1962	In unbalanced dependent relationships firms initiate balancing operations. Trust is one form of balancing operation.
Hewett and Bearden	2001	Relational behaviors such as trust help to resolve power imbalances caused by unequal dependence.
Izquierdo and Cillan	2004	Trust can influence the desire to maintain a relationship under conditions of dependence asymmetry and can counteract any negative effects caused by this asymmetry.
Kumar, Scheer, and Steenkamp	1995b	Relationships characterized by unbalanced dependence are more likely to engage in safeguarding tactics.
Liu, Tao, et al.	2008	Goodwill trust will decrease relationship dependence because partners will strive to work together while competence trust will increase dependence because a competent partner will seek to behave opportunistically.
Razzaque and Boon	2003	The interaction of dependence and trust can impact other relational variables such as commitment and cooperation and relationships with differential dependence symmetries may lead to differences in trust and other relational constructs.
Sheppard and Sherman	1998	Relationship form as determined by dependence type and balance impacts the type of trust mechanism used to safeguard the risks associated with that relationship form.
Wicks, Berman, and Jones	1999	Affective and rational components of trust take on different levels of importance based on the dependence balance in a relationship.

While trust may take on different forms in different types of relationships, it will still play a significant role in a relationship in which any dependence exists. Wells and Kipnis (2001) establish a positive relationship between dependence on a business partner and trust in a relationship. They argue that when dependence is high and trust is low, the relationship is dysfunctional and people would seek to end it. In addition, Izquierdo and Cillan (2004) argue

that in relationships with high dependence asymmetry, trust will counteract the negative effects of the dependence asymmetry. These arguments provide further support for a multidimensional trust construct. As presented by Sheppard and Sherman (1998), different dependence relational forms lead to different types of risks, which in turn are safeguarded by different qualities of trustworthiness. In addition, Wicks, Berman, and Jones (1999) argue that the amount of trust may differ based on the dependence level in the relationship. They claim that trust has an affective component and a rational component that exists in all dependence forms, but may take on different degrees of importance. Also, Liu, Tao, et al. (2008) argue for differential relationship effects based on multiple trust forms. They conclude that goodwill trust will decrease relationship risk or dependence because the partners seek to work together, while competence trust will increase relational risk because with expertise comes the ability to behave opportunistically (see Table 3). These arguments lead to the following hypothesis.

H₂: A multidimensional trust construct is significant across either deep or shallow unilaterally dependent relationships.

The Influence of Trust on Relationship Coordination by Dependence

Numerous variables have been studied as consequence variables of trust. Unfortunately, variables such as commitment, communication, and cooperation have been discussed with circular relationships. For example, organizations are more committed to each other when there is more trust, but when there is more trust, organizations are more likely to commit to each other. Therefore, identifying a consistent trust outcome is very difficult. One variable that has been mentioned is coordination.

Coordination is “the extent to which different parties in the relationship work well together in accomplishing a collective set of tasks” (Mohr, Fisher, and Nevin 1996: 105). Coordination is valuable to the relationship because, as Mohr and Spekman (1994: 138) argue, higher levels of coordination in a relationship lead to greater “mutual advantage” for relationship partners. They also argue that high levels of participation, which they say “refers to the extent to which partners engage jointly in planning and goal setting” (p. 139), leads to more successful partnerships. Fang et al. (2008) argue that trust among entities within an organization leads to increased coordination among those entities. Morgan and Hunt (1994) and Anderson and Narus (1990) discussed the fact that when trust exists, partners will behave in a more coordinated manner. Also, Mohr and Spekman (1994: 138) argue that trust is “related to a firm's desire to collaborate.” McAllister (1995) argues that in a situation of high affect-based trust, individuals are more likely to work together to meet needs. In a situation in which trust is greater, organizations would be more likely to engage in coordination or working toward common goals. Sheppard and Sherman (1998) argue that the relational and institutional mechanisms in deep dependence relationships are network processes, socialization, and quadratic control, which relate to a process through which relationship behaviors are understood and adopted. Therefore,

H₃: In a deep dependence relationship, the influence of trust in establishing coordinated partner relationships will be greater than in a shallow dependent relationship.

In addition, from Sheppard and Sherman's (1998) conceptualization of trust by dependence form, the trust concepts of discretion, reliability, and competence are more critical in a shallow dependent relationship. Based on previous studies (Moorman, Deshpande, and Zaltman 1993), it is likely that the concepts of reliability and competence are highly related to each other and very similar to Mayer, Davis, and Schoorman's (1995) concept of ability. Also, Chowdhury (2005: 313) argues for situational dependent effects of the trust dimensions, stating that "individuals with affect-based trust may not always develop cognition-based trust." In addition, White (2005) concludes that consumers look for expertise when decisions are low in difficulty, and they favor benevolent advice for more emotionally involved decisions. Essentially, in more routine business decisions, individuals are simply concerned with ability or the fact that the job is accomplished correctly, while in more complex situations (such as long-term relationships between supplier and manufacturer), individuals still value ability, but they also seek other assurances such as honest partners of high integrity with a caring disposition for the relationship as a whole. It seems reasonable to believe that in a unilaterally dependent relationship of relatively low importance, the main goal for the purchasing party would be to identify suppliers that have the ability to complete the job correctly and consistently. Therefore,

H₄: The ability dimension of trust will have greater relative importance in establishing coordinated partner relationships in the shallow dependence scenario than in the deep dependence scenario.

Furthermore, according to Sheppard and Sherman (1998), the concepts of integrity, concern, and benevolence are more critical in deeply dependent relationships. It seems likely that the concepts of concern and benevolence are very similar. Both concepts deal with the desire to do what is right by the other party or the hope that the other party achieves satisfaction. In a relationship that is considered a more critical business alliance, it is likely that the expected relationship duration is longer. In addition, a business partner may be more likely to investigate the intentions of their partners. They will want to know that the other party is ultimately acting in the best interest of the relationship. It is also possible that one may overlook an occasional mistake by the other party in these instances to keep the relationship strong. Again, White (2005) argues that in deeper emotional relationships consumers favor benevolent providers over providers with expertise. Therefore,

H₅: The benevolence and integrity dimensions of trust will have greater relative importance in establishing coordinated partner relationships in the deep dependence scenario than in the shallow dependence scenario.

METHODOLOGY

Data was collected using two relationship dependence scenarios. These scenarios differ based on various relationship characteristics identified to separate the purchasing relationships into a deep dependence scenario and a shallow dependence scenario (see Appendix 1 for the scenario scripts). Scenarios have been used in research to replicate feelings and opinions in a short time period regarding situations that would need extensive time to explore (McCullough, Berry, and Yadav 2000; Razaque and Boon 2003; White 2005). Scenarios were given to a national sample of purchasing agents. Most previous relationship research has been done on salespeople. While

we are not collecting data from both sides of the exchange dyad, examining the feelings of purchasing agents (buyers) as opposed to salespeople (sellers) brings a unique perspective.

Sample

Respondents were solicited through local chapter affiliations of the Institute for Supply Management (ISM). Officers from 40 ISM local chapters were contacted and asked to participate and were subsequently asked to distribute the surveys to their chapter members. Some form of participation was provided by members of 18 of the 40 (45%) chapters contacted. Some officers simply agreed to complete our survey themselves, while others agreed to pass along our survey to other chapter members. A total of 326 surveys were collected—168 deep dependence scenario surveys and 158 shallow dependence scenario surveys. Of these 326 surveys, 11 deep dependence surveys and 8 shallow dependence surveys were discarded because of a large number of unanswered questions. The final data set consisted of 307 surveys—157 deep dependence and 150 shallow dependence. To test the representativeness of the sample to match the population of purchasing agents, a demographic profile of ISM members was compared to various demographic responses from the survey. As shown in Table 4, the sample generated in the study is not significantly different from the ISM general membership on any of the key demographic variables in the study, such as industry type, age, and amount of dollars purchased.

TABLE 4. Comparing Sample Demographics to ISM Membership Characteristics

Demographic variable	Sample percent	ISM percent	Chi-square value	Significance
Industry				
Manufacturing	56	55		<i>p</i> value = 0.339, ns
Service	17	15		
Other	27	30	2.165, 2 <i>df</i>	
Age Group				
≤35	13	16		<i>p</i> value = 0.506, ns
36–45	37	36		
46–55	41	38		
>55	9	10	2.332, 3 <i>df</i>	
Dollars Purchased				
<\$500,000	14	16		<i>p</i> value = 0.378, ns
>\$500,000	86	84	0.779, 1 <i>df</i>	

Data Collection Instrument

Respondents were randomly assigned to one of the two survey scenarios. Subjects read the provided scenario and were asked to remember a relationship they have had with a supplier that best matches the characteristics provided at the beginning of the survey. They were then asked to consider their thoughts, feelings, and actions in regard to this one particular relationship when answering the remaining questions. Magnitude was the importance of the relationship, as defined by the proportion of the organization's sales that are represented by the partner firm (Hallen, Johanson, and Seyed-Mohamed 1991; Nicholson, Compeau, and Sethi 2001). Munificence, or the availability of alternative sources (Heide 1994; Kumar, Scheer, and Steenkamp 1995b), focused on the availability of other suppliers and the availability of substitute products. To help ensure that the relationships in question were asymmetric and not mutually dependent, the

scenario also included the statement: “Your organization would be *less* well-off if this relationship ended.”

Measures

The trust measures used here were adapted from Ganesan (1994), Kumar, Scheer, and Steenkamp (1995b), McAllister (1995), and Yilmaz and Hunt (2001). Using a combination of measures was necessary because of the lack of empirical work using these measurement items and the need for multiple items across each dimension to establish a reliable instrument. Ability items were chosen that reflect the concepts previously mentioned in the literature for the ability (or competence) dimension. Since prior work often combines elements of the integrity and benevolence dimensions, a longer list of beginning items for these two dimensions was selected. The integrity items incorporate concepts such as faithfulness, sincerity, telling the truth, and keeping promises. The benevolence items incorporate issues such as making sacrifices, caring for the partner's welfare, and understanding their difficulties. The data collection instrument was given to a small group of purchasing agents as expert judges to make sure that it was consistent with the issues present in a supplier and purchasing agent relationship. For a list of the specific items, see Appendix 2.

RESULTS

Manipulation Checks

Analysis was conducted to determine if the respondents felt the provided scenario was accurately represented by the relationship they were evaluating, and whether the deep dependence scenario actually produced a higher level of vulnerability than the shallow dependence scenario. Subjects were asked to rate, on a nine-point scale, how closely they felt that the relationship they listed matched the characteristics provided to them. Respondents in both scenarios felt that the relationship closely matched the characteristics (deep dependence mean of 7.57 and shallow dependence mean of 7.48). The mean responses were high and not significantly different from each other (t test = 0.642, p value = 0.521, *ns*), indicating that respondents of both groups felt comfortable that the scenario represented their relationship well.

As expected, the mean values for the vulnerability items were significantly greater for the deep dependence scenario (mean of 6.58) than the shallow dependence scenario (mean of 5.41) (t test = 5.334, p value = .000). Also of importance from this data was the presence of some level of vulnerability in the shallow dependence scenario. Given that both scenarios manipulate dependence and not interdependence, it is important that the respondents in the shallow scenario still feel some amount of vulnerability or perceived dependence on their partner. The vulnerability mean for the shallow dependence scenario showed a moderate amount of vulnerability in the relationship. In addition, as expected, the deep dependence relationships (75.19 months) were significantly longer in duration than the shallow dependence relationships (53.85 months) (t test = 1.935, p value = .054). It is likely there would be more turnover in a less dependent relationship, and these relationships are more short-term in nature than deep dependence relationships because they are relatively less important.

Trust-Scale Development

To examine the dimensionality of the trust construct, the scales used were first analyzed using coefficient alpha analysis to remove any inconsistent or unreliable items. Given the exploratory nature of the trust dimension analysis and the fact that the trust items were accumulated by combining the works of multiple authors, it is likely that some item deletion would be necessary. The initial alpha for the six-item ability scale was an acceptable 0.73 (Peter 1979), but could be improved with the removal of two items, resulting in a scale reliability of 0.93. The initial Cronbach's alpha for the nine-item integrity scale was a high 0.92, but two reverse-coded items appeared to cause some confusion for the respondents. With the removal of these two items, the remaining integrity scale reliability was 0.94. Also, the initial Cronbach's alpha for the nine-item benevolence scale was a relatively high 0.87, but could be improved with the removal of two items. These two items have higher means (7.86 and 7.34, respectively) than the other seven benevolence items and seem to have some words in common with other benevolence items (assistance and help, and understanding and care). With the removal of these two items, the resulting benevolence scale had an overall reliability of 0.94 (see Table 5).

TABLE 5. Exploratory Trust Item Means and Factor Loadings

Trust items	Item means	Initial run loadings			Final run loadings		
		Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Ability Scale Alpha = 0.93							
A2 Given the supplier's track record, I have no reason to doubt his or her preparation for the job.	7.69	.925			.934		
A4 I have great confidence in this supplier.	7.55	.918			.880		
A3 This supplier can be counted on to get the job done right.	7.62	.815			.767		
A1 This supplier approaches his or her job with professionalism.	7.91	.685			.673		
Benevolence Scale Alpha = 0.94							
B6 If I shared company problems with this supplier, I know she or he would respond caringly.	6.93		.914			.912	
B4 This supplier cares for my organization's welfare.	7.13		.891			.890	
B2 I can talk to this supplier about difficulties my company is having and know that she or he wants to help.	7.04		.831			.831	
B5 In times of problems, this supplier has been very understanding.	7.25		.753			.754	
B3 This supplier has made sacrifices for my company in the past.	6.79		.698			.702	
B1 When making important decisions, the supplier is concerned about my company's welfare.	7.16		.636			.636	
B7 I can count on the supplier to consider how his or her decisions and actions will affect my organization.	7.12		.568			.565	
Integrity Scale Alpha = 0.94							
I1 This supplier is always faithful to our company.	7.37			.661			.710
I2 This supplier has high integrity.	7.66			.667			.708
I5 I can count on the supplier to be sincere.	7.57			.525			.581
I6 This supplier can be counted on to do what is right.	7.61	.461		.498			.559
I3 Even when the supplier gives me an unlikely explanation, I am confident that she or he is truthful.	6.93			*			.403

Trust items	Item means	Initial run loadings			Final run loadings		
		Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
I4 When the supplier gives me advice on my business, I know she or he is sharing her or his best judgment.	7.39			*			.400
I7 This supplier usually keeps promises made to me.	7.55	.603					**

*Loadings less than .400 are not shown in the table.

**Removed from this analysis.

Exploratory Factor Analysis

An exploratory factor analysis was conducted on the remaining items to identify whether a three-factor solution was appropriate for this data set. Exploratory analysis is appropriate at this point to provide support of the existence of a multidimensional trust construct. Since the three trust dimensions proposed in this study have items taken from other empirical studies of trust, an exploratory factor analysis using a maximum likelihood estimation method is called for to refine the items. Given the strong potential for correlation among the dimensions, the final factor solution was evaluated using an oblique rotation, allowing for correlation among the factors. (Orthogonal rotations were examined across each analyzed factor solutions, but resulted in only very small differences in the interpretation. Given the strong theoretical support for correlated trust dimensions, the oblique rotated solution was chosen as the final solution.)

An initial factor analysis showed a three-factor solution across the proposed dimensions (see Table 5 for the initial factor loadings). In addition, two- and four-factor solutions were analyzed but discarded because of less variance explained in the solutions and a much weaker item structure across the factors. Hair et al. (2006) argue that a factor loading of .300 or greater is the minimum level to show any significance, loading of .400 or greater is more important, and loadings of .500 “are considered practically significant” (Siguaw, Simpson, and Baker 1998: 111). Refinements were made on each of the three factors based on the removal of cross-loading items and insignificant loading items. The rotated factor loading for this final exploratory factor solution is shown in Table 5. This solution showed factor loadings very consistent with the proposed dimensions. The result was a three-factor solution with seven benevolence items that load on one factor, four ability items that load on another factor, and six integrity items that load on a third factor. All of these loadings were at or above the 0.40 level, most were above the 0.50 level. In addition, these three factors explained a cumulative 78.9 percent of the variance in the data. Based on these results, H₁ is supported. A three-dimensional construct of trust is supported containing ability, benevolence, and integrity dimensions.

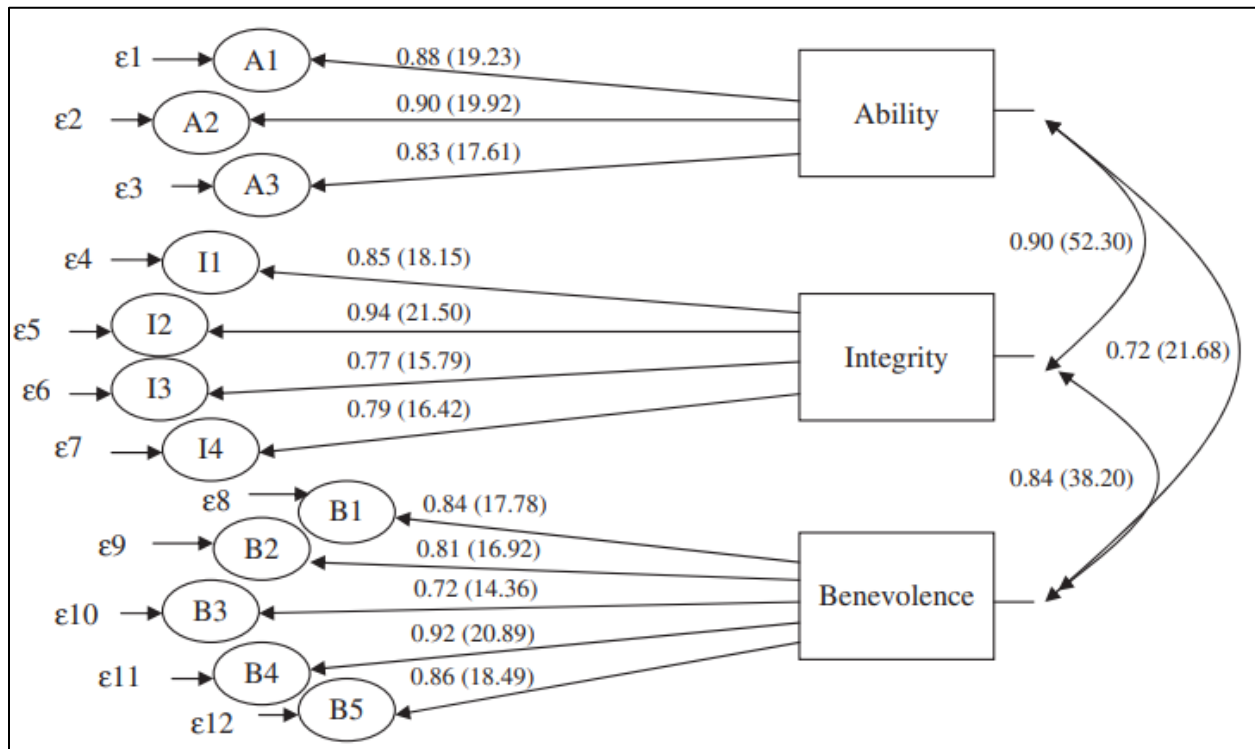
Exploratory Factor Analysis by Dependence Level

To examine H₂—that a consistent three-factor trust structure exists across different relationship forms—the previous exploratory factor analysis solution was run for each dependence sample. These additional factor analysis results produced similar factor structures with different factors showing importance across dependent types. The deep dependence sample produced a three-factor solution similar to the final factor results and explained more than 80.3 percent of the variance in the data. The shallow sample factor analysis solution resulted also in three factors with the four ability items loading very highly on factor one (ranging from 0.972 to 0.834) and

six integrity items also loading on factor one, but with smaller loadings (ranging from 0.814 to 0.424). The final two factors contained high loadings for the benevolence items. This factor solution explained more than 77.9 percent of the variance in the shallow dependence data.

These results both show three-factor solutions, but the deep dependence data shows greater importance of the benevolence items, while the shallow dependence data shows greater importance of the ability items. Bhattacharya, Devinney, and Pillutla's (1998) argued that the need for trust may be greater in a deep dependence situation because the vulnerabilities are greater in this form. In the shallow dependence situation, the vulnerabilities are less, which is evident by the significant differences in vulnerability scale means across the two scenarios. According to Bhattacharya, Devinney, and Pillutla (1998), less vulnerability leads to greater need in contractual mechanisms and less need for trust. The question remains: Does less vulnerability and less trust lead to a different structure, or does the construct need further refinement?

TABLE 6. Final Three-Dimension Trust Model With Dimension Items



Note: *t* values in parentheses (all significant at a *p* value > .000)

Confirmatory Factor Analysis by Dependence Level

To further examine the previous question, a confirmatory factor model was conducted using LISREL (Anderson and Gerbing 1998). The initial model for the final factor solution discussed previously did not show adequate fit for either the deep dependence (chi-square of 341.99, 116 degrees of freedom, root mean square error of approximation of 0.11, and goodness of fit index of 0.79) or the shallow dependence (chi-square of 340.23, 116 degrees of freedom, root mean square error of approximation of 0.11, and goodness of fit index of 0.79) samples. These indices

all indicate lack of fit according to Bollen (1989) and Hair et al. (2006). Further scale refinement is necessary. After the removal of items showing high potential for intercorrelation, a final three-dimension trust LISREL model was fit as shown in Table 6 using the correlation matrix shown in Table 7 as the input.

TABLE 7. Trust Item Correlation Matrix Including Item Mean

	Mean	A1	A2	A3	I1	I2	I3	I4	B1	B2	B3	B4	B5
A1	7.91	1.00											
A2	7.69	.802	1.00										
A3	7.62	.706	.760	1.00									
I1	7.37	.616	.609	.632	1.00								
I2	7.66	.781	.760	.717	.799	1.00							
I3	6.93	.605	.609	.579	.651	.728	1.00						
I4	7.39	.625	.629	.652	.668	.728	.594	1.00					
B1	7.16	.592	.566	.559	.683	.654	.536	.624	1.00				
B2	7.04	.492	.497	.481	.634	.617	.518	.558	.639	1.00			
B3	6.79	.434	.457	.437	.495	.518	.453	.523	.591	.558	1.00		
B4	7.13	.543	.552	.537	.701	.677	.568	.622	.771	.776	.674	1.00	
B5	7.25	.571	.586	.583	.621	.655	.641	.611	.725	.678	.652	.778	1.00

This final model shows good fit with the overall sample data (see Table 8 for a summary of fit indices). While the chi-square value of 135.38 with 51 degrees of freedom is not under the recommended ratio of 2:1 (Bentler 1990; Bentler and Bonnett 1980), the other indices all show good fit. This trust construct structure also shows good fit with the deep dependence data. The deep dependence model chi-square value of 87.36 with 51 degrees of freedom is well under the recommended ratio of 2:1. Finally, the shallow dependence data also shows good fit based on the fit indices. This model had a chi-square value of 88.63 with 51 degrees of freedom (see Table 8).

TABLE 8. LISREL Model Fit Indices for the Complete Data, Deep, and Shallow Dependence Models

Fit indices	Complete data	Deep dependence data	Shallow dependence data
Sample size	307	157	150
Chi-square/degrees of freedom	135.38/51	87.36/51	88.63/51
CFI	0.99	0.98	0.97
NNFI	0.99	0.97	0.97
GFI	0.93	0.91	0.91
RMSEA	0.07	0.07	0.07
SRMR	0.03	0.03	0.05

Based on the previous results, a three-factor trust structure fits both the deep dependence sample and the shallow dependence sample. These results support H₂, which proposed that a consistent, three-factor structure exists for both the deep dependence and shallow dependence scenarios. It can be argued that a similar conceptualization of trust exists across different relational forms—H₂ is supported. While it is often common at this point to test for a higher-order model for the trust dimensions, we have reason to not conduct this analysis. Hair et al. (2006) provide a series of questions to examine the need for a higher-order factor model. One question, in particular—“Are all the first-order factors expected to influence other nomologically related constructs in the

same way?" (p. 818)—leads to the conclusion that a high-order model is not appropriate in this instance. While we claim that trust is composed of a consistent three-dimension model, we also argue that in different relational forms, those dimensions will have different levels of influence.

The Role of Dependence Level on the Influence of Trust in Predicting Outcomes

To understand the role of dependence level on the ability of trust to explain coordination, regression equations were built for each dependence type. A regression equation that contained the three trust dimensions as independent variables and coordination as the dependent variable was run separately for the deep dependence sample and the shallow dependence sample. In using regression analysis for this study, the issue of multicollinearity must be considered. After identifying high correlations among the trust dimensions (ranging from 0.66 to 0.81), it was necessary to determine whether there are multicollinearity problems. To investigate potential multicollinearity problems, it is necessary to examine tolerance amounts and the variance inflation factor (VIF). The rule of thumb is that a small tolerance value, one less than 0.10, or a high VIF value, one greater than 10, provides evidence of multicollinearity problems (Hair et al. 2006; Kleinbaum and Kupper 1978; Pedhazur 1982). Examinations of the measures show that there is no significant multicollinearity among the trust dimensions in this study (see Table 9).

TABLE 9. Examination of Multicollinearity of Trust Dimensions

	Ability	Benevolence	Integrity
Deep dependence tolerance	0.350	0.329	0.231
Deep dependence VIF	2.858	3.041	4.322
Shallow dependence tolerance	0.344	0.485	0.252
Shallow dependence VIF	2.910	2.061	3.975

Note: A tolerance value less than 0.100 or a VIF value greater than 10 indicates potential for multicollinearity.

To evaluate H₃, adjusted R² values were compared across each dependence scenario. The adjusted R² value for the deep dependence model was 0.377 while the adjusted R² for the shallow dependence model was 0.135—H₃ is supported; the three trust dimensions explain a greater amount of variance in coordination for the deep dependence sample than for the shallow dependence sample.

Deep dependence data regression equation

$$\text{Coordination} = f(.982\text{constant} + .109\text{Ability} + .469\text{Integrity} + .204\text{Benevolence})$$

$$\text{Adjusted } R^2 = 0.377, F \text{ value} = 32.497, p \text{ value} > .000$$

Shallow dependence data regression equation

$$\text{Coordination} = f(1.961\text{constant} + .373\text{Ability} + .224\text{Integrity} + .001\text{Benevolence})$$

$$\text{Adjusted } R^2 = 0.135, F \text{ value} = 8.733, p \text{ value} > .000$$

The Relative Importance of Trust Dimensions on Coordination across Dependence Level

To further test the effects of the relative importance of the trust dimensions across dependence form, a comparison of unstandardized regression coefficients across the dependence models was

conducted. This method is suggested for a comparison of relative influence of variables across two samples (Hair et al. 2006; Kleinbaum and Kupper 1978; Pedhazur 1982). The regression coefficients show nominal results that support H₄ and H₅. In the deep dependence model, the coefficients for benevolence and integrity are greater than those in the shallow dependence model. In addition, the coefficient for ability is greater in the shallow dependence model than in the deep dependence model.

To further examine these results, additional LISREL analysis was conducted to determine if these nominal differences are statistically different. To test for significant differences, a two-group model approach was taken comparing model fit indices when freeing selected paths for each of the two dependence form models. In this analysis, benevolence was significantly different across the two models. This factor was significantly greater, as proposed, in the deep model than in the shallow model (chi-square 4.54, with one degree of freedom). However, integrity (chi-square 3.34, with one degree of freedom) was only marginally significant, and ability (chi-square 0.75, with one degree of freedom) was not significantly different across the two models. Based on this more rigorous analysis, H₄ is partially supported and H₅ is not supported.

DISCUSSION AND IMPLICATIONS

Summary of Findings

The goals of this study were twofold: first, to examine and empirically test a previously proposed three-dimensional structure of the trust construct that has theoretical support in the literature, and second, to begin to understand the dynamics of the relationship between the dimensions of trust and different relationship forms as determined by dependence structure. The results provide support for a multidimensional trust construct and evidence of similarities of this trust construct across different relationship forms. The literature has called for a multidimensional trust construct and the concept used in this article has received support in various forms across numerous studies. We hope that this research will provide a foundation for continued testing of Mayer, Davis, and Schoorman's (1995) trust concept. In addition, we have provided support for a similar trust structure across different types of relationships. We tested the three-dimensional structure across deep and shallow dependent relationships and found that a consistent construct fits both relationship situations. In addition, we began to explore the relationships of the trust dimensions as independent variables. By showing some support for differential levels of trust dimension importance across different dependence forms, we have begun to shed some light on the difficulty of understanding the impact of trust in business relationships.

Trust Dimensions by Dependence Scenarios

Further examination of the three-factor solution using LISREL across the two dependence samples showed good fit across both groups. These findings support the argument that a consistent trust construct structure exists across different types of relationships. These results are particularly interesting in that they support the notion that although the concepts of dependence and vulnerability may be different across different relationships, there is still a consistent

structure of the trust dimensions across these different relationship forms. This provides support that a single trust construct can be developed to study different situations that might include a high trust situation versus a low trust situation, or even a business-to-business relationship versus a business-to-consumer relationship.

Research Contributions

These results are significant for further research in that they provide a starting ground upon which further trust research can be built. This work is built on numerous other conceptual and empirical pieces that have attempted to understand a small piece of trust. For example, Cummings and Bromiley (1996) claim that trust may contain both behavior and belief components. The findings here support this thought. The ability dimension is built on behavioral aspects, such as the ability to get the job done right or preparation to complete the job. The benevolence and integrity dimensions are built around beliefs concerning a relationship partner, such as belief in their honesty, their sincerity, their concern, or their caring.

Other works have argued for other categories of trust. For example, McAllister (1995) argues that trust contains a cognitive and an affect-based dimension. He further argues that these dimensions may develop differently over time. Additionally, he states that cognition-based trust grows out of rational thought as trust is demonstrated in the relationship, while affect-based trust develops through emotional means based on personal liking of the partner. This work also supports McAllister's (1995) work by including an ability dimension, supporting the cognition-based trust and integrity and benevolence dimensions, which are affective-based.

This work further contributes to the marketing literature in three ways by providing an empirical test of a multidimensional construct. While numerous authors have argued for its necessity, many still measure trust in a single dimension, sometimes with a single item. This study provides strong empirical support for a three-dimensional trust construct that connects many different streams of research across the trust literature.

Limitations

Since trust is a relationship construct, it cannot exist without the presence of at least two relationship parties. One limitation of this study is that it only examines trust from one side of the relationship. Trust has been defined as a one-way construct that exists from each side of a relationship. This study takes the approach that trust exists separately for each party in the relationship, and it can take on different forms from each side of the relationship. Izquierdo and Cillan (2004) provide support for examining trust separately from each side of a relationship. They argue that there is “no consensus between manufacturer and the supplier as to the content of the relationship” (p. 989). The different nature of the relationship from each side of the dyad will likely change the nature of the trust construct. While measuring trust from only one side of the relationship is adequate for the scope of this study, additional examination of the relational partner's view of the relationship would add another level of insight to the dynamics of the relationship between dependence and trust constructs.

Another limitation of this study rests in the potential inability of the respondent to accurately visualize the situation and predict their own behavior using the scenario technique (McCollough, Berry, and Yadav 2000). Respondents placed in an artificial setting may have difficulties responding to questions that ask what they would do in this artificial situation. In an attempt to minimize the negative effects of this problem, we asked the respondents to consider a relationship that they are involved in that matches the scenario characteristics. They were also asked to think of a relationship that they had been involved in for at least a year. Therefore, they should have minimal difficulty visualizing the situation of verbalizing what they would do because they are living the scenario. While scenarios have their weaknesses, they have been used to make some treatment manipulations more possible (McCollough, Berry, and Yadav 2000; Razaque and Boon 2003; White 2005). The manipulation of relationship dependence forms in a field setting would be extremely difficult, if not impossible, because of the nature of establishing an effective and efficient relationship.

Managerial Implications

The results of this study provide valuable knowledge that can be used by organizations involved in business-to-business relationships. The detailed development of the trust construct will help all boundary spanners understand key areas to focus on in improving the trust in their business relationships. Understanding the trust concept thoroughly will help boundary spanners better identify actions that will help to strengthen their relationships.

In addition, business relationships can benefit by understanding that the type of exchange situation may impact the nature of trust needed. By realizing that some relationships are built solely on the concept of a business partner being able to get the job done right (such as short-term transactional-based exchanges), while others are built on more relational characteristics such as integrity, honesty, fairness, and caring (such as long-term relational exchanges in which each party is committed to the relationship and seeks to expand it over time), boundary spanners should better understand the key drivers of trust in their individual relationships.

It is useful to understand that while all three dimensions are valuable in establishing trust, in some situations various dimensions may have stronger influence. A supplier involved in a shallow dependence situation (many other suppliers, many substitutes, and a low percentage of overall business for the purchasing organization) may focus on completing the task correctly and in a timely manner, essentially concentrating on the ability dimension of trust. While a supplier involved in a deep dependence situation (few suppliers, little substitutes, and the relationship is a large amount of the overall business for the buying firm) must be concerned with ability, they should focus also on honesty, fairness, caring for the partner, and understanding, or the benevolence and integrity dimensions of trust.

Suggestions for Future Research

It is important to further examine the trust dimensions measured here in additional situations. Although these results showed good fit of the three-dimensional structure across different dependence forms, it would be helpful to further investigate the scales across other types of relationships. If one party views a relationship as a deep dependence situation, does that impact

the partner's view and the types of trust to pursue? Also, it would be interesting to examine the multidimensional nature of trust in an interdependent relationship. Related to this would be understanding the nature of trust across the relationship dyad. Can we measure a concept of total trust across both sides of a relationship, or is the trust for one party to another completely independent?

It would also be interesting to evaluate the trust construct from a consumer viewpoint. What is the nature of the trust construct when we are examining relationships between consumers and organizations, or between consumer and brands? A goal of this study was to provide a foundation for the construct that would prove valuable in studies across all contexts. By providing a multidimensional trust construct that exhibits consistent structure across different relationships, we hope to provide a construct that could be studied in other contexts.

A final interesting topic for further study would be examining the ever-changing nature of the trust construct by examining it in a longitudinal study. How does trust form in a relationship? Do we start by examining the performance capabilities (abilities) of our partners and then make assessments of the benevolence and integrity over time? Do we assume our business partners are generally benevolent people of high integrity and we build trust based on experiences with their abilities over time? Related to this area of research would be the study of the dissolution of trust in a relationship. While this study included a manipulation of the dependence construct as an antecedent condition of trust, other antecedents could be included to help further explain the true nature of the business relationship. Many antecedents have been proposed in the trust literature, such as organizational and individual characteristics, shared norms, value congruence, communication, and commitment. Incorporating these variables into the stream of research would only help to further understand why some business relationships are successful and other are not.

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APPENDIX 1: DEPENDENCE SCENARIOS

Deep Dependence Scenario

This supplier is one ...

- That your company has purchased from for a minimum of one year.
- That represents a relatively large percentage of your business as a buyer.
- Of a small number of suppliers (possibly the only supplier) that provides the particular product that you purchase from them.

There are few (possibly no other) substitute products for this particular product.

Your organization would be *less* well-off if this relationship ended.

Shallow Dependence Scenario

This supplier is one ...

- That your company has purchased from for a minimum of one year.
- That represents a small percentage of your business as a buyer.
- Of a large number of suppliers that provides the particular product that you purchase from them.

There are substitute products for this particular product.

However, your organization would be *less* well-off if this relationship ended.

APPENDIX 2: SURVEY ITEMS

Each of the following items are measured on a nine-point scale where 1 = “strongly disagree” and 9 = “strongly agree.”

Ability

- This supplier approaches his or her job with professionalism.
- Given this supplier's track record, I have no reason to doubt his or her preparation for the job.
- I expect this supplier to make my job more difficult by careless work.
- This supplier can be counted on to get the job done right.
- I have great confidence in this supplier.
- I let this supplier make important job-related decisions without my involvement.

Integrity

- If people knew this supplier better, they would monitor his or her performance more closely.
- This supplier can be counted on to do what is right.
- This supplier is always faithful to our company.
- This supplier has high integrity.

- Even when the supplier gives me a rather unlikely explanation, I am confident that she or he is telling the truth.
- The supplier has often given me information that has later proven to be false.
- The supplier usually keeps the promises made to me.
- Whenever the supplier gives me advice on my business, I know she or he is sharing her or his best judgment.
- I can count on the supplier to be sincere.

Benevolence

- I believe that the supplier is always willing to offer my company assistance and support.
- When making important decisions, the supplier is concerned about my company's welfare.
- When I share company problems with the supplier, I know that she or he will be understanding.
- I can count on the supplier to consider how his or her decisions and actions will affect my organization.
- I can talk to this supplier about difficulties my company is having and know that she or he wants to help.
- If I shared company problems with this supplier, I know she or he would respond caringly.
- This supplier has made sacrifices for my company in the past.
- This supplier cares for my organization's welfare.
- In times of problems, this supplier has been very understanding.

Vulnerability

- My organization has a great deal at stake in our relationship with this supplier.
- We could have difficulties if this supplier was not able to deliver.
- My organization is vulnerable to this supplier.

Coordination

- My company's programs are well coordinated with the supplier's programs.
- My company feels like we never know what we are supposed to be doing for this supplier.
- My company's activities with this supplier are well organized.

Global Trust

- I feel my organization can trust this supplier completely.
- This supplier is reliable in what they say.
- This supplier is trustworthy.
- I expect this supplier to tell me the truth regarding business matters.

IMPLICATIONS FOR BUSINESS MARKETING PRACTICE

The recent focus on relationship marketing has led to increased research on relational variables such as trust, commitment, communication, and cooperation. Trust itself has been identified in numerous studies as a critical variable in establishing successful business relationships

(Garbarino and Johnson 1999; Kumar, Scheer, and Steenkamp 1995a; Wilson 1995). Trust has been shown to influence commitment to a relationship, cooperation between relationship partners, communication in a relationship, and relationship satisfaction. Many argue that successful long-term relationships cannot exist in the absence of trust.

Even though its importance has been well documented, the trust construct itself has taken on many different measurement forms and structures across business research. Although researchers have been calling for a multidimensional structure construct for almost 15 years, numerous studies still attempt to understand the degree of trust in a relationship in very simple ways. Given these numerous inconsistent approaches to measuring trust in business research it is not surprising that researchers still consider the work in the area to be fragmented (Dirks and Ferrin 2001).

This research attempts to address some of the confusion in studying trust in two ways. First by identifying and testing a multidimensional structure previously proposed, but relatively untested in the literature. The multidimensional structure tested in this study has received much attention in different forms across many studies. By combining the conceptual arguments of others we have identified a set of trust dimensions that capture many of the ideas discussed across numerous studies. Second, we hope to provide clarity by examining this trust structure across two different relationship forms to better understand its measurement consistency. Understanding that a structure may fit nicely into one situation, we felt it was important to try to further validate the construct by comparing its relevance across situations of deep dependent relationships versus shallow dependent relationships.

Consistent trust themes across the literature include the dimensions of ability (or competence), benevolence, and integrity. Simply to trust someone we want to believe they have adequate abilities to complete the job, they are benevolent or want to complete the job, and they are honest people of good character. Therefore, we propose a construct containing each of these three dimensions. To evaluate the consistency of these dimensions, we identified the following two basic business market relationship types: deep dependent and shallow dependent. Deep dependent relationships are those of significant importance for an organization. Possibly, the relationship accounts for a substantial portion of the firm's business, there are few other providers, or the provider possesses a critical resource for the organization. On the other hand, a shallow dependent relationship is less critical to the organization. Maybe the relationship is a small portion of the firm's business, there are numerous other suppliers, and the resources provided are readily available from other suppliers.

To conduct our research, we gathered numerous trust items representing a set of items for other trust studies. We designed two dependence scenarios representing both deep and shallow dependence situations. Next, we provided these scenarios to a national sample of purchasing agents and asked them to think of a business relationship that they have had that closely represents the relationship described in the scenario. Finally, we asked the purchasing agents about their trust of the business partner across different items for this relationship that matched the provided scenario.

This study produced a three-dimensional trust construct consisting of an ability dimension, a benevolence dimension, and an integrity dimension. Furthermore, we examined this construct across both deep and shallow dependent situations and found that the structural dimensions are consistent across both relationship types. To further explore the relationship between the trust dimensions and the relational form, we examined a regression model of the dimensions on business coordination. We found some support for the argument that in deep dependence relationships the dimensions of benevolence and integrity play bigger roles than in shallow dependence relationships, and that the ability dimension is more important in shallow dependence relationships than in deep dependence relationships.

The findings of this research are useful for marketing practice in that understanding the nature of successful relationships is critical. Boundary spanners must understand how to build better relationships for companies to thrive. By providing a more detailed description of trust, we hope we have added insight to their ability to build stronger relationships. Understanding that in some business situations it may be more critical to just get it right and in other situations it may be more critical to be honest, fair, and concerned for the welfare of a business partner should prove helpful to anyone involved in business exchange. Using a relatively simple map of relationship types, including the importance for the firm and the availability of other sources, managers should be able to take the findings from this study and better understand the types of actions that will build trust and improve their relationships.