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Always Trust in Old Friends? Effects of Reciprocity within Bilateral Asset Specificity on Trust in International B2B Partnerships☆

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Abstract

Grounded in Social Exchange Theory (SET), this study is motivated by two unresolved issues. First, scholars find mixed results on how relationship duration facilitates business-to-business (B2B) trust. The lack of consensus results from the assumption that relationship duration is a measure of prior trust-building efforts. We contend that trust-building lies in exchanges between B2B partners, and relationship duration moderates the effects of reciprocal exchanges. Second, although Transaction Cost Analysis (TCA) is one of the most used theoretical lens in the study of B2B trust, TCA is criticized for neglecting the exchange process in B2B trust-building. To provide clarity to these issues, we empirically validate that bilateral asset specificity constitutes social exchange processes, which communicate goodwill reciprocity and equivalence reciprocity. Empirical findings suggest that, within bilateral asset specificity: (1) achieving goodwill reciprocity always enhances trust, regardless of the duration contingency; and (2) violating equivalence reciprocity

impairs trust over the duration.

Keywords: interorganizational relationship management, social exchange theory, transaction cost analysis, relationship duration, reciprocity, trust

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Always Trust in Old Friends? Effects of Reciprocity within Bilateral Asset Specificity on Trust in International B2B Partnerships

1. Introduction

Grounded in Social Exchange Theory (SET), this research addresses two unresolved theoretical issues in interorganizational trust literature. The first observation is that empirical works report inconsistent findings regarding how relationship duration facilitates business-to-business (B2B) trust**.** We thus aim to offer a clarification on the role of relationship duration in B2B trust-building process. The other theoretical puzzle is from the Transaction Cost Analysis (TCA). The article seeks to fill a gap in theory regarding social aspects of exchange and its development process, specifically related to asset specificity in the context of B2B trust. Our effort is directed to a widely lamented issue (Granovetter 1985; McEvily et al. 2003; McEvily and Zaheer 2006) that TCA downplays social foundations of transactions (e.g., meta-analysis evidence from Palmatier et al. 2006; Leonidou et al. 2014; Zhong et al. 2017). Heeding the warnings in the literature, we empirically focus on bilateral asset specificity and its role in underlying social exchange process that triggers goodwill reciprocity and equivalence reciprocity.

The conventional view asserts that adequate relationship duration strengthens interorganizational trust through connecting two parties beyond the discrete transaction, enhancing mutual understanding, and aligning them to pursue common goals (Dwyer et al. 1987; Morgan and Hunt 1994). For example, Ganesan (1994) states "…such periods provide both parties with a greater understanding of each other and their idiosyncrasies. Thus, experience with the vendor is likely to increase a retailer's trust in the vendor's credibility and benevolence (p.5)." This theme repeats itself in relationship marketing studies as they underline with the same tone that relationship duration accrues interorganizational trust (Anderson and Weitz 1989; Doney and Cannon 1997; Zhang et al. 2016). However, empirical

findings are mixed. Scholars find that the connection between relationship duration and interorganizational trust varies from positive effects (Brashear et al. 2003; Zhang et al. 2016; Dong et al. 2017), to insignificant effects (Heide 1994; Palmatier et al. 2006; Ekici 2013; Vanneste et al. 2014), to negative effects (Gulati and Nickerson 2008). Therefore, the role of relationship duration on interorganizational trust-building remains unclear.

Building on the Dwyer et al. (1987) conceptual framework, empirical studies attribute a constructive role in developing a mutual understanding and maturity of relationship (Anderson and Weitz 1989; Gulati 1995; Bejou et al. 1996; Sa Vinhas and Heide 2014). Despite such optimism, the length of relationship does not guarantee mutual reliance and relationship bonding (Fichman and Levinthal 1991). Instead, relationships mature during the social exchange process along with the complex experience of shared ideas and form a mutual identity over bonding between two parties. (Blau 1964; Cropanzano and Mitchell 2005; Cook et al. 2013). In other words, what matters is not how long the relationship lasts, but what has been done in the exchange dynamics within the course of the relationship. Responding to inconsistent empirical findings, scholars call for process-based perspectives on interorganizational trust rather than directly viewing relationship age as a proxy for accumulated trust-building efforts (Heide and Wathne 2006; Möllering 2006; Akrout and Diallo 2017; Zhong et al. 2017). Thus, our first research question is: *How does relationship duration affect the trust-building process in international B2B partnerships?*

Based on SET, this article posits the contingency role of relationship duration in interorganizational trust-building. The process lies in the relationship dynamics between two parties – how they communicate certain social norms and comply with them. By complying, they ensure both predictability and stability to facilitate trust (Blau 1964; Cropanzano and Mitchell 2005; Cropanzano et al. 2016). As such, repeated mutual understandings and expectations on certain norms are incrementally communicated, learned, and internalized

through continuing interactions (Cook et al. 2013). Over time, the fog gradually clears in partners' behavior, norms get established, compliance leaves a track record. Alongside with growing compliance, predispositions also multiply, the partners' expectations turn sharper and stricter to ensure sustainable exchange and reduced relational risk. (Blau 1964; Cook et al. 2013). Hence, the importance of norm-complying exchanges on trust increases over time. With this view, one notable contribution of the current study is to identify relationship duration as a contingent moderator between norm-complying exchanges and trust.

Second, another issue within interorganizational trust-building studies is a void left by the Transaction Cost Analysis (TCA). Although the most widely used theoretical lens (i.e., Leonidou et al.'s 2014 meta-analysis), TCA often receives critical scrutiny in the examination of interorganizational trust. The reasons include neglect of social context, path dependencies, and the interactive process in relationship bonding (Granovetter 1985; McEvily et al. 2003). McEvily et al. (2003) state "the Williamsonian view reflects an under-socialized view of the organization and coordination of economic activity and the relationship between economic actors, based on a limited understanding of how trust really works (p.99)." Responding to the critiques on applying TCA to interorganizational trust-building, we address the underlying reciprocity within bilateral asset specificity.

The present study draws from the Social Exchange Theory to propose a more socialized, context-oriented, and path-dependent investigation on the usage of TCA framework in interorganizational trust. Our approach has merits. For instance, Zhong et al. (2017) after a meta-analysis suggest that TCA and SET could be complementary perspectives in understanding trust across organizational boundaries. Each party interprets the opponent's move depending on whether or not the move complies with the reciprocity norm (Blau 1964; Emerson 1976; Cropanzano and Mitchell 2005; Cook et al. 2013). Given that TCA-based studies claim asset specificity to be one of the most influential factors in interorganizational

relationships (Geyskens et al. 2006; Palmatier et al. 2006), we investigate how reciprocity within bilateral asset specificity would influence interorganizational trust. Accordingly, our second research question is: *Does reciprocity within bilateral asset specificities play a role in the trust-building process in international B2B partnerships?*

Building on SET insights, any form of 'give-and-take' interaction constitutes a social exchange process. Accordingly, we contend that bilateral asset specificity consists of an underlying social exchange process between the parties, a process that affirms the opponent's goodwill, strengthens the reciprocity beliefs, and indeed elevates trust. The reciprocity is also constitutive. It facilitates an expectation that a good-deed engenders the return of the good-deed (Blau 1964; Molm et al. 2007). In the mutual exchange of positive behavior, reciprocity emerges in two components (Gouldner 1960; Hoppner and Griffith 2011; Hoppner et al. 2015; Swärd 2016). In the one, the concept of reciprocity is construed on exchanges of latent goodwill intentions (partner's actions in the dyad are more mutual-interest driven than self-interest driven). In the other, reciprocity is built on the equivalence of contributions (the level of investment in comparison to that of the partner). The present investigation contributes to the literature by identifying goodwill reciprocity and equivalence reciprocity within bilateral asset specificity to extend the field's understandings.

The remainder of this paper is organized as follows. First, we introduce the relevant literature on relationship marketing and describe how applying the SET extends our knowledge. Next, we illustrate our conceptual framework and hypotheses. We then report an empirical study of 202 international buyer-seller relationships. Methodology and empirical results are also presented. Finally, we conclude with theoretical extensions and managerial implications.

2. Theoretical Background

2.1 Interorganizational Trust

Trust is a focal factor in interorganizational relationship studies (Ganesan, 1994; Morgan & Hunt, 1994). For example, Heide (1994) delineates trust as an inter-organization governance mechanism that improves cooperation and reduces opportunism in interorganizational exchange. Doney, Cannon and Mullen (1998) define interorganizational trust as "… as a willingness to rely on another party and to take action in circumstances where such action makes one vulnerable to the other party" (page 4). McEvily et al. (2003) state that mutual trust creates favorable conditions for partners to cooperate and generate improved performance. Extant studies empirically verify that trust-based international B2B relationships enjoy superior relationship performance (Zhang et al. 2003; Cavusgil et al. 2004; Katsikeas et al. 2009).

Although the importance of interorganizational trust is widely acknowledged, two questions remain unanswered. First, the role of the relationship duration is unclear. Conceptual works explore the role of relationship duration in trust but differ on the question of why and how. For example, Dwyer et al. (1987) propose a conceptual model to differentiate between discrete transactions and relational exchanges, suggesting that relationship duration transforms economic transactions into social exchanges. Anderson and Weitz (1989) posit that the age of the relationship represents the level of bilateral relationship inertia in repeated interactions that signify established communications and reliable routines. Similarly, empirical findings are significantly mixed, even among meta-analysis studies. One meta-analytical study corroborates that relationship duration fails to influence interorganizational trust (Palmatier et al. 2006), but another meta-analysis suggests the relationship duration augments interorganizational trust (Zhong et al. 2017).

2.2 Asset Specificity

Asset specificity is a central piece in TCA. In particular, the TCA posits a strong and

purely calculative view of the concept. Put simply, TCA considers the difficulty of redeployment of assets outside the relationship due to specificity. The resulting lock-in condition requires the safeguarding control and places the investing party in an unfavorable position (Williamson 1985; 1991). Bilateral asset specificity lock-in both the parties in the relationship and reduce the concern on opportunism (e.g. Ganesan (1994); Poppo et al. (2015)). TCA-based studies in interorganizational relationship employ the calculative view that bilateral asset specificity stabilizes relationship by creating a "mutual hostage" condition (Heide 1994; Sa Vinhas and Heide 2014).

This above view of asset specificity draws criticism as an under-socialized explanation. The void in the explanation, the scholars argue, emerges from a static framework neglecting attitude changes (Chiles and McMackin 1996); assumption of calculative bounded rationality regardless of the relationship context (Ghoshal and Moran 1996; Bachmann and Zaheer 2008); and a strong assumption of behavioral opportunism across early and mature relationships (Rindfleisch and Heide 1997). Moreover, relationship stage and contingencies of past exchanges alter the social meanings to the relationship-specific investments perceived by each party (Cropanzano and Mitchell 2005; Cook et al. 2013; Cropanzano et al. 2016).

Recognizing the warnings from extant research, we deploy a more socialized angle to examine the TCA framework in interorganizational trust-building (Wathne and Heide 2000; McEvily et al. 2017). In our view, the SET is a useful companion to serve in augmenting the theoretical arguments of TCA. SET studies suggest that any form of bilateral interaction in the ongoing 'give-and-take process' constitutes a social exchange process (Blau 1964; Cropanzano and Mitchell 2005; Cook et al. 2013). Accordingly, we investigate the underlying social exchange process within bilateral asset specificity.

2.3 Social Exchange Theory

Social Exchange Theory (SET) explores social interaction within the exchange process (Blau, 1964; Emerson, 1976). As one of the prominent views in interorganizational relationships (Cropanzano & Mitchell, 2005), SET regards trust as the crucial factor that stabilizes a relationship because trust induces partners to be less calculating and more collaborative to achieve mutual goals (Blau, 1964, Emerson, 1976). In agreement with Zhong et al. (2017) that TCA and SET could be complementary perspectives in understanding interorganizational trust, this research provides a fresh perspective by integrating related research streams.

We borrow from the SET to shed light on multiple theoretical puzzles. First, we propose a model which employs the contingency approach to examine interorganizational trust-building. According to SET, trust cultivation lies in an exchange process where both partners fulfill their mutual expectations on focal norms such as reciprocity. Affirming experiences, in turn, foster stronger reciprocity expectations and future reciprocating behaviors (Cook et al., 2013). We aim to understand how the links between reciprocating activities and trust are dependent on the relationship duration, as the shared beliefs of reciprocity norms evolve through the history of interactions. SET asserts that norms in a continued social exchange root deeper and get sanctioned over time (Blau, 1964; Cook et al., 2013). This learning process gradually reinforces the exchange behavior and a stronger reciprocating stance. Therefore, the SET offers a sound basis for theorizing duration as a contingency in interorganizational trust-building.

Second, the SET extends our knowledge by identifying reciprocity within bilateral asset specificity. The TCA explanations of asset specificity are purely calculative and forward-looking. Based on SET, the TCA rationale overlooks the exchange process in the dynamics of relationship-specific inputs between parties. For example, Blau (1964) states: "individuals and groups are interested in, at least, maintaining a balance between inputs and

outputs and staying out of debts in their social interactions; hence the strain toward reciprocity." Because reciprocity is bilateral, SET asserts that the level of complying with reciprocity to one party's relational inputs would depend on the other's level of relational inputs (Cook et al. 2013). Therefore, we integrate TCA and SET perspectives, offering a discussion of inherent social meanings across different scenarios within bilateral asset specificity to address the neglected social contextualization in TCA.

Extant studies from other disciplines support the idea of underlying reciprocity within bilateral asset specificity. For example, behavioral economists suggest that game players' reciprocity expectations deepen along accumulated practice of bilateral behavior in repeated games (Dufwenberg and Kirchsteiger 2004; Falk and Fischbacher 2006). Evidence from behavioral economists suggests that reciprocities can be operated through certain strategic interactions between two economic sectors. The idea that reciprocity would be signified, operated, and performed within bilateral asset specificity is also mentioned in a meta-analytical review of relationship marketing studies (Palmatier et al. 2006). After an examination in the interorganizational relationship management literature, Palmatier et al. (2006) suggest: "integrating reciprocity into the relational-mediating framework may also explain the large, direct effect of relationship investment on performance, such that people's inherent desire to repay 'debts' generated by sellers' investments may lead to performance-enhancing behaviors (p.152)." We follow this suggestion and empirically examine how reciprocity can be signified, operated, and performed within idiosyncratic bilateral asset specificity.

Finally, extending the SET literature, we identify certain interorganizational activities within the bilateral asset specificity that fulfill reciprocities. Cropanzano et al. (2016) review the SET theoretic remedies in business research and indicate that SET scholars emphasize hedonic value but overlook the exhibited activities. Cropanzano et al. (2016) suggest future

SET studies should further examine how the initiating and responding activities in a relationship shape the participants' attitude and future behaviors (page 46). In response, the present investigation identifies how social norms evolve through exhibited activities (the bilateral asset specificity in our research context) at the interorganizational level.

2.4 Reciprocity: The Focal Norm in Trust-Building

Reciprocity is a critical element in interorganizational exchanges (Dwyer et al. 1987; Rokkan et al. 2003; Zhang et al. 2016). Bagozzi (1995) identifies reciprocity as "the core of marketing relationships (p. 275)." Palmatier et al. (2006) suggest "The classic mediating model of relationship marketing should be adapted to include alternative mediated pathways (e.g., reciprocity) (p.150 in Table 6)." Empirical studies also examine the virtue of reciprocity in relationship marketing (Dwyer et al. 1987; Heide and John 1992; Bello et al. 2003; Hoppner et al. 2015). Palmatier et al. (2009) address the role of customer gratitude in relationship marketing based on the rationale of reciprocity. Overall, the importance of reciprocity in interorganizational relationship management has been widely acknowledged.

In the interorganizational relationship management area, reciprocity is generally defined as a unidimensional concept (Heide and John 1992; Aulakh et al. 1996; Gençtürk and Aulakh 2007; Paswan et al. 2017). Conceptualization of unidimensional reciprocity in interorganizational studies ranges from increasing interdependences in collaboration (Dwyer et al. 1987), exchange of favors in the mutual give-and-take process (Serva et al. 2005), to reciprocation of relational benefits (Lioukas and Reuer 2015).

To resolve inconsistencies in conceptualizing reciprocity in the literature, recent research regards reciprocity to be a multi-faceted concept in interorganizational partnerships. Pervan et al. (2009) investigate sales relationships in industrial marketing and find that reciprocity evolves with both partner's communication affirming goodwill and equity/balance of the relationship. Hoppner and Griffith (2011) empirically verify two sub-facets of reciprocity in

the context of international B2B relationships: immediate exchange of goodwill and return of favors in equivalence. Swärd (2016) conducts in-depth interviews and finds that interorganizational trust lies in both small actions that incrementally contribute to the expression of goodwill and large actions that strongly signify and invoke reciprocal reactions for equivalence.

Accordingly, we follow Gouldner (1960), Hoppner and Griffith (2011), and Swärd (2016), examining two facets of reciprocity in bilateral asset specificity: goodwill and equivalence. Goodwill reciprocity refers to the exchange and affirmation of each other's good-deed toward mutual-interest motivations, which is evaluated through the mutually contingent exchange of gratifications. Equivalence reciprocity is fulfilled when the level of effort or return is equivalent to that of the partner (Gouldner 1960; Hoppner and Griffith 2011; Hoppner et al. 2015).

3. Research Framework & Hypotheses

Our conceptual framework is depicted in Figure 1. Achieving goodwill reciprocity lies in the interdependent exchange process: one party's reciprocating action would align with the other's past action. Continuing dyadic exchange is interdependent and contingent on the partner's goodwill. When perceiving goodwill from the partner's reciprocating actions, an exchange party is more likely to have the higher level of trust in the relationship(Blau 1964; Cook et al. 2013). Homans (1958) suggests that the opponent's responding actions with reciprocating gratitude could be viewed as a social reward that brings the sense of satisfaction and reliability to the relationship. Blau (1964) specifies that such exchanges secure the relationship with more predictability toward the future, and relational factors related to long-term oriented attitudes such as trust, commitment, and loyalty would evolve through the social rewarding process. More recent SET studies verify that the interactive process of exchanging goodwill is the micro-foundation of forming social exchanges (Rao et al. 2005;

Molm et al. 2007). The goodwill exchanges provide the lasting momentum in building trust in ongoing relationships. Therefore, we propose:

Hypothesis 1: Achieving goodwill reciprocity within bilateral asset specificity enhances trust in international B2B partnerships.

In SET, the concept of equivalence suggests that the distribution of effort is approximately equivalent between the participants (Cook et al. 2013). Following SET, we suggest that breaching equivalence reciprocity harms the participant's trust since equivalence reciprocity implies reliability and stability of the exchange (Gouldner 1960; Hoppner et al. 2015; Swärd 2016). Based on SET, equivalence is crucial in sustaining long-term relationships as it signifies a balanced structure between participants that neither participant perceives being unfairly exploited (Emerson, 1976). Violating equivalence reciprocity sends out negative signals. An imbalanced structure creates uncertainty about long-term sustainability. The partner being exploited may seek out alternative relationships if available (Blau 1964). Not adhering to equivalence reciprocity reflects instability, lack of predictability, and creates greater vulnerability for each participant (Hoppner and Griffith 2011; Hoppner et al. 2015). This signals unpredictability on a partner firm's future strategies and thus undermines trust (Cook et al., 2013). Therefore, we propose:

Hypothesis 2: Violating equivalence reciprocity within bilateral asset specificity harms trust in international B2B partnerships.

We assert that the importance of reciprocity on trust becomes more prominent over the relationship duration. SET suggests that reciprocity norms can be more understood, internalized, and emphasized in longer relationships, amplifying the impact of reciprocity on trust. In accordance with Homans (1958), reciprocity requires a generalized exchange where equivalent returns are not necessarily immediate but, over time, a balance of exchange must be achieved. Accordingly, trust accrues as the relationship evolves. The reciprocating process

can create a self-reinforcing cycle, as the norm of reciprocity becomes more accepted, established, and internalized. As such, each partner demands more reciprocated efforts in the relationship. That is, higher expectations evolve after both parties have cooperated and attained mutual reliance. Hence, we contend that both goodwill and equivalence reciprocity within bilateral asset specificity become more salient in mature interorganizational relationships. Because relationship duration implies higher mutual expectations on reciprocity, reciprocity within bilateral asset specificity that achieve or violate the norm would become more impactful on trust over the relationship duration. Thus, we propose:

Hypothesis 3a: Achieving goodwill reciprocity within bilateral asset specificity more strongly enhances trust over the duration of international B2B partnerships.

Hypothesis 3b: Violating equivalence reciprocity within bilateral asset specificity more severely harms trust over the duration of international B2B partnerships.

In harmony with the extant literature, we contend that interorganizational trust enhances relationship performance in international partnerships (Delbufalo 2012; Zhong et al. 2017). Relationship performance refers to the effectiveness and efficacy of the collaborative relationship (Selnes and Sallis 2003; Katsikeas et al. 2009; Katsikeas et al. 2016). Trust enables smooth bilateral communication and coordination that maximize the relationship's potential. Empirical studies have demonstrated that international trust-based B2B relationships lead to better relational performance through forming and reshaping long-term oriented behaviors and attitudes (Chiou and Droge 2006; Zaheer and Zaheer 2006; Katsikeas et al. 2009). Trust brings beneficial effects in interorganizational collaboration such as information sharing (Bachmann and Zaheer 2008) and fewer concerns for opportunism (Dyer 2002). Based on these arguments, we propose:

Hypothesis 4: Trust in international B2B partnerships enhances relationship

performance.

------ *Insert Figure 1 About Here* -----

4. Method

4.1 Measuring Goodwill and Equivalence Reciprocity within Bilateral Asset Specificity

Three theoretical and technical reasons support our decision to measure reciprocity in bilateral asset specificity. First, responding to critiques of TCA (Granovetter 1985; Ghoshal and Moran 1996; Zhong et al. 2017), this study directly examines reciprocity within bilateral asset specificity. Second, studies in interorganizational relationship management share the convention of using bilateral asset specificity to measure a variety of focal constructs in SET, such as accumulated invested costs in a relationship (Gulati and Nickerson 2008), level of embeddedness (Gulati and Sytch 2007), and power structure (McEvily et al. 2017). Our analysis aligns with previous SET studies and proposes the meaning of reciprocity within bilateral asset specificity. Finally, our measurement design is widely used and verified in other well-established studies (see He and Wong (2004), O'Reilly and Tushman (2008), and Li and Huang (2012)), indicating the methodological robustness of our construct operationalization. As such, we investigate how bilateral asset specificity communicates goodwill reciprocity and equivalence reciprocity. An overview of reciprocity elements is presented in Table 1.

------ *Insert Table 1 about here* -----

In our model, we employ the interaction-term between buyer and seller's asset specificity to measure goodwill reciprocity. Interaction-term measures how the impact of one independent variable on the dependent variable is contingent on the moderator (Hair et al. 2009). As discussed, goodwill reciprocity is bilateral. It refers to the exchange and affirmation of each other's good-deed through the mutually contingent interaction of gratifications. When the buyer has invested asset specificity and the seller reciprocates with

corresponding asset specificity commitments, the buyer would perceive goodwill in the seller's compliance with reciprocity to reinforce trust. Therefore, the buyer's asset specificity investment is associated with the perceived goodwill of the seller. Accordingly, we measure the interaction terms between the buyer and seller's asset specificity to evaluate goodwill reciprocity. Empirical studies offer reasonable support for the operationalization. Jap and Ganesan (2000) conceptualize the interaction between bilateral asset specificity as reciprocal actions that facilitate commitment in a B2B relationship. De Vita et al. (2010) mention that bilateral investments (interaction-term) can be regarded as a credible signal of self-enforcing commitment in an exchange relationship.

TCE-based relationship marketing studies employ the interaction-term between buyer and seller's asset specificity to measure the relationship stability created by "mutual hostage" condition (Artz 1999; Joshi and Stump 1999). Williamson (1985) suggests mutual investments of bilateral asset specificity as an alternative safeguarding mechanism to hierarchy control. However, follow-up empirical studies employ the interaction-term between buyer and seller's asset specificity to measure "mutual hostage" condition do not find consistent empirical support. Artz (1999) finds that the interaction-term of bilateral asset specificity does not significantly increase relationship performance. Joshi and Stump (1999) report interaction-term of bilateral asset specificity even undermines joint actions.

Commenting on the insignificance of proposed reciprocal asset specificity on performance, Artz (1999) comments " … it may be that certain governance mechanisms, e.g., relational norms, can effectively moderate the impact of these factors thereby allowing interfirm exchanges to continue (page 11)." Responding to the call, we testify the underlying social exchanges within bilateral asset specificity that performs reciprocity. Regarding the interaction-term between bilateral asset specificity, our framework suggests that SET-based explanation of reciprocity is a more robust conceptualization than the TCA-based logic of

mutual hostage. The reason is that we identify trust as the focal mediator that connects the interaction-term of bilateral asset specificity with relationship performance. As Blau (1964) states ”only social exchange tends to engender feelings of personal obligations, gratitude, and trust; purely economic exchange as such does not.” Our identification of the trust mediator supports the underlying social exchanges and explains the unsupported hypotheses presented by TCA-based investigations (Artz 1999; Joshi and Stump 1999).

The proposed model also considers the effect of equivalence reciprocity through observing the inequality between the buyer and seller’s asset specificity. To measure inequality, we adopt absolute difference, which is an adequate measure to capture the level of inequality between two variables (He and Wong, 2004). SET has two explanations regarding inequality in bilateral relationship contributions. One is that the more dominant partner uses its power advantage to demand the opponent sacrifice unilateral contributions and take advantage of the opponent’s excessive efforts (Emerson 1962; Ebers and Semrau 2015). Because power structure is controlled in our model, we believe inequality within bilateral asset specificity reflects the other SET explanation that participants fail to fulfill the norm of equivalence (Cropanzano & Mitchell, 2005). We justify this conclusion noting that any distortion in bilateral asset specific contributions will impede the trust between the parties involved.

4.2 Scales & Measurements

We employed scales established in the literature. Additionally, modified scales are employed to accommodate to address the needs of our model. All scales are listed in the Appendix. The measurement of the supplier and buyer’s asset specificity is adapted from Katsikeas et al. (2009), Heide and John (1990), Rokkan et al. (2003). The scale for trust is adapted from Doney and Cannon (1997). The relationship performance construct is modified from Selnes and Sallis (2003). Control variables include industry, firm age, firm size,

dependence, contact frequencies, and psychic distance between the buyer and seller.

To capture the effect of cross-national variation, we use psychic distance as a subjective measure of dissimilarity between the international buyer and seller in the context of culture, language, and legal systems (Johanson and Vahlne 1977; 1990). Psychic distance is a well-developed concept in the international business literature. It refers to "the sum of factors preventing the flow of information from and to the market." (Johanson and Vahlne 1977) Also, we contend that using a self-reported measure better fits the assertions of the SET. Social Exchange Theory suggests that interpretations of the social signals are subjective (Blau 1964). Using self-reported psychic distance measures appropriately controls the respondent's subjective awareness of cross-national differences, better aligning with the SET. Finally, psychic distance allows us to capture the overall influences caused by cross-national differences (Katsikeas et al. 2009; Obadia et al. 2015).

Aligning with the interorganizational relationship management literature, we follow the definition proposed by Doney and Cannon (1997) and argue interorganizational trust as "the perceived credibility and benevolence of a target of trust" (p.2). In accordance with a review article on interorganizational trust measures (Seppänen et al. 2007), this is one of the mostly used definitions in the interorganizational relationship management literature.

To rule out alternative explanations other than reciprocity in trust-building, we capture and control the effect of the power structure in each interorganizational relationship. Specifically, the SET suggests that power structure is an alternative motive driving each participant's relationship-specific investments (Blau, 1964), and dependence imbalances in each relationship is a strong proxy for power structure (Emerson 1962). Thus, we control the level of dependencies to address the effect of our focused reciprocity norm.

To check for common method variance (CMV), we employed the CFA marker approach. The subjects are questioned about their perceived goal importance in attending trade shows

with items adapted from Godar and O'Connor (2001). CFA marker technique requires a marker variable that is theoretically unrelated to the focal variables, for which its expected correlation with the focal variables is zero (Lindell and Whitney 2001). After consulting with two knowledgeable scholars, we conclude that the proposed CFA marker (the buyers' goals of attending the trade show) has no confounding effect on our study.

Overall, all items used were reviewed by two expert academics as well as two experienced practitioners to check for face validity in this specific research context.

4.3 Data and Research Subjects

The present study employs SET to analyze a relationship with the unilateral focus on the buyer's viewpoint. A unilateral data collection is carried out. There are two reasons for the research design. First, a unilateral focus allows us to simplify the reciprocity interpretations. Although an exchange is embedded within the dyad, SET assesses the role of interpretation of social outcomes (i.e. social reward minus social cost) as a determinant of norm compliance and perceived relational bond (Blau, 1964; Granovetter, 1985; Holmes, 1981). For our research, considering interpretations from both bilateral sides may require massive controls on other unrelated issues between the dyad, such as misalignments in perceptions caused by information asymmetry. As a pioneer study investigating sociological meanings underlying asset specificity, we contend that a unilateral focus on the buyer's side avoids excessive ambiguity. Therefore, a unilateral focus on the buyer's perspective fits our research purpose in addressing the contextual meaning of asset specificity.

Second, reciprocity in social exchanges is typically based on subjective assessments. Before reciprocating, a partner must sense, read, and interpret the other side's actions. The effectiveness of this process depends on the receiver's visceral interpretations of such actions (Blau, 1964; Holmes, 1981). The proposed empirical analysis based on primary data is consistent with the tenets of SET. Overall, a unilateral focus concurs with the SET in

providing a compelling analysis.

Research Subjects. The data used in this investigation is from a large-scale survey of senior procurement executives representing international buyers in the global electronics industry. The sampling scope includes very different companies without particular focus on region or country. In the electronic OEM–supplier context, buyers have alternative options to partner up with different sellers (Kang et al. 2009; Jean et al. 2010). This is important because the SET assumes that partners hold the discretion of choosing alternative partnerships (Emerson, 1972, 1976). In addition, the electronics industry is not immune to high uncertainty and risk. Firms in this industry must learn to cope with short product life cycles, technological uncertainty, and difficulties in negotiations for better margins. Business cycles in the electronics industry mature fast, making it a suitable industry to examine relationship development. As such, the global electronics industry is an ideal choice for the present investigation.

To access the senior procurement executives of buyer firms in the electronics industry, the sampling frame comprised of registered buyers in the annual convention of *Computex Taipei*. This event is Asia's largest, and the world's second-largest, ICT (Information and Communications Technology) trade show. The event attracts a large cross-section of senior procurement executives in the industry. It is a meeting place for manufacturers of notebooks, tablet PCs, motherboards, servers, wafer OEMs, LCD monitors, WLAN (Wireless Local Area Network, and PND (Portable Navigation Devices). Since 1981, *Computex Taipei* has come to be known as an elite gathering of innovators and entrepreneurs who showcase the most advanced and innovative ICT products. As such, this trade show provides an ideal venue for both a wide spectrum of subjects and gaining access to electronics industry senior executives.

We randomly selected 1,300 cases among the buyer firms registered in Computex 2014. Executives at each firm were contacted and asked whether they would be willing to

participate in the survey. After eliminating invalid cases, complete survey data were secured from 202 respondents. The final response rate was 15.5 percent. The countries of origin for the buyers and sellers are summarized in Table 2. A rich variety of sub-industries are represented: software/IT: 25.25 %; electronics: 30.69 %; chemicals: 1.5 %; telecommunications: 7.9 %; engineering: 8.9 %; and others: 25.76 percent. Respondents are owners (5.9%), top managers including CEOs, CFOs, CMOs and the like (17.3%), middle managers (36.6%), purchasing and sales account managers (20.7%) from global buyer companies. The average tenure (years of service) of respondents is 7.4 years. Each informant was asked to respond concerning the buying relationship they considered the most critical to their firm.

------ *Insert Table 2 about here* -----

4.4 Structural Equation Modelling Analysis

For the analysis, we followed the approach suggested by Hair et al. (2012). These authors point to the complementary characteristics of covariance-based sequential equation modeling (CB-SEM) and partial least square sequential equation modeling (PLS-SEM). Following their suggestion, we first used the CB-SEM technique to conduct a CFA to check the measurement model validity including all of our used variables measured with reflective scales. Then, PLS-SEM is used to test the structural model where we have variables with both formative and reflective measures. Psychic distance, one of our control variables, is a predefined formative latent variable. Using PLS-SEM to conduct the structural model analysis allows us to benefit from PLS's flexibility in specifying both formative and reflective measures without loss of information in the data set (Hair et al. 2012). The PLS analysis was conducted using SmartPLS version 3.1.9 software with the defaulted bias-corrected and accelerated bootstrap method and 500 subsample settings. The CFA was conducted using LISREL ver. 8.54.

We assessed the convergent validity of constructs by examining the average variance extracted (AVE) and the significance of item loadings. The AVE attempts to measure the level of explained variance that a latent variable component captures from its indicators relative to the amount due to measurement error. The AVE values should be greater than the 0.50 cut-off level (Gefen et al. 2011). The construct reliability is examined using the composite reliability (CR) developed by Werts et al. (1974). Acceptable values of CR statistic should exceed 0.70 (Fornell and Larcker 1981). To evaluate the discriminant validity, we compared the square root of AVE with the correlations among the latent variables (Fornell and Larcker 1981).

To contend with both interaction and inequivalence between buyer and seller's asset specificity, we followed the method used by a series of empirical studies from another established literature stream (He and Wong 2004; Cao et al. 2009; Raisch et al. 2009). Our two-way and three-way interaction terms (i.e. interaction-term between bilateral asset specificity, interaction-term between bilateral asset specificity × duration, and inequivalences between bilateral asset specificity × duration) were generated based on the two-stage approach in SmartPLS with mean-centered interaction terms to avoid multicollinearity. Because our measures of buyer and seller's asset specificity are paralleled items, we generated our inequivalence measures with absolute difference values across pairs of matched items. The reliability and validity checks empirically support the appropriateness of this approach.

Finally, we conducted a CMV post check with a comprehensive CFA marker technique presented by Williams et al. (2010). Compared with the partial correlation CFA marker technique proposed by Lindell and Whitney (2001), the comprehensive CFA marker technique accounts for the measurement error; therefore it is a superior statistical test for CMV effects in an SEM setting (Williams et al., 2010).

5. Results

5.1 Measurement Model Results.

The CFA results are reported in Table 3. The CB-SEM technique was employed to conduct the CFA to ensure robustness of our measurement model. All item loadings reach statistical significance, indicating convergent validity. The CFA model goodness-of-fit (CFI=0.97. NNFI=0.95, SRMR=0.058) indicators are satisfactory (Hu and Bentler 1999). Construct reliability is supported by composite reliability statistics above 0.7. The AVE statistic is above 0.5, indicating convergent validity (Hair et al., 2009).

The correlation matrix and discriminant validity check are presented in Table 4. All square roots of the AVEs are greater than the off-diagonal elements in the corresponding rows and columns, demonstrating discriminant validity (Fornell & Larcker, 1981). Overall, these results show that all statistics in the measurement model reach the requisite threshold suggested in the literature. We thus confirm the measurement models' validity using multiple indicators: reliability, convergent validity, and discriminant validity.

------ *Insert Tables 3 and 4 about here* -----

5.2 Structural Model and Hypothesis Testing

The PLS structural model checks are summarized in Table 5. He and Wong (2004) recommend two separate examinations of the interaction-term and absolute difference in two models to avoid ambiguity in the interpretation of the results. Accordingly, we examined five PLS structural models by stepwise addition of focal independent variables to ensure robustness of the results. The Model 1 is the baseline model including only control variables. Because H4 is the widely accepted hypothesis in literature, we firstly added H4 (trust --> performance) and H1 (goodwill reciprocity --> trust) to Model 2 to incrementally check the validities of the added hypothesis. The increase in R^2 and a minor decrease in SRMR between Model 2 and Model 1 indicates the appropriateness of adding two variables. The significance of coefficients in Model 2 empirically supports H4 and H1. Compared to Model 2, in Model

3 includes Hypothesis 3a (goodwill reciprocity × duration --> trust). The statistical insignificance of the corresponding coefficient and increased SRMR denote that Hypothesis 3a is not supported.

Model 4 examines the main effect of violating equivalence reciprocity between asset specificity on trust. Compared with Model 1, the values of R^2 and SRMR are greater in Model 4. However, H2 is not supported. In Model 5, we add Hypothesis 3b, which argues that relationship duration moderates the link between violating equivalence reciprocity and trust. Hypothesis 3b is confirmed. Model 6 indicates the robustness of results with all variables included. Overall, Three of five hypotheses are empirically supported (Table 6).

------ *Insert Tables 5 and 6 about here* -----

Figure 2 illustrates the interaction effect within bilateral asset specificity (Model 2) presented in Table 4. In Figure 2, scenario A in the upper-right side on the dotted line reflects the practice of equivalence reciprocity (high in both buyer and seller's asset specificity), where the corresponding trust value on the vertical axis is the highest. Scenario B over the middle-right side on the solid line implies the buyer's indebtedness of reciprocal acts (high in seller's asset specificity but low in buyer's), where the corresponding trust value on the vertical axis is the second highest. The middle-left side of the dotted line, Scenario C, denotes practices of the discrete transaction (both low in buyer and seller's asset specificity), where the corresponding trust value on the vertical axis is the third highest. The practice of priming trust with favors is described in scenario D over the bottom-left side on the dotted line (high buyer's asset specificity but low in seller's), where the corresponding trust value on the vertical axis is the lowest.

Figure 3 illustrates how relationship duration serves as a moderator variable. With short durations (the dotted line with negative slope, given duration equals to mean duration -1× standard deviation), an increase in inequivalence within bilateral asset specificity would not

significantly decrease trust. In contrast, the solid line with a negative slope denotes long durations (given duration equals mean duration +1×standard deviation), where an increase in the magnitude in asset specificity inequivalence significantly diminishes the level of trust.

------ *Insert Figures 2 and 3 about here* -----

5.3 Common Method Variance

The results were examined for common method variance (CMV), concluding that the results are not biased by CMV. First, two of the hypotheses are moderating effects, and the results indicate statistical significance. According to Siemsen et al. (2010), CMV does not severely bias if the moderating hypothesis reaches statistical significance. Hence, the statistical significance of Hypotheses 3b indicates that CMV is not problematic.

Second, in our questionnaire design, we varied the format of measurement items, from a 7-point scale (e.g., trust) to open-ended numbers (e.g., duration). The anchor labels of 7-point scales also vary from construct to construct. These are measurement designs recommended for avoiding CMV (Podsakoff et al. 2003; Podsakoff et al. 2012).

Finally, we followed the procedures recommended by Williams et al. (2010) and included a CFA marker in our questionnaire for statistical post check. The results are summarized in Table 7. We first added the marker items into our item pools and conducted an additional CFA analysis. The results provide reference values for conducting the baseline model parameters. We then added the marker to conduct the baseline model with the orthogonal approach suggested by Lindell and Whitney (2001). Next, we allowed the other items to be loaded on the marker with the equality constraint to build the Method-C model. The insignificant Chi-square difference between baseline model and Method-C model indicates a lack of congeneric method variance (Williams et al., 2010). Finally, we let the items used to be freely loaded on the marker to conduct the Method-U model. The insignificant Chi-square difference between Method-C and Method-U indicates the results are

not biased by non-congeneric method variance (Williams et al., 2010).

------ *Insert Table 7 about here* -----

6. Discussion

Our empirical findings shed light on the two unresolved issues that motivated the present study. First, the results offer clarifications on the moderating role of relationship duration in interorganizational trust cultivation. Second, based on the empirical findings, we verify reciprocity in bilateral asset specificity. A proposed typology is offered to identify four scenarios in bilateral asset specificity, and we address the buyers' corresponding level of trust across the four possible conditions.

6.1 The Contingency Role of Relationship Duration in B2B Trust-Building

We find empirical support for the view that inequivalences within bilateral asset specificity impair trust over the relationship duration (H3b). Results suggest that violating equivalence reciprocity becomes more harmful to trust over time. Indeed, as can be seen in Table 5, relationship duration does not directly influence trust (as a control variable), but significantly moderates the impact of inequivalent asset specificity on trust (H3b). The findings align with our contention that relationship duration is the contingency in interorganizational trust-building rather than an antecedent to measure overall trust-building efforts.

Interestingly, some empirical findings are contrary to expectations. Hypothesis 3a, where we propose goodwill reciprocity becomes more influential on trust over the duration, is not supported. Likewise, Hypothesis 2, proposing that violating equivalence reciprocity harms trust is not supported. However, the findings support another associated proposition that violating equivalence reciprocity becomes more harmful to trust over relationship duration (Hypothesis 3b).

Plausible explanations for the unsupported hypotheses lie in the different level of

strictness between goodwill and equivalence reciprocity. Goodwill reciprocity has a relatively loose requirement that only requires the seller's asset specificity to reciprocate with the buyer's. However, equivalence reciprocity further requires the approximately equivalent level of bilateral asset specificity contributions. Goodwill reciprocity is relatively tolerant of the partner's behavior in exchange for the possibility of future pay off. The SET suggests trust cultivation always requires initiating the process with goodwill so that the other party will reciprocate. This, in turn, creates another round of reciprocating exchanges (Blau 1964). A purpose for signaling goodwill is to indebt the other party to reciprocate the favor, but not necessarily immediately or equivalently (Blau 1964). Goodwill reciprocity permits relatively loose norm-actualization, and thus it functions universally across all relationships. Our findings suggest that achieving goodwill reciprocity is a universal norm in trust cultivation that is important, regardless of relationship maturity.

On the other hand, equivalence reciprocity strictly warrants partners to reciprocate in relatively equivalent value. This requirement is rigid and stricter. In that, it might take longer for participants to understand, accept, and internalize as a mutually accepted norm and shared obligation. This result suggests the idea that young relationships might have completely different anticipation in bilateral asset specificity compared to mature relationships. Early in the relationship, there is a 'honeymoon effect' which makes the partners less aggressive in their demands and interprets the relational behavior with a positive forward look (Fichman and Levinthal 1991). In the more mature relationships, this pattern is replaced by a hangover effect which more strictly measures the equivalence in relational contributions; such expectations are formed incrementally through the historical experiences of give-and-take.

Therefore, the differences in the level of strictness between two reciprocity facets might explain the finding that: (1) the main effect of goodwill reciprocity on trust is significant (H1), but the main effect of equivalence reciprocity on trust is not supported after controlling the

duration (H2); (2) influences of equivalence reciprocity on trust are duration-dependent (H3b), but of goodwill reciprocity are duration-independent (H3a).

6.2 Reciprocity within Bilateral Asset Specificity: A Proposed Typology

The study findings confirm goodwill reciprocity between buyer and seller's asset specificity in trust-building (H1). Interorganizational trust cultivation lies in the series of social exchanges that confirm and update each partner's goodwill. This research demonstrates that such goodwill exchange can be achieved within idiosyncratic bilateral asset specificity. A buyer interprets the goodwill sent from the seller's asset specificity contingent on the buyer's incumbent level of asset specificity.

Based on our findings, we propose a typology of four possible scenarios. This typology is depicted in Figure 4. In each, we examine, from the buyer's perspective, how trust develops from bilateral asset specificity. The four scenarios include: (i) both parties provide contributions with high asset specificity; (ii) low levels of buyer's asset specificity, but high levels of seller's; (iii) high levels of buyer's asset specificity, but low levels of seller's; and (iv) both parties provide low asset specificity.

------ *Insert Figure 4 about here* -----

The upper-right corner in Figure 4 denotes the case that both goodwill and equivalence reciprocity is attained, meaning both the buyer and seller have a history of high mutual asset specificity. In this case, high levels of asset specificity are exchanged with equivalent contributions. Under these conditions, goodwill reciprocity is achieved through reciprocating responses, and equivalence reciprocity is satisfied through an approximately equivalent level of contribution. Attainments in both facets of reciprocity ensure the strongest future predictability in the relationship and thus generate the highest level of trust.

In the upper-left corner of Figure 4, the level of buyer's trust is second highest when receiving excessive favors in goodwill. In this scenario, the buyer recognizes the seller's

sacrifice as a goodwill gesture to trigger future reciprocal exchanges. The buyers in this scenario attain more options to act. That is, the buyer can choose to: (1) selfishly enjoy the partner's excessive asset specificity and terminate the relationship by stopping the exchange process; or (2) to reciprocate with equivalent asset specificity contributions which, in turn, strengthens the mutual trust in the relationship (Blau, 1964; Emerson, 1972, 1976). In other words, the buyer can potentially take advantage of the seller's excessive asset specificity. These results indicate that the perceived goodwill from the seller's unselfish sacrifice will generate the second highest level of the buyer's trust.

The bottom-left corner illustrates a scenario of discrete transactions without significant social interactions or norms. In this scenario, the buyer's trust is the third highest. Here, given the absence of asset specificity from each party, neither participant is handicapped if the relationship is terminated (Blau, 1964). The SET refers to this as "economic exchange" as it represents standardized economic agreements (Blau, 1964). In the case of discrete transactions, buyers are involved in economic transactions without many exchanges within bilateral asset specificity. The buyer's trust toward the seller is based on the contractual obligations and market institutions.

The buyer's trust is lowest in the 'favor given in initiating goodwill reciprocity' scenario, represented at the bottom-right corner in Figure 4. Buyers in this scenario encounter the potential risk that the partner might not adhere to norms of goodwill reciprocity. The buyer's high levels of asset specificity imply the buyer's expectation of future payback. If such expectation is not fulfilled, discord arises (Molm et al., 2007). The lack of reciprocal asset specificity may lead to disappointment by the buyer. The buyer's trust toward the seller declines along with continued excessive favors.

7. Implications and Directions for Future Research

7.1 Theoretical Contributions

The present investigation contributes to our understanding of interorganizational trust in four important ways. First, we offer a novel perspective in attempting to resolve mixed findings regarding the role of relationship duration in interorganizational trust-building. The study addressed a weakness in existing research – viewing relationship age as a direct measure of relational bonding and overall efforts on cultivating trust. Building on social exchange theory (SET), we have been able to demonstrate that interorganizational trust results from the reciprocal exchanges. The relationship develops as the participants incrementally communicate, internalize, and mutually accept the meanings and requirements of reciprocity (Blau, 1964; Cook et al., 2013; Homans, 1958).

In other words, the results support the view that it is not necessarily how long the relationship endures that builds trust, but it is how parties interact and communicate with each other during the relationship. Hence, we confirm that relationship duration does not directly enhance trust but rather moderates the effect of reciprocating actions on trust. Figure 3 depicts how relationship duration moderates the connection between asset specificity inequivalence and trust. We provide an empirically supported explanation for the conflicting findings regarding the influence of relationship duration. Therefore, the findings clarify the contingency role of relationship duration with theoretical insights and empirical support.

Second, we address an overlooked approach in interorganizational trust-building -- underlying reciprocity within bilateral asset specificity. The present study extends our understanding of asset specificity by proposing the contextual meanings that are neglected in transaction cost analysis. The contingent meanings in bilateral asset specificity represent a significant departure from how most scholars have been using calculative logic in interpreting asset specificity. In line with ample critiques of TCA (Granovetter 1985; Chiles and McMackin 1996; Ghoshal and Moran 1996), our findings suggest organizations are not purely economic-rational entities in managing interorganizational relationships. We offer

rigorous evidence that the TCA overlooks the social exchange process and interactive nature of interorganizational trust-building. We specify that organizations are dependent on pre-dispositions and generate interpretations on asset specificity which are socially embedded in the ongoing exchanges between dyadic parties. The results yield new nuances of the social exchange process within bilateral asset specificity to extend traditional theoretical concepts. Hence, the findings contribute to interorganizational trust studies by specifying reciprocity within bilateral asset specificity.

Further, we specify the mutual-contingencies between buyer and seller's asset specificity on trust cultivation. Because the TCA deemphasizes the interactive exchanging nature, TCA-based studies on interorganizational trust portray a simplistic linear connection of one partner's asset specificity on trust with the calculative logic (e.g. Doney and Cannon (1997); Katsikeas et al. (2009)). Studies delineate that, because asset specificity increases the investing party's switching cost to be locked-in the relationship, the opponent would reduce concerns for being exploited by the investing partner's opportunistic behaviors and thus elevates the opponent's trust (Williamson 1994; Geyskens et al. 2006). An underlying assumption in the TCA-based frameworks is one party's asset specificity on trust is independent of the other's existed level of asset specificity. This assumption does not consider the social contingencies, relationship stages, and social norms. According to the SET, meanings of relationship-specific inputs are contextual-oriented and highly dependent on the history of interaction (Blau 1964; Molm et al. 2007). We empirically verify that, in the dynamic social exchange process within bilateral asset specificity, how buyers read and perceive reciprocity in the seller's asset specificity would depend on the buyer's incumbent level of asset specificity (Figure 4).

Third, this research responds to the call for robust examinations of interorganizational reciprocity. Scholars have been ardent about the mechanisms and conceptualization of

interorganizational reciprocity (Rokkan et al. 2003; Palmatier et al. 2006; Zhang et al. 2016). In line with studies that suggest multi-faceted reciprocity in interorganizational relationship management (Hoppner and Griffith 2011; Hoppner et al. 2015; Swärd 2016), the present investigation further identifies how the dual reciprocity facets (i.e. goodwill and equivalence) are fulfilled within bilateral asset specificity that, in turn, affect interorganizational trust.

Moreover, the study details how relationship duration varyingly moderates the effects of dual reciprocity facets on trust. Regarding goodwill reciprocity, our findings suggest that goodwill is universally essential in cultivating trust across different relationship stages. Achieving goodwill reciprocity provides momentum in sustaining interorganizational trust in relationships. On the other hand, equivalence is a stricter facet of reciprocity that requires decent communication and mutual understandings to be commonly accepted. Our findings suggest that violating equivalence reciprocity is not universally harmful to trust across all relationship stages. However, as the relationship matures, the expectation for equivalence is heightened, and each party becomes less tolerant of inequivalent efforts between the parties (Cook et al., 2013; Gouldner, 1960). As relationship tenure lengthens, uneven bilateral asset specificity violates the equivalence reciprocity principle and erodes trust.

Finally, this research also contributes to the SET. In the context of cross-border B2B relationships, our findings reveal that each party learns and internalizes norms of reciprocity through continuous observation of their international partner's past actions. Numerous SET studies discuss the cross-cultural differences of norms accepted in different societies (Leung and Morris 2015; Gelfand and Jackson 2016). In a cross-border partnership, common grounds on appropriate reciprocity may be limited due to cultural differences. However, the present study suggests mutual requirements on reciprocity can still be established through continuing social exchanges between international buyers and sellers. Therefore, the findings demonstrate that reciprocity norm can be established and fulfilled in cross-border

partnerships; such norms are shaped through ongoing bilateral strategic actions such as asset specificity.

7.2 Managerial Implications

The present study offers four implications for managerial practice. First, practitioners would find the proposed contingency role of duration on interorganizational relationship management to be of importance. Findings support the view that, in evaluating the robustness of interorganizational trust, the duration of the relationship is not a solid direct indicator. The contingent effect of relationship duration on trust is demonstrated. Hence, managers should seek for more process-based indicators such as mutual asset specificities in a partnership.

Second, managers should also be cognizant that each firm's expectations in a business relationship evolve over time. To maintain trust in interorganizational relationships, managers should accordingly adjust their decisions and activities to align with the dynamic expectations and changing norms in the relationship. Our findings also imply such collaborative adjustments with reciprocating attitudes takes time to achieve. Managers should be aware that, because bilateral consensus on equivalence takes a fair amount of time to achieve, attaining equivalence reciprocity is a long-term relational asset in international B2B connections. Therefore, practitioners should regard long-term relationship trust as a unique resource that is valuable, rare, costly to imitate, and difficult to be substituted (Barney 1991). The development of such a competitive advantage lies in mindful management in ongoing social exchanges with senses of time horizon.

Third, this study specifies the mutual-contingencies between buyer and seller's asset specificity in interorganizational trust. We identify the underlying exchange process within bilateral asset specificity in the interorganizational relationship management. In addition to the conventional idea of cost-benefit analysis on investment evaluations, practitioners should also be aware of the reciprocal message being sent when making business decisions in

interorganizational relationship management. Our findings suggest that even asset specificity, a factor that most scholars and practitioners interpret and evaluate with economic rationality, can carry substantial social signals in interorganizational relationships. Therefore, managers should be cognizant of signals sent by one's partner and should reciprocate accordingly.

Finally, the study implies that strategic decisions should not solely depend on static analysis but have a long-term and dynamic view. The present value analysis in investment evaluations might neglect the potential future benefits of long-term business relationship buildings. Benefits from a relationship should not be limited to present accruals, but be valued for their potential from the future undertaking. Overall, our research suggests that, in addition to economic rationale, practitioners should recognize the values of reciprocity within bilateral asset specificity to bond with key business stakeholders.

7.3 Limitations and Future Research

While the current study provides rich theoretical and practical implications, there are good grounds for future research. First, due to time and financial constraints, all respondents completed the questionnaire within a limited time frame. We gathered information on both independent and dependent variables from a cross-sectional design. Therefore, mono-respondent bias is a concern. Future research may benefit from using panel data to clarify the dynamic aspects and capture possible extensions of the present framework.

Also, as a study with the focus on reciprocity within bilateral asset specificity, this research follows the SET and focuses on goodwill and equivalence exchanges. Future studies might consider examining other social meanings within bilateral asset specificity, such as fairness, justice, and altruism.

Third, to ensure that our findings are generalizable to different cultures, this study investigated international buyer-seller pairs from a variety of country bases (see Table 2), and controlled psychic distance in each cross-border partnership pair. Future studies can test our

theorization in different settings to examine the contextual influences. For example, institutional effects might be another contingent variable to examine if our framework performs differently across advanced markets, emerging markets, and developing markets.

Fourth, based on multiple meta-analysis studies in interorganizational relationship management (Geyskens et al. 1999; Palmatier et al. 2006; Parmigiani and Rivera-Santos 2011; Leonidou et al. 2014), interorganizational trust is defined as a unidimensional construct. Accordingly, we used one of the mostly applied definitions from Doney and Cannon (1997) to align with this research stream. However, we suggest future studies use a multi-faceted definition of interorganizational trust to thoroughly examine the effects of goodwill and equivalence reciprocity.

Finally, the proposed conceptualization of reciprocity may also be performed within other types of bilateral business activities, such as joint marketing campaigns and R&D investments. It is hoped the present investigation will motivate scholars to pursue such avenues for further development of knowledge on interorganizational relationships.

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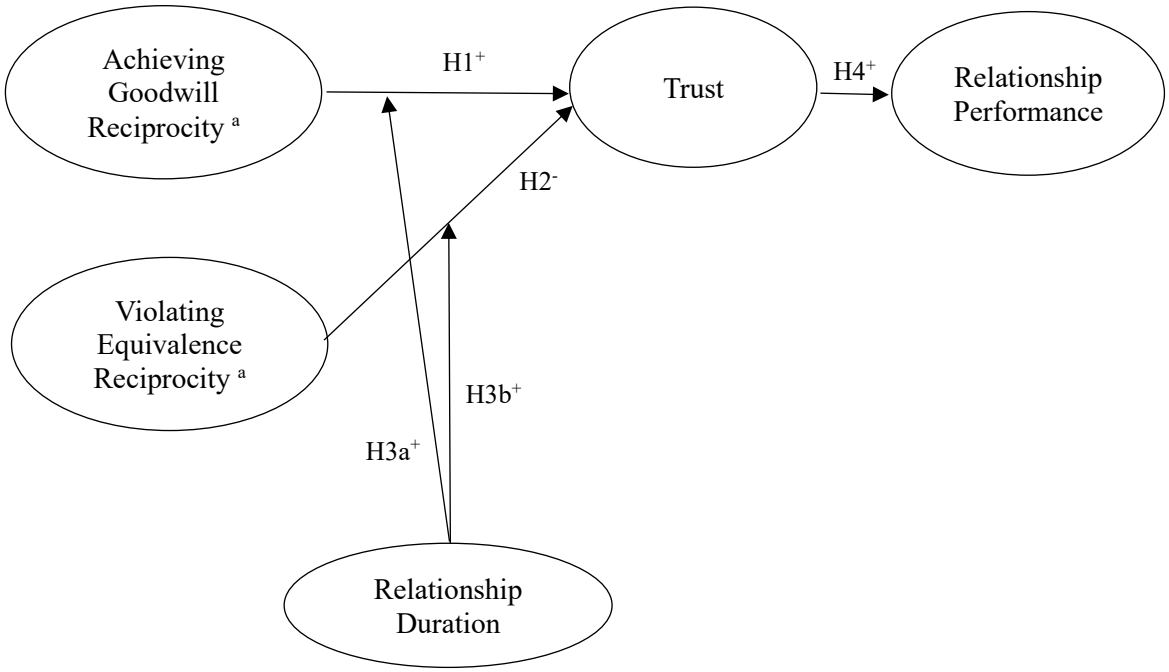
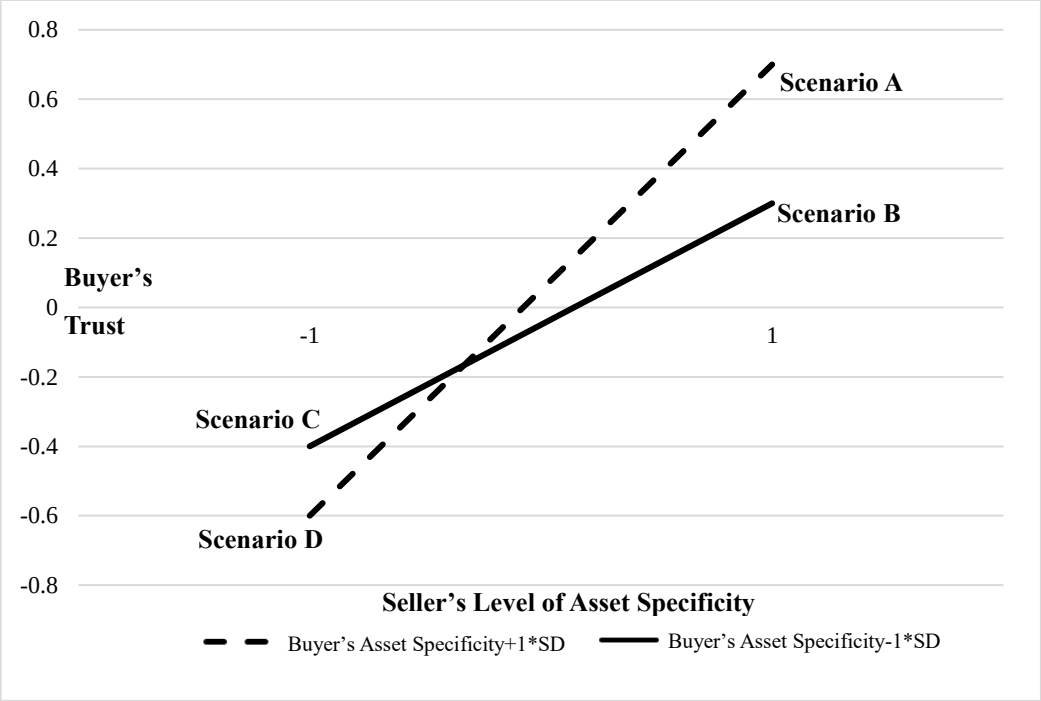
Figure 1. Research Framework



a: Achieving or violating the reciprocity norm within bilateral asset specificity; Control variables include buyer's asset specificity, seller's asset specificity, dependences, contact frequency, buyer's firm size, buyer's firm age, and psychic distance.

Figure 2. Interdependences between Buyer and Seller's Asset Specificity on Trust (Model 2 in Table 3)



All stats are standardized.

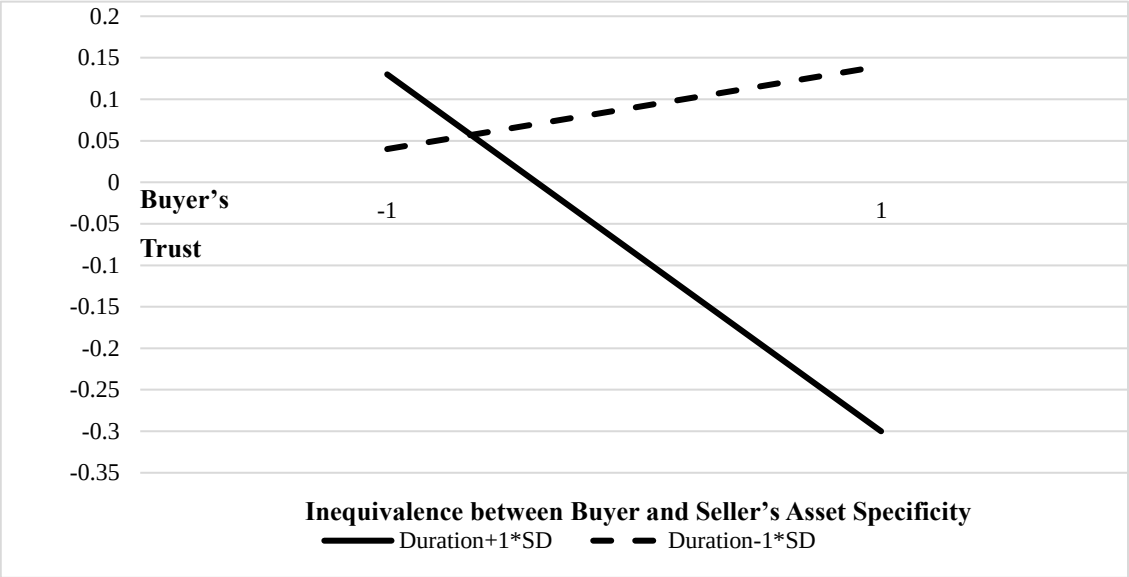
Scenario A: Buyers perceive equivalence reciprocity, where the buyer's trust level is highest.

Scenario B: Buyers are indebted by receiving excessive goodwill from the seller, where the buyer's trust level is 2nd highest.

Scenario C: Buyers perceive discrete transaction, where the buyer's trust level is 3rd highest.

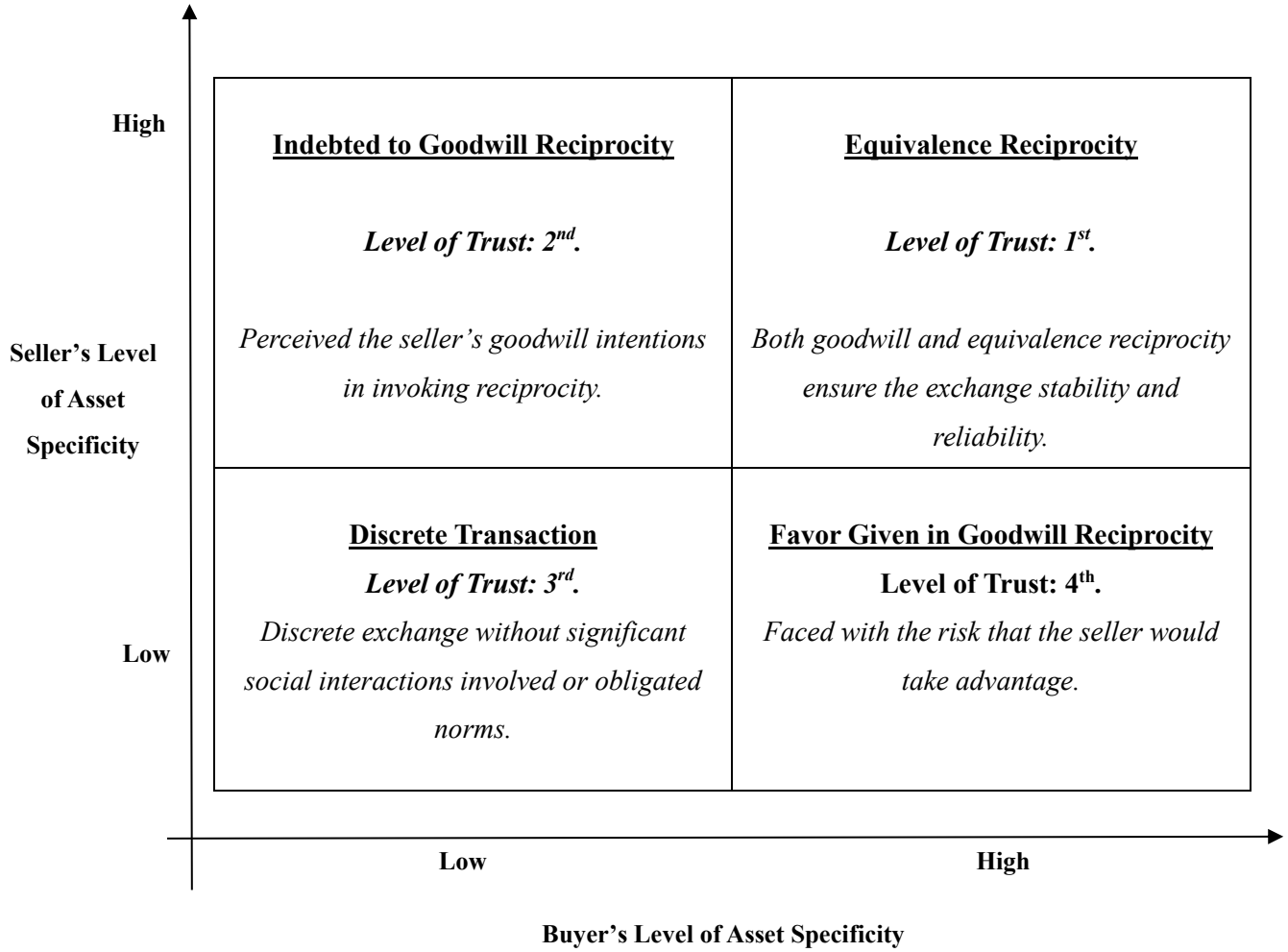
Scenario D: Buyers are insecure by giving excessive goodwill without reciprocal feedback, where the buyers' trust is the lowest.

Figure 3. Relationship Duration Moderates the Connections between Violating Equivalence Reciprocity and Trust (Results of Model 5 in Table 3)



All stats are standardized. Note: The dotted line denotes that at early relationship stage, inequivalence within bilateral asset specificity does not significantly influence trust. However, in relationships with longer durations (the solid line), inequivalence in bilateral asset specificity violates equivalence reciprocity and significantly undermines trust.

Figure 4. A Proposed Typology of Reciprocity within Bilateral Asset Specificity (Buyer's Perspective)



Descriptions for each quadrant:

Upper-right: Both equivalence and goodwill reciprocity are fulfilled, where the buyer's trust level is the highest (1st).

Upper-left: Buyers are indebted by receiving excessive goodwill, where the trust level is 2nd highest.

Bottom-left: Buyers perceive discrete transaction, where the trust level is 3rd highest.

Bottom-right: Buyers are insecure by giving excessive goodwill without reciprocal feedback, where the trust level is the lowest.

Table 1. Conceptualization and Measurement of Reciprocity Elements

Reciprocity Facets	Definition	Measurement	Explanations
Goodwill Reciprocity	Responding with goodwill to reciprocate the opponent's favors (Gouldner, 1960; Rabin, 1993).	Interaction-term between buyer and seller's asset specificity	Seller's asset specificity inputs reciprocate with the buyer's existed asset specificity to signify goodwill.
Equivalence Reciprocity	Equivalence in bilateral contributions devoted or output received (Gouldner, 1960; Hoppner & Griffith, 2011; Sahlins, 1974).	Absolute difference between buyer and seller's asset specificity	The misalignments between buyer and seller's asset specificity signify violations of equivalence.

Table 2. The Country Bases of Sampling Dyads

Regions	Buyers	Sellers
Africa	2	-
China	13	57
Europe	39	19
India	12	1
Indonesia	5	
Japan	10	13
Malaysia	1	-
Mongolia	1	-
Mid-East	17	1
North America	21	35
Oceania	6	-
Philippines	5	1
Singapore	2	3
South America	2	-
South Korea	4	5
Taiwan	60	66
Thailand	2	1

Asian buyers and sellers are reported at country-level.

All buyer-seller relationship samples are cross-border pairs.

Table 3 CFA Results and Reliability Tests for Reflective Measures

Items	Standardized Loadings	Construct CR	Construct AVE
Buyer's Asset Specificity 1	0.832**	0.9171	0.7351
Buyer's Asset Specificity 2	0.919**		
Buyer's Asset Specificity 3	0.882**		
Buyer's Asset Specificity 4	0.791**		
Seller's Asset Specificity 1	0.863**	0.9169	0.7341
Seller's Asset Specificity 2	0.888**		
Seller's Asset Specificity 3	0.868**		
Seller's Asset Specificity 4	0.806**		
Trust 1	0.759**	0.8854	0.6602
Trust 2	0.736**		
Trust 3	0.855**		
Trust 4	0.890**		
Relationship Performance 1	0.822**	0.8983	0.6885
Relationship Performance 2	0.820**		
Relationship Performance 3	0.863**		
Relationship Performance 4	0.813**		

** Significant at alpha = .01

CFA model goodness-of-fit statistics: CFI=0.97. NNFI=0.95, SRMR=0.058.

Table 4 Correlation Matrix and Discriminant Validity.

Constructs	1	2	3	4	5	6	7	8	9	10	11	12
1. Buyer's Asset Specificity	**0.857**											
2. Seller's Asset Specificity	0.657	**0.857**										
3. Trust	0.331	0.517	**0.813**									
4. Performance	0.495	0.644	0.675	**0.830**								
5. Achieving Goodwill Reciprocity [a]	-0.095	-0.009	0.144	0.052	**0.732**							
6. Violating Equivalence Reciprocity [b]	0.005	-0.355	-0.261	-0.230	0.032	**0.740**						
7. Psychic Distance [c]	0.003	0.168	-0.005	0.150	0.093	-0.044	-					
8. Duration [d]	0.084	0.057	-0.056	-0.05	0.141	-0.034	-0.103	-				
9. Firm Age [d]	-0.086	-0.092	-0.061	-0.167	-0.024	-0.047	-0.081	0.336	-			
10. Firm Size [d]	-0.020	-0.048	-0.020	0.011	-0.120	0.108	-0.116	0.113	0.106	-		
11. Power [d]	0.159	0.100	-0.048	-0.048	-0.018	0.023	-0.087	0.138	-0.157	-0.080	-	
12. Contact Frequency [d]	0.118	0.187	0.209	-0.075	-0.014	-0.128	-0.075	0.145	0.143	0.026	0.073	-

a: Operationalized by interaction-term between buyer and seller's asset specificity; b: Operationalized by absolute difference between buyer and seller's asset specificity; c: Formative construct; d: Constructs measured by single item;

Numbers on the diagonal are the square root of average value extracted (AVE).

Table 5. PLS Hypotheses Testing and Model Goodness-of-Fit

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Controlled Effect Estimates						
Buyer's Firm Age -> Performance	-0.135	-0.122*	-0.122*	-0.122*	-0.122*	-0.122*
Buyer's Firm Age -> Trust	-0.030	-0.034	-0.038	-.0.031	-0.020	-0.029
Buyer's Asset Specificity ->Performance	0.157*	0.156**	0.156**	0.156*	0.156*	0.156*
Buyer's Asset Specificity -> Trust	-0.006	0.048	-0.023	0.031	0.016	0.000
Power-> Performance	-0.142**	-0.090*	-0.090	-0.090	-0.090	-0.090
Power -> Trust	-0.110	-0.123*	-0.107*	-0.108	-0.089	-0.098
Duration -> Performance	-0.046	-0.009	-0.009	-0.009	-0.009	-0.008
Duration -> Trust	-0.094	-0.075	-0.049	-0.091	-0.088	-0.071
Contact Frequencies -> Performance	0.143**	0.087*	0.087*	0.086*	0.086*	0.086*
Contact Frequencies -> Trust	0.121*	0.097*	0.124*	0.124*	0.093	0.089
Psychic Distance->Performance	0.045	0.095	0.095	0.095	0.095	0.095
Psychic Distance->Trust	-0.104	-0.119	-0.096	-0.101	-0.111	-0.106
Seller's Asset Specificity ->Performance	0.517**	0.277**	0.277**	0.277**	0.277**	0.277**
Seller's Asset Specificity -> Trust	0.551**	0.510**	0.528**	0.474**	0.479**	0.482**
Buyer's Size -> Performance	0.046	0.052	0.052	0.052	0.052	0.052
Buyer's Size -> Trust	-0.015	0.005	-0.027	0.002	0.005	-0.016
Hypothesized Effect Estimates						
Trust -> Performance (H4)		0.451**	0.451**	0.451**	0.451**	0.451**
Achieving Goodwill Reciprocity [a] -> Trust (H1)		0.147**	0.124*			0.105*
Achieving Goodwill Reciprocity [a]* Duration -> Trust (H3a)			-0.003			0.001
Violating Equivalence Reciprocity [b] -> Trust (H2)				-0.084	-0.084	-0.076
Violating Equivalence Reciprocity [b]* Duration -> Trust (H3b)					-0.130**	-0.020**
PLS Model Goodness-of-Fit Statistics						
Adjusted R^2	0.462	0.602	0.602	0.602	0.619	0.619
SRMR	0.060	0.062	0.064	0.064	0.064	0.065

a: Operationalized by interaction-term between buyer and seller's asset specificity; b: Operationalized by absolute difference between buyer and seller's asset specificity; **: Significant at alpha = .01; *: Significant at alpha = .05.

Table 6. Summary of Hypotheses Testing

Hypotheses	Contents	Results
Hypothesis 1	Achieving goodwill reciprocity within bilateral asset specificity enhances trust.	Supported
Hypothesis 2.	Violating equivalence reciprocity within bilateral asset specificity harms trust.	Not Supported
Hypothesis 3a.	Achieving goodwill reciprocity within bilateral asset specificity more effectively enhances trust over the relationship duration.	Not Supported
Hypothesis 3b.	Violating equivalence reciprocity within bilateral asset specificity more severely harms trust over the relationship duration.	Supported
Hypothesis 4.	Trust increases relationship performance.	Supported

Table 7. CFA Marker: the CMV Check

Model	**Chi-Square**	**df**	**CFI**
CFA	356.39	142	0.96
Baseline	363.97	146	0.96
Method-Constrained	360.21	145	0.96
Method-Unconstrained	351.55	130	0.96
Chi-Square Comparison Results	**$\Delta \chi^2$**	**Δ df**	**Chi-Square Critical Value**
Baseline vs Method-C	3.76	1	3.841
Method-C vs Method-U	8.66	15	24.996

Note: the insignificance of $\Delta \chi^2$ statistics indicate our results is not biased by congeneric nor non-congeneric method variances.

Appendix: Measurement Scales

Construct	Measurement
Buyer's Firm Age	How long has your firm been in business? ___years
Buyer's Firm Size	How many full-time employees does your company have? ____employees (employee No.)
Dependence	What percentage of the total purchasing volume in this product category is accounted for by this supplier (0%.–100%)? ___%.
Relationship Duration	How long have your company been doing business with this supplier? _____years
Contact Frequencies	Please indicate the frequency your firm did business with this supplier? (7 points very infrequently… very frequently scale)
Seller's Asset Specificity	(Adapted from Katsikeas et al. (2009), Jan B Heide and John (1990), and Rokkan et al. (2003)). 1. This supplier has invested a great deal in our business. 2. This supplier has made extensive internal adjustments in order to deal effectively with our firm 3. This supplier has made substantial commitments of time and money in training their people to deal with our firm. 4. This supplier has gone out of its way to link us with their product line or logistic system. (7 points strongly disagree… strongly agree scale)
Buyer's Asset Specificity	(Adapted from Katsikeas et al. (2009), Jan B Heide and John (1990), and Rokkan et al. (2003)). 1. We have invested a great deal in this supplier's business. 2. We have made extensive internal adjustments in order to deal effectively with this supplier. 3. Our firm has made substantial commitments of time and money in training our people to deal with this supplier. 4. Our firm has gone out of its way to link this supplier with our product line or logistic system. (7 points strongly disagree… strongly agree scale)
Psychic Distance	(Formative scale adapted from Bello and Briggs (2009); Obadia, Bello, and Gilliland (2015)) Please evaluate the degree of dissimilarity in this supplier's operating country and environment. 1. Culture (traditions, values, language) 2. Accepted business practices 3. Economic environment 4. Legal system 5. Communication infrastructure (7 points very similar… very different scale)
Trust	(Adapted from Doney and Cannon (1997)) 1. This supplier keeps promises it makes to our firm. 2. We believe the information that this vendor provides us. 3. When making important decisions, this supplier considers our welfare as well as its own. 4. We trust this vendor keeps our best interests in mind. (7 points strongly disagree… strongly agree scale)
Relationship Performance	(Adapted from Selnes and Sallis (2003)) 1. Flexibility to handle unforeseen fluctuations in demand has been improved because of the relationship. 2. The relationship with this supplier company has resulted in better product quality. 3. The relationship has a positive effect on our ability to develop successful new products. 4. The relationship helps us to detect changes in end-user needs and preferences before our competitors do. (7 points strongly disagree… strongly agree scale)

Relative Importance of Goals in Attaining Trade Show	(CFA Marker adapted from Godar and O'Connor (2001)) Please evaluate the importance of following objectives for your attendance to this trade show… 1. Collect information about new products/developments in the industry. 2. Collect information about competitors' prices, products, and strategies. 3. Collect information in general. (7 points strongly disagree… strongly agree scale)