

The Origins of Trust Asymmetry in International Relationships:

An Institutional View

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Abstract

Trust is key to relationship marketing. Although trust is bilateral, studies on the dispersion of trust among exchange parties remain limited, leaving the antecedents and outcomes of trust asymmetry largely underexplored. To fill the gaps, this study empirically examines the effects of different types of trust asymmetry on exchange performance and then investigates the institutional origins of trust asymmetry in international interfirm exchanges. Drawing on a survey of 134 international buyer–supplier relationships in China, the study finds that both calculative trust asymmetry and relational trust asymmetry have negative influences on exchange performance. The study also finds that formal institutional distance constrains calculative trust asymmetry, and informal institutional distance increases relational trust asymmetry. Moreover, prior interactions and expectations of continuity significantly moderate the effects of formal and informal institutional distance. This study advances trust studies in cross-border settings.

Keywords

trust asymmetry, formal institutional distance, informal institutional distance, international buyer–supplier relationships

Trust is central to interorganizational relationship marketing (Aulakh, Kotabe, and Sahay 1996; Katsikeas, Skarmeeas, and Bello 2009; Leonidou et al. 2014). When trust exists, exchange parties are willing to cooperate, share information, and make adaptations (Griffith, Myers, and Harvey 2006; Gulati and Nickerson 2008). In an international marketing relationship characterized by high unpredictability and complexity, cross-border players usually face more challenges in effectively dealing with their exchange partners and achieving satisfactory outcomes, making the role of trust even more pivotal (Katsikeas, Skarmeeas, and Bello 2009; Leonidou et al. 2014). For instance, Robson, Katsikeas, and Bello (2008) show that in cross-border relationships, trust is critical for increasing transaction value and reducing transaction costs, which in turn result in better performance. Katsikeas, Skarmeeas, and Bello (2009) also reveal that importer trust enhances performance in international exchange relationships by motivating participants to contribute resources and share sensitive information. Although many studies have validated the importance of trust in an international marketing context, several aspects of this issue remain unexplored.

First, the extant studies on interorganizational trust mainly investigate the topic from a single perspective (Aulakh, Kotabe, and Sahay 1996; Poppo and Zenger 2002; Zaheer, McEvily, and Perrone 1998), and few have studied trust dispersion (McEvily, Zaheer, and Kamel 2017). Trust asymmetry, which refers to the difference in trust between exchange partners, adds significant uncertainty to cross-border exchanges and generates uncertain performance implications (Graebner 2009; Zaheer and Zaheer 2006). For example, despite a 20-year partnership, Ford Motor and China's Changan Automobile Co. Ltd still have high trust asymmetry, which not only hinders team cooperation but also generates lackluster global performance. And not until recently did Ford Motor commit itself to the partnership with Changan by localizing its management team and offering more tested talents to product R&D, manufacturing, and marketing areas (Li 2018). In studying the failures of interorganizational relationships, Oliveira and Lumineau (2019) suggest that trust may backfire, and the extant literature mainly focuses on the inverted curvilinear effect of trust without a multiparty consideration of the effects of trust. By adopting a dyadic view to examine trust asymmetry, our study attempts to enrich the understanding of the dark side of trust. Furthermore, distinct types of trust exist. Poppo, Zhou, and Li (2016) argue that calculative trust and relational trust coexist and characterize most

business relationships. By examining alternative forms of trust asymmetry, our study deepens our understanding of the performance implications of trust.

Second, despite abundant attention on the origins of trust, few studies explicitly consider how institutional factors influence trust asymmetry (for a review, see Table 1). Oliveira and Lumineau (2019) posit that a topic less studied in interorganizational relationships is how country-related antecedents influence interaction outcomes. For international exchange relationships, the distinct institutional backgrounds of interfirm partners may shape their attitudes and behaviors toward economic transactions and thus drive the level of trust asymmetry. However, related studies mainly focus on the informal aspects of institutions (i.e., culture) and argue that cultural distance leads to a lower level of trust (Homburg et al. 2009; Leonidou et al. 2014). Whereas informal institutions influence relational trust by emphasizing business participants' internal interpretations and knowledge obtained from repeated social interactions (Kostova and Roth 2002; Yang, Su, and Fam 2012), formal institutions mainly influence calculative trust by providing a basis for exchange parties to calculate the benefits and costs of their actions (Cai, Jun, and Yang 2010). Given this dissimilarity, a collective consideration of both formal and informal institutional distance to understand different types of trust asymmetry is critical but lacking in the current literature.

Third, past studies on the origins of trust imply that historical interactions and future expectations matter (Poppo and Zenger 2002; Poppo, Zhou, and Ryu 2008). In terms of relational trust, prior interactions breed familiarity and mutual understanding, which in turn promote trust (Gulati 1995). According to game theory, expectations of continuity instill a forward-looking calculus of costs and benefits that drives trust perception (Parkhe 1993; Poppo, Zhou, and Ryu 2008). Although institutional distance demonstrates a macro-level institutional force exerted by the external environment, the exchange parties themselves intentionally determine the ways in which they assess their relationships and shape their attitudes and actions. When parties hold dissimilar perceptions regarding the transaction, they may react differently in dealing with institutional challenges when forming their trust perceptions. However, few studies have developed an interdependence perspective in studying trust asymmetry. Thus, researchers have not resolved how the factors involved with the institutional view, the relational view, and game theory jointly account for the emergence of trust asymmetry.

Accordingly, the following three important questions remain unanswered: (1) how do calculative/relational trust asymmetry (TA) affect exchange performance, (2) what are the effects of institutional distances on the formation of calculative/relational trust asymmetry, and (3) how do past perceptions and future expectations held by the exchange parties moderate the relationships between institutional distance and calculative/relational trust asymmetry? To answer these research questions, we first explore the different performance logics associated with calculative and relational trust asymmetry. Second, we show that different forms of institutional distance (i.e., formal and informal institutional distance) have divergent effects on the formation of calculative and relational trust asymmetry. Third, we examine the moderating roles of prior interactions and expectations of continuity to examine when institutional distance matters more under various conditions.

By conducting an empirical study with 134 international buyer–supplier dyads, this article contributes to the extant international marketing studies in several ways. First, by empirically examining the roles of trust asymmetry in reducing exchange performance in international buyer–supplier relationships, our study enriches the understanding of performance implications and the dark side of trust (Korsgaard, Brower, and Lester 2015; Scheer 2012). Second, by integrating an institutional view in understanding how formal and informal institutional distance influence calculative and relational trust asymmetry in international marketing relationships, we enhance the understanding of the institutional origins of trust asymmetry in an international context with empirical evidence (Zaheer and Kamal 2011; Zaheer and Zaheer 2006). Third, by incorporating prior interactions and expectations of continuity as moderators, we apply an interdependence perspective to understanding the influences of institutional distance on trust asymmetry in international markets. Figure 1 displays our conceptual framework.

Insert Table 1 and Figure 1 about here

Theory

Calculative Versus Relational Trust

Trust is the confidence that a partner will act in a reliable, predictable, and fair manner (Zaheer, McEvily, and Perrone 1998). With the belief that their partners will not pursue self-interest, business participants show a “willingness to be vulnerable” (Mayer, Davis, and Schoorman 1995, p. 712). Trust is not unitary but multidimensional. As a multifaceted concept, trust has distinct implications with different bases (Dyer and Chu 2000; Rousseau et al. 1998). The extant

research mainly defines interorganizational trust from the following two perspectives: economic and social (Gulati 1995; Rousseau et al. 1998; Williamson 1993). The economic perspective (e.g., transaction cost economics, game theory) emphasizes calculative trust, in which the trustor uses rational reasoning to recognize that the calculated benefits of cooperative behaviors are greater than those of opportunism (Rousseau et al. 1998; Williamson 1993). As a rational choice based on calculated gains and losses in economic exchanges, calculative trust requires economic incentives, such as credible commitments, to make deliberate calculations (Williamson 1993). It relies on a forward-looking decision rule, in which business participants must envision the future situation and make decisions with an assumption of self-interest calculations (Rousseau et al. 1998). During the conscious process, calculative trust forms rational expectations and motivates the exchange parties' behaviors to maximize their economic interests within the exchange (Poppo, Zhou, and Li 2016; Rousseau et al. 1998).

The social perspective (e.g., social exchange theory), however, challenges this rational basis of trust and instead posits that trust arises from social interactions (Blau 1964; Morgan and Hunt 1994; Uzzi 1997). Relational trust refers to the trusting party's positive beliefs about the shared understanding and common identity regarding the specific relationship (Rousseau et al. 1998). In contrast to rational reasoning, relational trust is more comparable to relational beliefs, which generally arise from intrinsic values, social interactions, and understanding of goodwill (Schilke and Cook 2015; Uzzi 1997). Distinct from the forward-looking logic of calculative trust, relational trust relies on repeated interactions to guide the parties' decisions and transactional actions. With an emphasis on the noneconomic aspects of exchange relationships, business participants with high relational trust would follow the norm of mutuality to behave and consider the relationship as a whole (Rousseau et al. 1998; Schilke and Cook 2015).

As different facets of trust, calculative and relational trust coexist and characterize most business relationships (Poppo, Zhou, and Li 2016). Trust studies can lead to misattributions if they fail to account for the various types of trust (Poppo, Zhou, and Li 2016; Schilke and Cook 2015).

Therefore, we distinguish between calculative and relational trust and explore their distinct bases and decision logics in studying the origins, boundary conditions, and performance outcomes of trust asymmetry.

Trust Asymmetry across Borders

Although trust is multidimensional, it is also important to note that trust is bidirectional, which involves both a trustor (the trusting party) and a trustee (the trusted party) (Korsgaard, Brower, and Lester 2015). When examining trust asymmetry, we take both parties' perceptions into consideration to capture the bilateral nature of trust. To achieve relational benefits, it usually requires the mutual consent of dyadic parties to make adaptations and provide information, and a shared value of trust between exchange partners is, therefore, essential (Heide and John 1992). However, in practice, the perceptions of the parties often vary across the dyad, especially in an international context, making trust asymmetry in such contexts more prevalent (Zaheer and Zaheer 2006).

Zucker (1986) highlights the importance of institutions in determining trust. As "the rules of the game," institutions define what is institutionally appropriate for social actors and shape the firms' perceptions through formal and informal forces (DiMaggio and Powell 1983; Scott 1995). In international exchanges, cross-border partners' expectations and perceptions are likely to vary across the dyad given their different institutional backgrounds (Zucker 1986). Institutional distance, which is defined as the differences in the institutional environments of the exchange parties, can be characterized into two types: formal institutional distance and informal institutional distance (Xu and Shenkar 2002; Yang, Su, and Fam 2012). For formal institutional distance, we examine the differences in the legal and regulatory institutions of the home and host countries (Kaufmann, Kraay, and Mastruzzi 2009). For informal institutional distance, we focus on the national culture differences in a cross-border context (Salomon and Wu 2012). By doing so, we attempt to offer a clear picture of how institutional distance influences different types of trust asymmetry in international relationships.

According to Scott's schema (Scott 1995), we suggest that formal institutions mainly apply to calculative trust, whereas informal institutions mainly explain relational trust given their different emphases and implications. Formal institutions mainly refer to the regulatory and political bodies of a nation, such as regulatory policies, constitutions, and property rights (Scott 1995). Using legal deterrence, formal institutions sanction deviant behaviors according to written regulations and laws, thereby shaping business participants' recognitions about rewards or punishments for specific behaviors (Scott 1995). In addition, since formal institutions are generally characterized as objective and formalized frameworks, it is easy for business participants to obtain explicit information (Gaur and Lu 2007; Scott 1995), which provides a

basis for exchange parties to make economic calculations of their actions, thereby applying to the formation of calculative trust (Cai, Jun, and Yang 2010).

Informal institutions include social beliefs, values, behavioral norms, and conventions (Scott 1995). Informal institutions can be manifested in terms of individualism versus collectivism, masculinity versus femininity, power distance, uncertainty avoidance, and long-term orientation (Hofstede 2001). When operating in China, *guanxi* is a key informal institution that shapes exchange parties' interpretation and behaviors. Literally, *guanxi* means social connections and relationships (Xin and Pearce 1996). Because Chinese society is heavily structured according to social relations, *guanxi* affects not only personal interactions but also business practices (Peng and Luo 2000). *Guanxi* influences interfirm exchanges through the operating rules of reciprocal obligation and face saving (i.e., the idea of maintaining one's prestige; Park and Luo 2001). Considering that *guanxi* mainly originated from a collective mindset, which correlates with the collectivism–individualism dimension of the tradition distinction of informal institutions, we focus on a more generalized form of informal institutions (i.e., national culture) to develop our hypotheses (Hofstede 2001; Salomon and Wu 2012). Informal institutions emphasize the knowledge and perceptions developed from repeated social interactions, which constitute the basis of relational trust (Kostova and Roth 2002; Yang, Su, and Fam 2012). In this regard, the logics underpinning informal institutions are more in line with the formation of relational trust.

Hypotheses

Effects of Trust Asymmetry

We first posit that both calculative and relational TA show negative influences on exchange performance. First, high calculative TA implies that the exchange parties attach different importance to the economic reasoning of gains and losses. Thus, when allocating jobs to fulfill performance goals, high calculative TA would motivate exchange parties to understand their roles and obligations in different ways (Rousseau et al. 1998). Whereas the exchange party who emphasizes a calculation of gains and losses in building trust would pay more attention to actions that are related to high rewards and low punishments (Poppo, Zhou, and Li 2016), the other would understand their roles with less calculation. This inconsistency would generate conflicts when interpreting each other's expectations, leading to additional transaction costs and, thus, lower performance satisfaction.

Second, according to economic evaluations, calculative trust relies on a forward-looking decision rule to guide how the exchange parties would work (Bromiley and Harris 2006; Poppo, Zhou, and Li 2016). In this regard, when interfirm partners have asymmetric levels of calculative trust, they show inconsistent reliance on this forward-looking logic. We argue that such an inconsistency indicates divergent time horizon expectations regarding the specific exchange relationship and drives different behavioral patterns of international partners. To be specific, the international partner with relatively lower calculative trust tends to adopt a short-term perspective about the transaction relationship and pursue interests in the short run (Bromiley and Harris 2006), whereas its partner is more likely to show less concern about short-term benefits and be long-term oriented. The misalignment of motivations between international exchange parties leads to inconsistent and even contradictory transactional behaviors, thus decreasing overall satisfaction regarding the exchange.

H_{1a}: Calculative trust asymmetry is negatively associated with exchange performance.

We further argue that relational TA decreases exchange performance for two reasons. First, relational TA indicates that the exchange parties rely differently on past interactions to interpret the partner's intentions and obligations (Gulati 1995). In this situation, interfirm partners are likely to have divergent understandings about the roles and responsibilities of each of the parties. To be specific, the partner who has higher relational trust tends to show a higher learning capability in understanding roles and more inertia in linking their expectations to prior interactions (Gulati 1995), whereas its partner relies less on the past to consider each other's roles and obligations. This generates misunderstandings between transaction parties and, thus, increases conflicts in the international exchange relationship, resulting in lower exchange performance.

Second, exchange parties with relational TA tend to place inconsistent emphases on mutuality when carrying out roles and jobs. Such divergence causes interfirm partners to behave in very different ways. Specifically, the party who attaches more importance to mutuality is more likely to care about its partner's welfare and act beneficially because it is in its partner's interest (Lewicki and Bunker 1996), whereas its partner shows less care regarding the other's benefits and has a higher tendency to pursue self-interest. Such a misalignment fails to support business partners to work well together and proceed smoothly to achieve joint goals, thereby increasing

transaction costs and curtailing exchange performance. Thus, we propose the following hypothesis:

H_{1b}: Relational trust asymmetry is negatively associated with exchange performance.

Institutional Distance and Trust Asymmetry

We argue that formal institutional distance decreases calculative trust asymmetry. First, high formal institutional distance implies high dissimilarity between two nations' regulations, rules, and sanctions that influence business practices (Salomon and Wu 2012; Scott 1995).

International parties become more concerned about the aspects of the foreign legal rules and practices that are unfamiliar to them to avoid any misbehaviors that would invite legal sanctions (Yang, Su, and Fam 2012). Due to the perceived high risk within the relationship, both sides tend to be more cautious and sensitive about their investments and rewards, which in turn fortifies their calculative mindsets. In this regard, both sides continually assess the gains and losses for cooperation and noncompliance, attempting to use this as an internal remedy to curtail external hazards. During the process, exchange partners align their calculative trust perceptions and thereby lower their calculative TA.

Second, given that formal institutions contain rules and practices that are objective and explicit (Scott 1995), international business participants can easily recognize the specific differences between the two nations. For instance, formal institutions constrain business participants' behaviors through explicit rules and observable sanctions such that international exchange parties can still obtain specific information despite distance (Gaur and Lu 2007; Scott 1995). The observable nature of those codes and practices enables international interfirm partners to make comparable assessments of the costs and benefits of compliance and noncompliance, thus allowing them to better build similar forward-looking decision rules between them. As a result, the exchange parties are more likely to develop similar levels of calculative trust. Thus, we propose the following hypothesis:

H_{2a}: Formal institutional distance is negatively associated with calculative trust asymmetry.

We argue that informal institutional distance increases relational TA for two reasons. First, informal institutional distance reflects differences in national cultures in terms of the attitudes, beliefs, values, and norms of business participants (Yang, Su, and Fam 2012). For example, whereas Western relationships usually emphasize a fair and even relationship, *guanxi* does not demand an equal level of reciprocity but may request a sacrifice of self-interest in the

anticipation of future favors (Gu, Hung, and Tse 2008). This divergence adds complexity and difficulty to interactions within the international dyads and increases the perceived risk for international exchanges (Leonidou et al. 2014). Facing such risk, it is likely that international interfirm partners with dissimilar cultural backgrounds will have different views regarding mutuality (Eden and Miller 2004). Specifically, one may show more goodwill and care regarding mutuality, whereas the other may be more likely to show willingness to pursue self-interest. Therefore, we argue that international exchange parties are more likely to develop different levels of relational trust toward each other because of such dissimilar behavior patterns, thus resulting in higher relational TA.

Second, in the forms of values, beliefs, cognitions, and norms of conduct, informal institutions are imprinted in participants' mindsets and are characterized as implicit and tacit (Scott 1995; Yang, Su, and Fam 2012). Informal institutions are, therefore, difficult for outsiders to understand and interpret (Johnston et al. 2012; Leonidou et al. 2014). Reciprocal obligation and face saving, which are two operating norms of *guanxi*, can be difficult to understand even in other collectivist cultures such as Russia's and Japan's (Guthrie 1998). Given the implicit nature of informal institutions, exchange parties tend to organize their perceptions and develop norms with reference to their cultural backgrounds (Scott 1995). Because informal backgrounds influence the way that firms understand and interpret situations (Samaha, Beck, and Palmatier 2014), exchange parties with high informal institutional distance also tend to interpret previous interactions within the specific exchange through different perspectives, allowing more opportunity for relational TA to arise. Thus, we propose the following hypothesis:

H_{2b}: Informal institutional distance is positively associated with relational trust asymmetry.

Moderating Effects of Prior Interactions and Expectations of Continuity

We also explore how prior interactions and expectations of continuity moderate the effects of formal and informal institutional distance. Prior interactions are essential in interorganizational relationships (Poppo, Zhou, and Ryu 2008; Rindfleisch and Heide 1997). With a longer transacting history and more frequent interactions, interfirm partners learn about each other and gain familiarity (Lee 2013). Expectations of continuity capture business parties' prospects for their future exchange relationships (Lusch and Brown 1996). When exchange parties anticipate continued relationships, they generally attach more importance to the relationships (Poppo, Zhou, and Ryu 2008). As key characteristics capturing the past and the future of interfirm

relationships, both factors play roles in the trust-building process that cannot be ignored (Ganesan 1994; Lusch and Brown 1996; Poppo, Zhou, and Ryu 2008). Whereas institutional distance serves as an external force that shapes the parties' behaviors, prior interactions and expectations of continuity serve as two internal forces that jointly influence the participants' perceptions and behaviors in the formation of trust asymmetry.

We contend that a high prior interaction level intensifies the effect of formal institutional distance on constraining calculative TA. First, with high levels of repeated interactions, exchange parties accumulate knowledge and specific information about each other (Kwon, Halebian, and Hagedoorn 2016). Such prior learning enables international parties to develop a better understanding of their partners' expectations and decision rules. Whereas high formal institutional distance motivates participants to adopt more calculative decision rules and behavior patterns, prior interactions facilitate participants' calculations by offering unified and precise information (Gulati 1995; Poppo, Zhou, and Ryu 2008) and thus provide a common ground for exchange parties to better align their assessments of gains and losses, further lowering calculative TA. Conversely, when levels of prior interaction are low, international parties cannot predict their potential gains and losses on the basis of historical interactions. Even though great formal institutional distance fortifies their calculative perspectives, the lack of sufficient historical information prohibits their ability to form a consistent level of calculative trust toward each other.

Second, prior interactions facilitate the establishment of a standardized approach (Poppo, Zhou, and Ryu 2008; Reuer and Ariño 2007). With collaborative histories, both parties gain a better mutual understanding of how the transaction can be organized to achieve greater benefits and how the routinized process based on prior history can reduce costs (Reuer and Ariño 2007).

Whereas formal institutional distance exerts influence through dissimilar codes and practices and motivates firms to adopt more calculative thinking, a standardized approach developed on the basis of prior interactions would enable participants to assess the costs and benefits in the same way, thereby strengthening the effect on constraining the potential calculative TA. In contrast, a low prior interaction level fails to support exchange parties with different formal institutions to effectively build a standardized process, thereby increasing the possibility of a divergence in calculative trust. Thus, we propose the following hypothesis:

H_{3a}: The negative relationship between formal institutional distance and calculative trust asymmetry is stronger when the prior interaction level is high than when it is low.

We further posit that high levels of prior interaction weaken the link between informal institutional distance and relational TA. As international parties repeatedly interact, they tend to rely more on prior experience than cultural stereotypes to form perceptions about their partners (Kwon, Halebian, and Hagedoorn 2016). Whereas informal institutional distance would enlarge relational TA given the dissimilar cultural imprints of international partners, prior interactions build a collective experience that narrows the perception gap between the two. Through repeated interactions, exchange parties gain specific knowledge about each other and develop a greater understanding of their partners' idiosyncrasies (Reuer and Ariño 2007). Buckley, Clegg, and Tan (2006) echo that active guanxi building in China facilitates the development of a common understanding of the aspects of ongoing interactions. This provides a relational basis for exchange parties to bridge their original divergence in cultural values and align their ways of interpretation with mutual experience during the interaction process. Progressing from distinct cultural backgrounds to shared experiences helps to mitigate the initial effect of divergent informal institutions. Conversely, when prior interaction is low, with limited shared experiences, international exchange parties would rely more on their dissimilar cultural backgrounds to form perceptions and trust, thus allowing a higher degree of relational TA to emerge from informal institutional distance. Therefore, we propose the following hypothesis:

H_{3b}: The positive relationship between informal institutional distance and relational trust asymmetry is weaker when the prior interaction level is high than when it is low.

We also propose that a high expectation of continuity level amplifies the influence of formal institutional distance in reducing calculative TA. First, in the presence of a high expectation of continuity, exchange parties recognize that it is important to maintain a long-term relationship with their partners (Ganesan 1994). Under this condition, international interfirm partners tend to exert more effort to make plans and show more concern about potential risks arising from formal institutional distance (Yang, Su, and Fam 2012). For instance, they need to pay more attention to the possibility of a government transition occurring when requiring government support to deal with sudden issues. As a result, when the expectation of continuity level is high, exchange parties with distant formal institutions are more likely to show similar sensitivity and make coordinated assessments to constrain external risks, leading to a lower level of calculative TA. By contrast,

when expectation of continuity is low, it is less possible that international interfirm partners will show comparable levels of sensitivity in response to perceived risks.

Second, when the expectation of continuity level is high, the transaction partners are more willing to regularly share useful and confidential information with each other (Dyer and Singh 1998; Poppo, Zhou, and Ryu 2008). The provision of continuous and unified knowledge to formally distant exchange parties facilitates their calculating efforts to clearly specify their responsibilities and rights to deal with the divergence in explicit formal institutions (Gaur and Lu 2007), thereby enabling them to make more aligned evaluations about benefits and costs, resulting in an even lower degree of calculative TA. In contrast, when the expectation of continuity is low, exchange parties who view their relationships as short-lived tend to withhold specific information. This fails to help international interfirm partners with formal institutional distance work well together to make consistent assessments of gains and losses, thereby weakening the effectiveness of efforts to constrain calculative TA.

H_{4a}: The negative relationship between formal institutional distance and calculative trust asymmetry is stronger when the expectation of continuity level is high than when it is low.

We further hypothesize that a high expectation of continuity mitigates the influence of informal institutional distance on relational TA. When the expectation of continuity is high, both exchange parties show more willingness to signal goodwill through actively sharing information and making commitments within the relationship (Dyer and Singh 1998; Parkhe 1993). While dissimilar cultural backgrounds increase relational TA through the occurrence of divergent understandings and interpretations, high expectations about the relationship continuity align the perceptions of cross-border exchange dyads and encourage mutual engagement (Poppo, Zhou, and Ryu 2008). Such joint efforts weaken the role of divergent informal backgrounds in shaping exchange parties' perceptions and trust, thereby mitigating the effect of informal institutional distance on relational TA. In contrast, under the condition of a low expectation of continuity, the implicit character of informal institutions can still be a concern for cross-border transaction parties with different informal backgrounds, allowing relational TA to emerge. Therefore, we propose the following hypothesis:

H_{4b}: The positive relationship between informal institutional distance and relational trust asymmetry is weaker when the expectation of continuity level is high than when it is low.

Method

Sampling and Data Collection

For the empirical research setting, we focused on international buyer–supplier relationships within various manufacturing industries in China. China engages heavily in international business. In 2017, the amount of international trade of goods and services with China was \$4.63 trillion USD, which accounts for 10.16% of all world trade (World Bank 2017). Despite this achievement, China also faces increasing challenges to effectively manage its cross-border exchange relationships due to the complexity of transition economies and the recent global rise in protectionism. Moreover, China is characterized by an underdeveloped legal framework and a traditional culture (Armstrong and Yee 2001). Its distinct institutional environment not only places an emphasis on trust for relationship management but also underlines the necessity for firms to better understand the role of institutional distance when dealing with cross-border players (Armstrong and Yee 2001). All these aspects make China a suitable context for our study.

We collected data at both the interorganizational level and institutional level. For the interorganizational-level data, we approached both buyers and suppliers to retrieve dyadic data. By randomly selecting firms using a list from the National Bureau of Statistics of China, we identified an initial sample of 1,200 manufacturing firms located in more developed areas in China (Beijing, Shanghai, and Guangdong) and in the surrounding less developed areas, such as Hebei, Anhui, and Jiangxi. These firms operated within the four-digit Chinese Industrial Classification codes 1311–4290, covering industry sectors such as medicine, electronics, telecommunication, mechanics, automobiles, chemicals, apparel, food, textiles, and furniture. As such, this sample provides significant variations in China’s institutional environments.

We conducted a questionnaire survey to collect the interorganizational data. Drawing on a thorough review of the related literature and in-depth discussions with experienced researchers in the area, we developed an initial version of the questionnaire in English. Two independent translators then translated it into Chinese (i.e., Chinese Mandarin). We then conducted back-translation and compared the different versions to ensure conceptual equivalence and accurate calibration. To verify the validity and clarity of our questionnaire content, we invited 20 senior managers with practical experience to pretest the survey. The respondents not only answered the survey questions but also provided suggestions about the questionnaire content. With their feedback, we made minor changes to refine the questionnaire.

To guarantee survey quality, we ensured that our interviewers were well-trained before sending them to conduct onsite interviews (Hoskisson et al. 2000; Ju, Jin, and Zhou 2018). Before they gave the survey, the interviewers explained the objectives and importance of the study to participants and offered to provide a report with the findings and conclusions to encourage their participation. For the main data collection, we contacted senior managers from matched buyers and suppliers to gather dyadic data. We first contacted the senior purchasing managers who are mainly and directly responsible for dealing with major suppliers, as they are the key respondents. We asked them to identify a major supplier and then answer the distributed survey questions referring to the specific relationship with the supplier. With their responses and information, we approached the corresponding supplier managers and collected matched assessments regarding the specific relationship with the buyer.

After excluding 17 responses with missing values on the key variables of interest, we obtained a sample of 433 matched buyer–supplier relationships, yielding a response rate of 36.08%. Of the 433 dyads, there were 134 international buyer–supplier relationships, which constitute the final sample for this study. The sample size is comparable to prior international marketing studies (Ju, Jin, and Zhou 2018). To avoid potential nonresponse bias, we adopted t-tests to compare the samples of respondents and nonrespondents in terms of firm size ($t = .68, p = .50$) and firm age ($t = .90, p = .38$) (Lambert and Harrington 1990). According to the results, there was no statistically significant difference between the groups, indicating limited risk of nonresponse bias for this study.

Among the final sample, 74 of the dyads were local buyer–foreign supplier relationships and 60 were foreign buyer–local supplier relationships. Appendix A shows the details of the sampling characteristics. On average, as senior managers, the participants had 7.52 years of experience within the firm and 12.89 years within the industry. Moreover, we included a qualification question to measure the respondents' familiarity with the survey content (Cannon and Perreault 1999), and the average score was 5.40 (seven-point scale). These statistics offered support to the assertion that our informants were knowledgeable about our research questions and qualified to offer reliable assessments about their ongoing exchange relationships, thereby enhancing the validity of our study (John and Reve 1982).

The final sample covered 19 economies, including mainland China, the United States, the U.K., France, Japan, Singapore, Australia, Germany, Denmark, India, South Korea, the Netherlands,

Luxembourg, Norway, Philippines, Sweden, Switzerland, Hong Kong, and Taiwan. On the basis of this sample, we collected corresponding institutional-level data. To evaluate the lagged effect of institutions, we obtained data regarding the formal institutions and informal institutions one year before the survey data was collected. For the effect of trust asymmetry on exchange performance, although we considered a time-lagged data collection, it was difficult to collect adequate samples given the dyadic relationship context of our research design. Because the major focus of our study is institutional origins of trust asymmetry, we ultimately decided to save the lagged effect of trust asymmetry as an empirical challenge for future research.

Measures

Appendix B shows the measurement details of the multi-item constructs from the survey. To examine calculative trust, we adapted three items from Lewicki and Bunker (1996) and Rousseau et al. (1998) to capture the degree of the participants' perception of calculative confidence regarding the relationship. For relational trust, we followed Lewicki and Bunker (1996) to adopt a three-item scale to assess the extent of the exchange parties' relational beliefs about the business relationship in terms of shared understanding and common identity. We then calculated the absolute value of the buyer calculative/relational trust minus the supplier calculative/relational trust within the relationship to examine calculative TA and relational TA. For exchange performance, we relied on a four-item scale adapted from Bercovitz, Jap, and Nickerson (2006) to assess relationship performance. We computed the average value of the buyer and supplier evaluations to indicate the exchange performance.

We examined two main aspects of institutional distance—formal and informal institutional distance—to gain a more comprehensive picture of the cross-border business relationships. To compute formal institutional distance, we first followed Kaufmann, Kraay, and Mastruzzi (2009) and adopted the following six dimensions to measure the quality of formal institutions: voice and accountability, political stability, control of corruption, government effectiveness, regulatory quality, and rule of law. All these are critical indicators of legal and regulatory institutions (Kaufmann, Kraay, and Mastruzzi 2009). Using data from the World Bank Governance Indicators database (World Bank 2014), we created the composite variable of formal institutional distance (FD) with the deviation along each of the dimensions, as follows:

$$FD_j = \sum_{i=1}^6 \{(D_{ij} - D_{iChina})^2 / V_i\} / 6$$

FD_j stands for the formal institutional distance of country j from China. D_{ij} is the index for country j on the i th formal dimension. D_{iChina} indicates the index for China on the i th formal dimension. V_i is the variance of the index of the i th dimension across countries.

For informal institutional distance, we focused on the national culture, which broadly captures both cognitive and normative institutions (Salomon and Wu 2012). Hofstede (2001) classified culture into five separate dimensions (individualism vs. collectivism, masculinity vs. femininity, power distance, uncertainty avoidance, and long-term orientation), which have been widely used in prior studies (Salomon and Wu 2012). Because relationship marketing literature has well recognized the representation of the five dimensions (Samaha, Beck, and Palmatier 2014), we ultimately focused on them to measure informal institutions. We used the differences across the five cultural dimensions to measure informal institutional distance and obtained available data from Hofstede's database (www.geerthofstede.nl). Similarly, we constructed informal institutional distance (ID) as follows (Kogut and Singh 1988; Shenkar 2001):

$$ID_j = \sum_{i=1}^5 \{(D_{ij} - D_{iChina})^2 / V_i\} / 5$$

ID_j refers to the informal institutional distance of country j from China; D_{ij} represents the index for country j for the i th informal dimension; D_{iChina} is the index for China for the i th informal dimension; and V_i is the variance of the index of the i th informal dimension.

We computed prior interaction with the product term of exchange duration and exchange frequency. Exchange duration is the number of years that the exchange parties have been doing business together. Exchange frequency examines the frequency that the buyer places orders with the supplier as follows: (1) more than once a day, (2) once a day, (3) one to five times a week, (4) two to three times a month, (5) once a month, (6) five to ten times a year, (7) two to four times a year, and (8) once a year. We reverse-coded the exchange frequency to align with the concept of prior interaction as follows: the higher the exchange frequency, the higher the degree of prior interaction. The data was identical for buyers and suppliers. For expectation of continuity, we adapted three items from Ganesan (1994) and Lusch and Brown (1996) to evaluate the degree of the participants' belief about the continuity of their relationships. The items were adjusted according to interviews with participants. We calculated the average value of the buyer and supplier data to capture the shared level of expectations of continuity.

To eliminate alternative explanations, we also included several control variables that potentially influenced the dependent variables in the analysis. First, considering the unignorable correlations between shared values and asymmetric values, we controlled shared calculative trust (the average value of buyer calculative trust and supplier calculative trust) when examining calculative TA and shared relational trust (the average value of buyer relational trust and supplier relational trust) for analysis of relational TA.

Second, to account for the potentially significant roles of exchange hazards in influencing exchange performance and trust, we controlled two transactional characteristics—asset specificity and supply market uncertainty—which have been highlighted in prior studies (McEvily, Zaheer, and Kamel 2017; Poppo and Zenger 2002). For asset specificity, we adapted three items following Cannon and Perreault (1999) and Jap and Ganesan (2000) to assess the degree to which the exchange parties had made specific and non-redeployable investments within the relationship. With the dyadic data, we computed both the shared asset specificity (the average value of buyer asset specificity and supplier asset specificity) and asset specificity asymmetry (the absolute value of buyer asset specificity minus supplier asset specificity). For supply market uncertainty, we followed Cannon and Perreault (1999) to adopt a three-item scale that examined the extent to which the supply market changes in terms of pricing, product features and specifications, and product supply and demand.

Regarding transactions in Chinese society, *guanxi* is an important force that affects a firm's business decisions and actions, especially regarding trust (Cai, Jun, and Yang 2010; Lee and Dawes 2005). Therefore, *guanxi* serves as a valuable control for our analysis given the Chinese context. Using three items developed by Child, Chung, and Davies (2003) that capture the respondents' awareness of the significance of *guanxi* when doing business in the market, we measured the *guanxi* importance (the average value of buyer evaluation and supplier evaluation) and incorporated it as a control.

Moreover, to further account for firm-level effects, we controlled for the buyer/supplier age (i.e., the number years the buyer/supplier has been in operation) and buyer/supplier size (i.e., the number of people the buyer/supplier employs), which have been shown to have important implications for firm decisions and performance. For these variables, we applied natural logarithms given the positive skewness. In addition, because industries play a significant role in explaining performance, we included buyer industry types to control for the potential effects.

With three dummy variables, we respectively coded 1 for mechanics, heavy (e.g., materials, automobile, chemicals) and electronics, and 0 for all other industries.

Construct validity

We first conducted exploratory factor analysis for the multidimensional measures and did not observe high cross-loadings between them. Using confirmatory factor analysis for the constructs, Appendix B reports the results of the fit statistics of the measures, suggesting an acceptable model fit for the study ($\chi^2 / df = 1.94$, CFI = .96, IFI = .96, RMSEA = .075). All the loadings on the factors were statistically significant ($p < .01$). For all constructs, the composite reliability (CR) values fell into the range between .85 and .95, and the average variance extracted (AVE) ranged from .66 to .87. These results provided support for adequate convergent validity.

Moreover, for every possible pair of multidimensional constructs, we constrained the correlation for one model to 1.0 and freely estimated the correlation for another model. Then, we ran chi-square difference tests to show that the difference between them was significant, displaying discriminant validity (Anderson and Gerbing 1988).

Common method bias

By collecting data from different sources (formal/informal institutional distance from the secondary data and other variables from the survey data), we can safely state that common method variance was not a significant threat for our study (Podsakoff et al. 2003). In addition, for the subjective responses to the survey, we took measures to ensure that respondents clearly understood the survey content. By guaranteeing informants that we protected their confidentiality, we also constrained the common method variance (Podsakoff et al. 2003).

To further control for common method variance, we adopted the marker variable technique, following Lindell and Whitney (2001). We used the firm tenure of supplier respondent (i.e., the number of years the supplier respondent had been working at the company) as the marker variable because it was not theoretically related to at least one of the focal constructs in the study, and the correlation between the firm tenure of supplier respondent and the exchange performance variable was .01. After conducting a partial correlation adjustment for all bivariate correlations between the constructs, the significance of the correlations remained consistent. The results indicate that common method variance was not a serious problem in this study.

Analysis and Results

Hypothesis Testing

Our study first examined the impacts of calculative and relational TA on exchange performance and then analyzed the influences of formal/informal institutional distance on calculative/relational TA with the moderating roles of prior interactions and expectations of continuity. For interaction effects, we mean centered formal institutional distance, informal institutional distance, prior interactions, and expectations of continuity to constrain the potential multicollinearity between the variables and their interaction terms (Aiken and West 1991). Among all the variables, the maximum variance inflation factor was 1.78, suggesting that multicollinearity was not likely to be a significant issue. Table 2 reports the descriptive statistics and correlations among all the variables.

Insert Table 2 about here

In Table 3, Model 2 shows the regression results of calculative TA on exchange performance, and Model 4 examines the effect of relational TA. For the model analyses of H_{2a} and H_{2b}, we followed McEvily, Zaheer, and Kamal (2017) and adopted seemingly unrelated regression, which is a regression in which two or more unrelated dependent variables are predicted by sets of independent variables, to deal with potential correlations between the error terms of the variables (Zellner 1962). Table 4 displays the seemingly unrelated regression results of the institutional origins of calculative TA and relational TA. In Table 4, Models 1 and 4 report the influences of the controls on the dependent variables, Models 2 and 5 test the main effects of formal and informal institutional distance, and Models 3 and 6 represent the results of the full model with the product terms of formal/informal institutional distance and the moderators.

Insert Tables 3 & 4 about here

As we can observe from Table 3, Model 2, calculative TA shows a significantly negative influence on exchange performance ($b = -.21, p < .01$), which supports the prediction that the increasing divergence in calculative trust between exchange parties is detrimental for business relationships. According to Table 3, Model 4, relational TA also significantly reduces exchange performance ($b = -.16, p < .05$). Thus, both H_{1a} and H_{1b} are well supported.

As shown in Table 4, Model 2, the hypothesized relationship between formal institutional distance and calculative TA is significantly negative ($b = -.31, p < .01$), which confirms H_{2a} (that formal institutional distance has a negative effect on calculative TA). For H_{2b}, Model 5 in Table 4 reveals that informal institutional distance leads to a significant increase in relational TA (b

= .22, $p < .05$), which supports the prediction that relational TA becomes higher when the informal institutional distance between international exchange parties increases.

We then tested the moderating effects of prior interactions and expectations of continuity. For significant interactions, we employed a simple slope analysis and plotted graphs to better explain the interaction coefficients following Aiken and West (1991). With the mean value and standard deviation (SD) of each moderator, we computed its high levels (one SD above the sample mean) and low levels (one SD below the sample mean) to illustrate the interaction effect in Figure 2 (Aiken and West 1991).

H_{3a} predicted that prior interactions negatively moderate the association between formal institutional distance and calculative TA. However, the result in Table 4, Model 3, does not show a significant moderating effect of prior interactions, failing to support H_{3a}. A possible reason for this is that despite the specific knowledge gained from experience, prior interactions also breed relational inertia, which may weaken the international exchange parties' sensitivities to external risks and thus inhibit their active calculations as a response (Lee 2013).

H_{3b} posited that the influence of informal institutional distance on increasing relational TA becomes weaker when the level of prior interactions is high. The significant and negative interaction between prior interactions and informal institutional distance provides support to H_{3b} ($b = -.21$, $p < .05$). As Figure 2, Panel A, shows, the positive association between informal institutional distance and relational TA is much stronger at low (simple slope: $b = .11$, $t = 3.12$, $p < .01$) rather than high levels of prior interaction (simple slope: $b = .01$, $t = .16$, $p > .10$).

For calculative TA, the interaction between formal institutional distance and expectations of continuity is significantly negative ($b = -.23$, $p < .01$), which supports H_{4a}. As shown in Figure 2, Panel B, the role of formal institutional distance in reducing calculative TA is significantly negative when the expectation of continuity is high (simple slope: $b = -.04$, $t = -7.36$, $p < .01$) and less significant when it is low (simple slope: $b = -.01$, $t = -1.83$, $p < .10$). H_{4b} predicted that the influence of informal institutional distance on relational TA becomes weaker at high levels of expectation of continuity. Our results demonstrate that the interaction term of informal institutional distance and expectations of continuity is significantly negative ($b = -.20$, $p < .05$), which supports H_{4b}. Figure 2, Panel C, reveals that the impact of informal institutional distance on relational TA is insignificant for relationships with high expectation of continuity levels

(simple slope: $b = .00$, $t = .00$, $p > .10$) and is significantly positive for those with low expectation of continuity levels (simple slope: $b = .12$, $t = 3.23$, $p < .01$).

Insert Figure 2 about here

Additional Analysis

Because the final sample of our study consists of both local buyer–foreign supplier and foreign buyer–local supplier relationships, we conducted an additional test to complement our analysis. Since the sizes of the two types of relationships are comparable, we split the whole sample into the following two groups: the local buyer–foreign supplier group and the foreign buyer–local supplier group. We then reran the analysis for the two groups individually to examine whether there is any difference. Although the regression results of the two groups show lower significance levels with smaller sample sizes, the results of this analysis were highly consistent with the results of the whole sample.

To be specific, for the local buyer–foreign supplier group, both calculative TA ($b = -.16$, $p < .05$) and relational TA ($b = -.13$, $p < .05$) relate negatively to exchange performance. In addition, formal institutional distance negatively influences calculative TA ($b = -.33$, $p < .05$), and informal institutional distance positively influences relational TA ($b = .16$, $p < .10$). With calculative TA as the dependent variable, the interaction of formal institutional distance and prior interactions remains insignificant, and the interaction of formal institutional distance and expectations of continuity is significantly negative ($b = -.47$, $p < .05$). For the effects on relational TA, both the interaction terms of informal institutional distance and prior interactions ($b = -.35$, $p < .05$) and informal institutional distance and expectations of continuity ($b = -.16$, $p < .10$) are negative and significant.

For the foreign buyer–local supplier group, both calculative TA ($b = -.17$, $p < .05$) and relational TA ($b = -.15$, $p < .10$) negatively influence exchange performance. Moreover, we found a negative relationship between formal institutional distance and calculative TA ($b = -.37$, $p < .01$) and a positive relationship between informal institutional distance and relational TA ($b = .17$, $p < .10$). With calculative TA as the dependent variable, the interaction of formal institutional distance and prior interactions is insignificant, and there is a significantly negative interaction between formal institutional distance and expectations of continuity ($b = -.39$, $p < .01$). For the influences on relational TA, both the interaction terms of informal institutional distance and prior

interactions ($b = -.27, p < .10$) and informal institutional distance and expectations of continuity ($b = -.18, p < .05$) are significantly negative.

Discussion

Our research examines how formal and informal institutional distance influence the formation of calculative trust asymmetry and relational trust asymmetry in international marketing relationships. With 134 dyads of international buyer–supplier relationships, our results first show that both calculative and relational TA negatively influence exchange performance and that formal institutional distance constrains calculative TA whereas informal institutional distance leads to a higher degree of relational TA. Moreover, exchanges with high prior interaction levels show weaker links between informal institutional distance and relational TA. A high expectation of continuity level strengthens the role of formal institutional distance in reducing calculative TA and mitigates the impact of informal institutional distance on relational TA.

Research Implications

Our study contributes to international marketing research in three ways. First, the study contributes to trust research by empirically examining the role of trust asymmetry in international buyer–supplier relationships, answering calls for further exploration of trust in dyadic relationships (McEvily, Zaheer, and Kamal 2017). Although prior studies view trust as an important factor in interfirm interactions, there have been mixed findings about the influence of trust on exchange performance (Aulakh, Kotabe, and Sahay 1996; Gulati and Nickerson 2008; Katsikeas, Skarmas, and Bello 2009). By adopting an asymmetrical perspective and empirically examining the influences of calculative and relational TA on exchange performance, our study offers an explanation for the inconsistent results of previous studies and enriches the understanding of the performance implications of trust. Moreover, in contrast to mutual trust, trust asymmetry indicates a divergence in understanding, motivation, and emphasis across the exchange dyad, thereby increasing conflicts and transaction costs and resulting in lower exchange performance. This explains the failure of some seemingly strong relationships and further contributes to research on the dark side of trust (McEvily, Zaheer, and Kamal 2017; Scheer 2012).

Second, this article integrates an institutional view in understanding how formal and informal institutional distance influence different forms of trust asymmetry in cross-border relationships. Due to the high complexity of developing trust with counterparties from divergent institutional

backgrounds, it is urgent for international exchange parties to understand under what circumstances trust asymmetry can emerge (Korsgaard, Brower, and Lester 2015; Zaheer and Kamal 2011). We suggest that a formal institutional distance urges international channel partners to make continual assessments of gains and losses to constrain external risk and makes them build similar forward-looking decision rules given the objective and explicit characteristics of formal institutions, thereby constraining calculative TA. In contrast, informal institutional distance enlarges relational TA due to international exchange parties' dissimilar behavior patterns and different reliance on cultural backgrounds to develop understandings and interpretations about previous relations. The empirical results confirm our arguments. By explaining the distinct implications of formal and informal institutional distance, we extend the understanding of institutional origins of trust asymmetry in the international context (Zaheer and Kamal 2011).

Third, we introduce an interdependence perspective to investigate the moderating roles of prior interactions and expectations of continuity in understanding the institutional distance–trust asymmetry relationship. The empirical findings show that prior interactions weaken the link between informal institutional distance and relational TA by providing shared experiences to mitigate the initial effect of different cultural backgrounds. Moreover, an expectation of continuity strengthens the impact of formal institutional distance on constraining calculative TA by highlighting the importance of making continued assessments and motivating international interfirm partners to share detailed information. An expectation of continuity also lessens the influence of informal institutional distance on increasing relational TA by encouraging cross-border exchange parties to share information and make commitments to signal goodwill. The findings underscore the importance of developing a contingent view of the effects of institutional distance on trust asymmetry.

Managerial Implications

Our study provides important practical implications for international marketing relationships. First, managers often emphasize the building of trust but ignore the potential trust asymmetry. Representing the divergence in trust across the dyad, trust asymmetry increases conflicts and transaction costs and is disruptive to joint outcomes, thereby reflecting the dark side of trust. By investigating the negative implications of both types of trust asymmetry in international relationships, our study cautions managers to also take their partners' trust into consideration and

avoid relying too heavily on trust to manage the exchange relationship lest their partners do not trust in the same way.

Furthermore, managers should understand that their institutional backgrounds play a nontrivial role in shaping trusting relationships. Specifically, for culturally distant marketing relationships, firm managers should be more cautious about relying on relational trust to manage their exchange relationships because their dissimilar cultural backgrounds could breed higher levels of divergence in relational trust, indicating increasingly negative consequences. For international relationships with high formal institutional distance, firm managers can worry less about the potential negative impacts of calculative trust asymmetry since both sides are motivated to make continual assessments and are able to achieve consistency.

Third, by examining whether the parties hold a shadow of past or a shadow of future perception, our study provides guidelines for international channel partners with originally divergent institutional backgrounds to operate more effectively. For exchanges with high prior interaction levels, relational TA is less likely to be an issue for culturally distant partners because they are able to learn about each other and develop a better understanding during the interaction process. When the expectation of continuity is low, managers need to be more concerned with calculative trust asymmetry when dealing with their formally distant partners because their evaluation efforts become less effective. In addition, managers should be particularly alert to the more serious issue of relational trust asymmetry arising from informal institutional distance because interfirm partners are more likely to have divergent views regarding engagement.

Limitations and Future Research

The limitations of our study leave several issues up for future investigation. First, we adopted the measures of the united index of formal and informal dimensions with the assumption that all dimensions have equal weight (Kogut and Singh 1988). This method, however, has limitations because the dimensions might vary in their effect sizes (Shenkar 2001). Future studies might extend this by adopting specific data that allows more solid measurements, thereby making contributions to international marketing research.

Second, the study focuses on the generality of international marketing parties, but it does not discuss the potentially divergent characteristics of buyers and suppliers. With different positions within relationships, buyers and suppliers might have divergent perceptions and operations concerning the role of trust (Nyaga, Whipple, and Lynch 2010). Taking this into consideration, it

would be fruitful for researchers to advance the literature in this area by comparing the potentially different roles of buyers and suppliers in influencing the effect of trust asymmetry. Third, our study examines exchange performance using overall satisfaction, which is a focal consequence of transaction relationships and has been widely used in prior research (Gulati and Nickerson 2008; Poppo and Zenger 2002). However, it has limitations, and future research could examine the different aspects of performance to investigate the performance trade-offs of trust asymmetry in international marketing relationships (Katsikeas et al. 2016). In addition, it is also meaningful to adopt objective performance indicators, such as accounting performance, to provide the validity of the findings (Katsikeas et al. 2016).

Fourth, as trust asymmetry is still a nascent topic, future research can investigate other possible contingencies, such as transactional attributes for the effects of formal and informal institutional distance, to offer a more nuanced understanding. In addition, an extension of this study might include the use of longitudinal data to provide a dynamic view of how the roles of trust asymmetry evolve as exchange relationships proceed over a longer time period. Specifically, it would be beneficial for future research to collect time-lagged data to examine the effect of trust asymmetry on exchange performance.

Finally, although we consider *guanxi* an important informal institution regulating business interactions in China, we fail to test *guanxi* directly. Given the uniqueness of *guanxi*, it would be meaningful for further research to extend our proposed model by investigating the roles of *guanxi* in the links between institutional distance and trust asymmetry in a Chinese context.

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TABLE 1. SELECTED STUDIES ON TRUST IN INTERFIRM RELATIONSHIPS.

| Study | Context | Theoretical Perspective | Antecedents | Major Findings | Trust Concept |
|-------------------------------------|--|--|--|---|------------------|
| Anderson and Narus (1990) | 249 distributors and 213 manufacturers | SET (Relational) | Communication, cooperation | Communication and cooperation promote trust; trust reduces conflict and increases satisfaction. | Unilateral trust |
| Ganesan (1994) | 124 retailers and 52 vendors | TCE (Economic) | Specific investments, reputation, interaction experience, satisfaction | Retailer trust is related to specific investments, reputation, interaction experience, and satisfaction, and plays a key role in determining long-term orientation. | Unilateral trust |
| Morgan and Hunt (1994) | 129 association presidents in US | RET (Relational) | Shared values, communication, opportunistic behavior | From the buyer perspective, commitment and trust are key mediating constructs in relationship marketing. | Unilateral trust |
| Kumar, Scheer, and Steenkamp (1995) | 417 US dealers | Bilateral deterrence theory (Economic) | Total interdependence, interdependence asymmetry | Total interdependence increases and interdependence asymmetry reduces dealer trust. | Unilateral trust |
| Aulakh, Kotabe, and Sahay (1996) | 652 US firms with firms from other countries | RET (Relational) | Continuity expectations, flexibility, information exchange, output control, process control, social control | Both bilateral relational norms and informal monitoring mechanisms foster trust and improve partnership performance. However, trust is not significantly related to performance. | Mutual trust |
| Doney and Cannon (1997) | 200 purchasing managers | SET (Relational) | Firm characteristics (reputation, size, expertise, power), relationship characteristics (information sharing, similarity, length of relationship, etc.) | Both firm characteristics and relationship characteristics significantly influence buyer trust; trust is significantly related to anticipated future interaction. | Unilateral trust |
| Zaheer, McEvily, and Perrone (1998) | 107 buyer-supplier relationships | RET (Relational) | N.A. | Enhanced supplier performance, lowered costs of negotiation, and reduced conflict are shown to be related to high levels of interorganizational trust. | Mutual trust |
| Dyer and Chu (2000) | 453 supplier-automaker relationships | Institutional theory (Institutional) | Length of relationship, communication, relationship continuity, assistance to the supplier, buyer's ownership of supplier stock, institutional environment | Supplier trust is highly correlated with stable and consistent buyer processes/routines that represent credible commitments towards long term interactions. The institutional environment has an important influence on the development of trust. | Unilateral trust |
| Poppo and Zenger (2002) | 285 computer executives | RET (Relational) | Exchange hazards, previous relations | Relational governance and contracts function as complements in explaining exchange performance. | Mutual trust |

(continued)

TABLE 1. (CONTINUED)

| | | | | | |
|---|--|--------------------------------------|--|--|------------------|
| Dyer and Chu (2003) | 344 supplier–automaker relationships | Institutional theory (Institutional) | N.A. | Trust lowers transaction costs, promotes information sharing, and is an important source of performance. | Unilateral trust |
| Krishnan, Martin, and Noorderhaven (2006) | 126 Indian firms with international alliances | RET (Relational) | N.A. | The positive relationship between trust and performance is stronger under high behavioral uncertainty and weaker under high environmental uncertainty. | Mutual trust |
| Zaheer and Zaheer (2006) | Conceptual study | Institutional theory (Institutional) | Differences in institutional environments | Trust asymmetry arises from differences in institutional environments and has greater negative effects on collaboration performance with high interdependence. | Trust asymmetry |
| Bstieler and Hemmert (2008) | 100 product development partnerships | Institutional theory (Institutional) | Communication, fairness, conflicts, national culture | Relational behaviors impact trust formation, and national culture has a direct and a moderating effect on trust development. | Unilateral trust |
| Gulati and Nickerson (2008) | 222 component–sourcing arrangements of two assemblers | TCE (Economic) | N.A. | Trust complements buy and ally governance choices by lowering conflict and enhancing performance. | Mutual trust |
| Poppo, Zhou, and Ryu (2008) | 137 manufacturers | TCE (Economic) | Asset specificity, uncertainty, prior exchange history, expectation of continuity | The relationship between asset specificity/uncertainty/prior history and trust is mediated by expectations of continuity. | Mutual trust |
| Robson, Katsikeas, and Bello (2008) | 177 international strategic alliances | RET (Relational) | Distributive fairness, partner similarity | Both distributive fairness and partner similarity are positively associated with interpartner trust, which is positively associated with alliance performance. | Mutual trust |
| Graebner (2009) | Case study of 12 entrepreneurial firms and 8 acquirers | TCE (Economic) | Information asymmetry | Both buyers' and sellers' assessments of their counterparts' trust were often mistaken, and these imbalances foster seller vulnerability and buyer deceit. | Trust asymmetry |
| Homburg et al. (2009) | 511 buyer–supplier relationships | Institutional theory (Institutional) | Transnationality of buyer–supplier relationship, national culture of buyer firm | Transnationality and culture both affect the buyer's choice of governance modes. | Unilateral trust |
| Katsikeas, Skarmeas, and Bello (2009) | 214 importing distributors | Institutional theory (Institutional) | Internal uncertainty, external uncertainty, interfirm psychic distance, transaction specific assets, opportunism | Interfirm psychic distance, internal uncertainty, and exporter transaction-specific assets and opportunism are related to importer trust. | Unilateral trust |

(continued)

TABLE 1. (CONTINUED)

| | | | | | |
|-----------------------------------|---------------------------------|--------------------------------------|--|---|------------------|
| Cai, Jun, and Yang (2010) | 398 Chinese manufacturers | Institutional theory (Institutional) | Legal protection, government support, importance of <i>guanxi</i> | Government support and importance of <i>guanxi</i> significantly affect trust, which subsequently influences information sharing and collaborative planning. | Unilateral trust |
| Nyaga, Whipple, and Lynch (2010) | 370 buyers and 255 suppliers | RET (Relational) | Collaborative activities (information sharing, joint relationship effort, and dedicated investments) | Collaborative activities lead to trust and commitment. Trust and commitment, in turn, lead to improved satisfaction and performance. | Mutual trust |
| Jiang et al. (2011) | 108 Chinese senior executives | Institutional theory (Institutional) | Cultural similarity | Overseas partners of different cultural ethnicities from host-country executives are disadvantaged in the trust domain when compared with partners who share similar cultural ethnicities. | Unilateral trust |
| Zaheer and Kamal (2011) | Conceptual study | Institutional theory (Institutional) | Home country, host country | Both the home and host country of the exchange partners influence the nature and outcomes of dyadic trust. | Mutual trust |
| Altinay et al. (2014) | 200 multi-sector franchisees | Institutional theory (Institutional) | Role performance, cultural sensitivity | There is a positive relationship between franchiser's role performance/cultural sensitivity and franchisee's trust; trust positively affects the franchisee's satisfaction. | Unilateral trust |
| Leonidou et al. (2014) | 76 empirical studies | Institutional theory (Institutional) | Opportunism, conflict, communication, cultural distance, adaptation | Opportunism, conflicts, and cultural distance endanger relationship quality, while communication and appropriate adaptations enhance relationship quality (i.e., cooperation, trust, and commitment); relationship quality strengthens both relational and financial performance. | Mutual trust |
| McEvily, Zaheer, and Kamel (2017) | 86 buyer-supplier relationships | TCE (Economic) | Exchange hazards, power imbalance | The same degree of exchange hazards/power imbalance has contrasting effects on trust across the dyad. | Trust asymmetry |
| Shen et al. (2019) | 243 IT service suppliers | RET (Relational) | Contract design capability | A partner's contract design capability revealed in the contracting process can engender relational trust. | Unilateral trust |

Notes: SET = social exchange theory; TCE = transaction costs economics; RET = relational exchange theory

TABLE 2. DESCRIPTIVE STATISTICS AND CORRELATIONS.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|--------|--------|--------|
| 1 Exchange performance | | | | | | | | | | | | |
| 2 Calculative TA | -.17* | | | | | | | | | | | |
| 3 Relational TA | -.18* | .36** | | | | | | | | | | |
| 4 Formal institutional distance | -.10 | -.34** | .06 | | | | | | | | | |
| 5 Informal institutional distance | -.08 | -.01 | .04 | .20** | | | | | | | | |
| 6 Prior interaction | -.07 | -.19* | .02 | .07 | -.23** | | | | | | | |
| 7 Expectation of continuity | .37** | -.10 | -.05 | -.13 | -.06 | .04 | | | | | | |
| 8 Shared calculative trust | .25** | -.13 | -.01 | .01 | .04 | .27** | .27** | | | | | |
| 9 Shared relational trust | .36** | -.11 | -.12 | -.11 | -.01 | .08 | .19* | .30** | | | | |
| 10 Shared asset specificity | -.13 | -.12 | -.18* | .09 | -.11 | .26** | .30** | .06 | .04 | | | |
| 11 Asset specificity asymmetry | -.14 | .32** | .20* | -.09 | .08 | -.18* | -.18* | -.02 | .15 | .03 | | |
| 12 Supply market uncertainty | .12 | .10 | -.08 | .06 | -.12 | .06 | .08 | -.04 | -.20* | -.14 | -.14 | |
| 13 <i>Guanxi</i> importance | .20* | .07 | .08 | -.03 | .07 | -.19* | .24** | .20* | .19* | -.36** | -.06 | .20* |
| 14 Buyer age | .07 | -.13 | -.01 | .11 | .09 | .26** | -.08 | .05 | .08 | .02 | -.13 | .04 |
| 15 Supplier age | -.01 | -.10 | -.13 | -.05 | -.10 | .34** | -.13 | .11 | -.03 | .03 | -.24** | .10 |
| 16 Buyer size | .24** | -.05 | -.10 | -.10 | .07 | .07 | .17 | .08 | .15 | .00 | .02 | -.02 |
| 17 Supplier size | -.09 | -.03 | .01 | -.09 | .08 | .00 | .00 | .27** | -.16 | .07 | -.01 | -.02 |
| 18 Mechanics | -.05 | -.01 | -.02 | -.02 | .13 | -.13 | -.07 | -.19* | -.01 | -.10 | .02 | -.03 |
| 19 Heavy | .22* | -.11 | -.10 | .06 | -.09 | .05 | -.03 | .10 | .00 | -.07 | -.09 | .23** |
| 20 Electronics | -.12 | -.06 | -.09 | -.04 | -.01 | .09 | .11 | .07 | .03 | .15 | .11 | -.24** |
| Mean | 4.77 | .31 | .42 | 22.59 | 2.91 | 25.72 | 3.80 | 4.94 | 4.05 | 2.53 | .29 | 4.09 |
| SD | .64 | .45 | .54 | 7.25 | 1.31 | 13.43 | .50 | .48 | 1.00 | 1.18 | .47 | .86 |

* $p < .05$.** $p < .01$.

(continued)

TABLE 2. (CONTINUED)

| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|------|-------|-------|--------|--------|--------|--------|-----|
| .12 | | | | | | | |
| -.01 | .07 | | | | | | |
| .21* | .24** | .08 | | | | | |
| -.06 | -.14 | .13 | -.05 | | | | |
| .00 | -.07 | -.02 | -.11 | -.08 | | | |
| .08 | .15 | .11 | .09 | -.09 | -.39** | | |
| -.10 | -.06 | -.13 | .02 | .17* | -.30** | -.33** | |
| 5.17 | 17.90 | 16.40 | 1.17E3 | .87E3 | .19 | .50 | .28 |
| .62 | 5.58 | 5.13 | 2.70E3 | 3.90E3 | .40 | .50 | .45 |

TABLE 3. REGRESSION RESULTS: EXCHANGE PERFORMANCE.

| Independent Variables | Dependent Variable: Exchange Performance | | | | | | | |
|---------------------------------------|--|-------|---------|-------|---------|-------|---------|-------|
| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
| | b | t | b | t | b | t | b | t |
| Shared calculative trust | .15* | 2.01 | .14* | 1.98 | | | | |
| Shared relational trust | | | | | .16* | 2.01 | .17* | 2.22 |
| Shared asset specificity | -.26** | -3.57 | -.29** | -4.05 | -.20* | -2.47 | -.22** | -2.78 |
| Asset specificity asymmetry | -.10 | -1.49 | -.03 | -.44 | -.13† | -1.81 | -.10 | -1.38 |
| Supply market uncertainty | .20** | 2.83 | .24** | 3.40 | .17* | 2.31 | .14† | 1.82 |
| <i>Guanxi</i> importance | .29** | 3.88 | .30** | 4.08 | .32** | 4.33 | .33** | 4.54 |
| Buyer age | .02 | .28 | .01 | .11 | .01 | .09 | .02 | .30 |
| Supplier age | -.05 | -.72 | -.06 | -.84 | -.05 | -.62 | -.05 | -.67 |
| Buyer size | .22** | 3.00 | .23** | 3.34 | .19** | 2.64 | .17* | 2.36 |
| Supplier size | -.03 | -.35 | -.00 | -.05 | .01 | .07 | .02 | .33 |
| Mechanics | .37* | 2.27 | .30† | 1.84 | .37* | 2.26 | .33* | 2.01 |
| Heavy | .54** | 2.71 | .44* | 2.22 | .57** | 2.87 | .52** | 2.62 |
| Electronics | .44* | 2.40 | .37* | 2.05 | .45* | 2.45 | .42* | 2.31 |
| H_{1a}: Calculative TA | | | -.21** | -2.95 | | | | |
| H_{1b}: Relational TA | | | | | | | -.16* | -2.16 |
| R² | .31 | | .33 | | .30 | | .32 | |
| F-value | 9.04** | | 9.76** | | 9.24** | | 9.14** | |

† $p < .10$.* $p < .05$.** $p < .01$.

Notes: Standardized coefficients are reported for b.

TABLE 4. SEEMINGLY UNRELATED REGRESSION RESULTS: CALCULATIVE AND RELATIONAL TRUST ASYMMETRY.

| Independent Variables | Dependent Variable: Calculative TA | | | | | | Dependent Variable: Relational TA | | | | | |
|--|------------------------------------|-------|---------|-------|---------|-------|-----------------------------------|-------|---------|-------|---------|-------|
| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
| | b | t | b | t | b | t | b | t | b | t | b | t |
| Shared calculative trust | -.17† | -1.86 | -.13 | -1.37 | -.18† | -1.84 | | | | | | |
| Shared relational trust | | | | | | | .12 | 1.19 | .16 | 1.51 | .12 | 1.17 |
| Shared asset specificity | -.13 | -1.41 | -.09 | -.90 | -.09 | -.92 | -.18† | -1.74 | -.15 | -1.36 | -.17 | -1.57 |
| Asset specificity asymmetry | .30** | 3.42 | .30** | 3.48 | .27** | 3.15 | .09 | .98 | .08 | .87 | .10 | 1.08 |
| Supply market uncertainty | .18* | 1.97 | .20* | 2.26 | .19* | 2.24 | -.19* | -1.96 | -.19* | -2.01 | -.18* | -1.97 |
| <i>Guanxi</i> importance | .03 | .36 | .02 | .21 | .01 | .11 | .06 | .60 | .09 | .94 | .06 | .59 |
| Buyer age | -.06 | -.60 | .03 | .31 | .05 | .48 | .13 | 1.35 | .09 | .90 | .13 | 1.31 |
| Supplier age | -.04 | -.45 | -.06 | -.58 | -.06 | -.64 | -.06 | -.64 | -.05 | -.45 | -.09 | -.86 |
| Buyer size | .08 | .84 | .07 | .71 | .07 | .78 | -.14 | -1.45 | -.17† | -1.71 | -.18† | -1.86 |
| Supplier size | .11 | 1.13 | .07 | .70 | .06 | .58 | .18† | 1.90 | .16* | 1.67 | .20* | 2.09 |
| Mechanics | -.39 | -1.60 | -.36 | -1.56 | -.42† | -1.81 | -.42† | -1.69 | -.43† | -1.75 | -.32 | -1.32 |
| Heavy | -.51† | -1.74 | -.47† | -1.65 | -.50† | -1.77 | -.52† | -1.73 | -.50† | -1.66 | -.36 | -1.24 |
| Electronics | -.36 | -1.34 | -.32 | -1.24 | -.36 | -1.43 | -.38 | -1.39 | -.39 | -1.43 | -.39 | -1.47 |
| H_{2a} : Formal institutional distance (FD) → Calculative TA | | | -.31** | -3.60 | -.33** | -3.85 | | | .00 | .01 | -.04 | -.39 |
| H_{2b} : Informal institutional distance (ID) → Relational TA | | | .02 | .25 | .03 | .36 | | | .22* | 2.40 | .19* | 2.16 |
| Prior interaction | | | -.06 | -.63 | -.05 | -.45 | | | .05 | .45 | -.01 | -.14 |
| Expectation of continuity | | | -.03 | -.25 | .04 | .41 | | | .02 | .14 | -.01 | -.11 |
| H_{3a} : FD × Prior interaction → Calculative TA | | | | | .02 | .29 | | | | | .08 | .87 |
| H_{3b} : ID × Prior interaction → Relational TA | | | | | -.04 | -.47 | | | | | -.21* | -2.29 |
| H_{4a} : FD × Expectation of continuity → Calculative TA | | | | | -.23** | -2.59 | | | | | .10 | 1.11 |
| H_{4b} : ID × Expectation of continuity → Relational TA | | | | | .02 | .25 | | | | | -.20* | -2.15 |
| R² | .20 | | .28 | | .33 | | .15 | | .19 | | .28 | |
| F-value | 2.36* | | 2.77** | | 2.65** | | 1.69† | | 1.98* | | 2.12** | |

† $p < .10$.* $p < .05$.** $p < .01$.

Notes: Standardized coefficients are reported for b.

FIGURE 1. CONCEPTUAL MODEL.

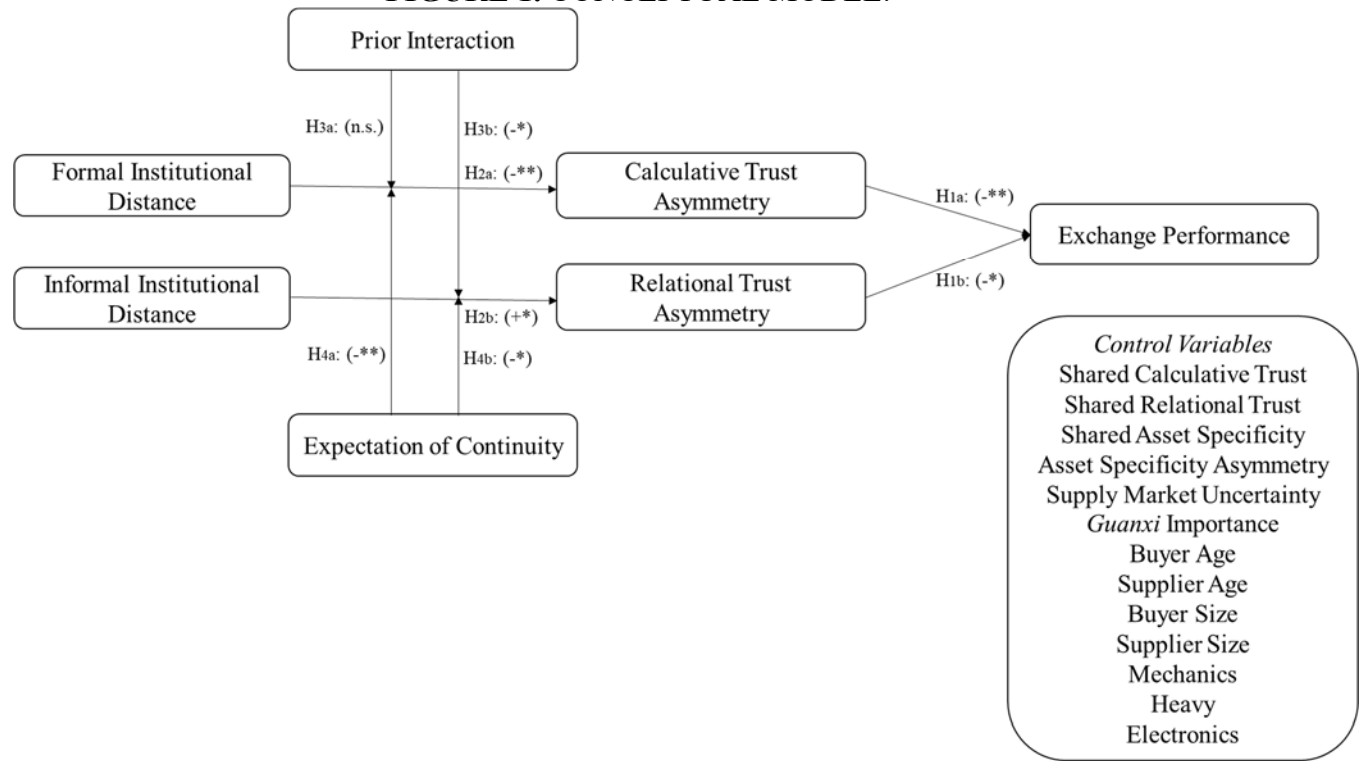
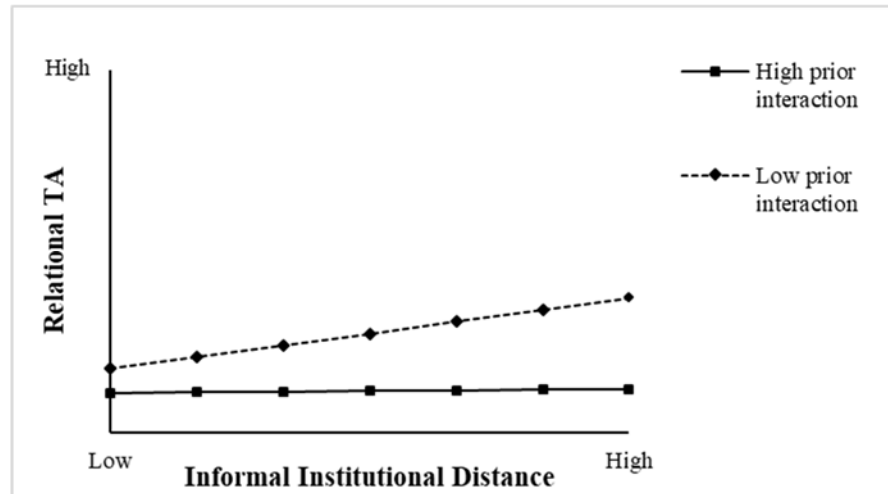
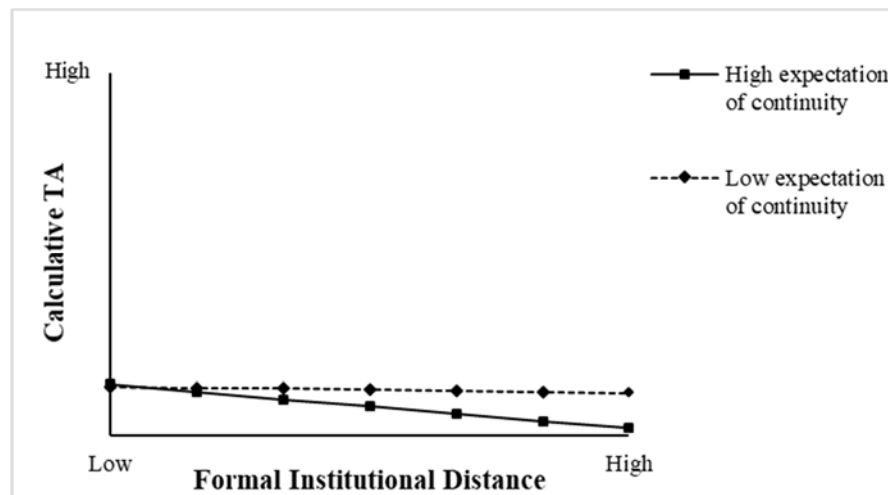
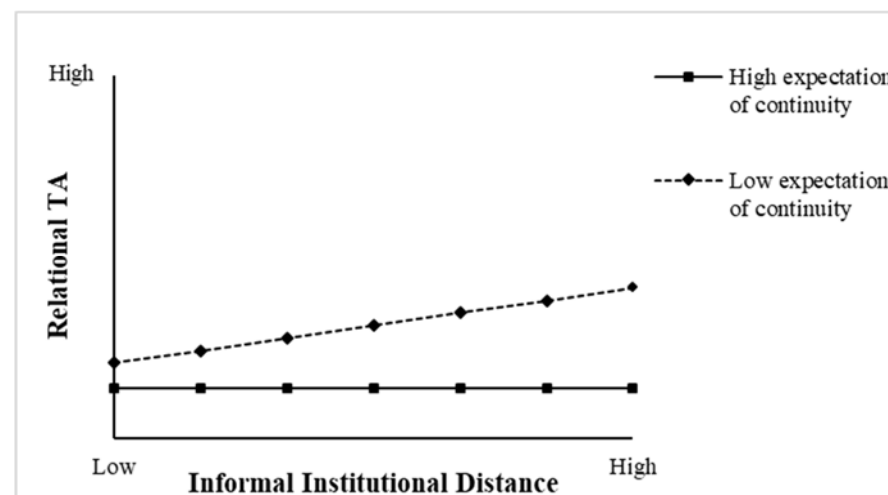


FIGURE 2. INTERACTION EFFECTS.(a) H_{3b}: Informal Institutional Distance and Prior Interaction: Relational TA(b) H_{4a}: Formal Institutional Distance and Expectation of Continuity: Calculative TA(c) H_{4b}: Informal Institutional Distance and Expectation of Continuity: Relational TA

APPENDIX A. CHARACTERISTICS OF SAMPLE FIRMS.

| Category | Buyer Firms (%) | Supplier Firms (%) |
|--|------------------------|---------------------------|
| 1. Number of Employees | | |
| Less than 100 | 14.93 | 24.63 |
| 100-499 | 45.52 | 47.76 |
| 500-999 | 17.16 | 13.43 |
| 1,000 and above | 22.39 | 14.18 |
| 2. Annual Revenue (in Millions of RMB) | | |
| Less than 5 | 63.43 | 68.66 |
| 5-9 | 9.7 | 13.43 |
| 10-49 | 14.93 | 13.43 |
| 50 and above | 11.94 | 4.48 |
| 3. Industry Type | | |
| Medicine | 5.97 | 1.49 |
| Electronics, telecommunication | 27.61 | 27.61 |
| Mechanics | 23.88 | 19.40 |
| Chemical | 9.70 | 14.93 |
| Metal, automobiles/parts | 20.37 | 25.58 |
| Others (food, shoes/clothing, furniture, print, textile, etc.) | 12.47 | 10.99 |

APPENDIX B. MEASUREMENT ITEMS AND VALIDITY ASSESSMENT.

| Items | SFL | |
|---|-------|----------|
| | Buyer | Supplier |
| Exchange performance (reported by buyers/suppliers: CR = .91/.91; AVE = .71/.73) | Buyer | Supplier |
| In dealing with this supplier/client, to what degree do you agree (1 = very low; 7 = very high): | | |
| 1) The partner's performance leaves a lot to be desired from an overall standpoint. | .80 | .81 |
| 2) We are satisfied with the outcomes from this buyer-supplier relationship. | .88 | .87 |
| 3) Our relationship with this partner has been a successful one. | .85 | .86 |
| 4) Our relationship with this partner has more than fulfilled our expectations. | .84 | .87 |
| Calculative trust (reported by buyers/suppliers: CR = .87/.88; AVE = .70/.72) | Buyer | Supplier |
| In dealing with this supplier/client, to what degree do you agree (1 = very low; 7 = very high): | | |
| 1) Considering the costs and benefits involved in the relationship, both parties act as expected. | .97 | .96 |
| 2) Considering rewards and punishments, both parties behave honestly in dealing with each other. | .76 | .85 |
| 3) The behaviors of both parties are trustworthy because the costs and punishments of misconduct are very high. | .76 | .72 |
| Relational trust (reported by buyers/suppliers: CR = .93/.94; AVE = .83/.84) | Buyer | Supplier |
| In dealing with this supplier/client, to what degree do you agree (1 = very low; 7 = very high): | | |
| 1) Both parties allow the other make decisions because we think like one another. | .95 | .95 |
| 2) Both parties can effectively act for the other because both share the same understanding of what matters. | .95 | .96 |
| 3) Both parties are confident that their interests will be fully protected, because both parties share the common identity. | .82 | .84 |
| Expectation of continuity (reported by buyers/suppliers: CR = .86/.85; AVE = .67/.66) | Buyer | Supplier |
| In dealing with this supplier/client, to what degree do you agree (1 = very low; 7 = very high): | | |
| 1) Our company expects the relationship with this supplier/client to continue for a long time. | .86 | .88 |
| 2) Maintaining a long-term relationship with this supplier/client is important to us. | .81 | .77 |
| 3) We expect this supplier/client to continue working with us for a long time. | .78 | .79 |
| Asset specificity (reported by buyers/suppliers: CR = .94/.93; AVE = .84/.81) | Buyer | Supplier |
| You may have made investments in time, energy, and/or money specifically to accommodate this supplier/client and its products. These investments would be lost if your firm switched to another supplier/client. Please indicate the extent to which your firm has made investments or changes specifically to accommodate this supplier/client (1 = none, 7 = a great deal). Just for the supplier/client, we have changed our (1 = none, 7 = a great deal): | | |
| 1) Product features | .88 | .88 |
| 2) Personnel | .94 | .92 |
| 3) Inventory and distribution procedures | .93 | .90 |
| Supply market uncertainty (reported by suppliers: CR = .95; AVE = .87) | | Supplier |
| For this supply market, the following factors are changing (1=very infrequent, 7 = very frequently): | | |
| 1) Pricing | | .88 |
| 2) Product features and specifications | | .96 |
| 3) Product supply and demand | | .95 |
| Guanxi importance (reported by buyers/suppliers: CR = .93/.92; AVE = .81/.79) | Buyer | Supplier |
| 1) In this market, business depends on good connections with friends and family. | .94 | .91 |
| 2) In this market, <i>guanxi</i> is still very important. | .99 | .94 |
| 3) In this market, <i>guanxi</i> is a requirement for success. | .76 | .82 |

Notes: Sample size = 134. Model fit: $\chi^2(401) = 776.44, p < .01$; CFI = .96, IFI = .96; RMSEA = .075

SFL = standardized factor loading; CR = composite reliability; AVE = average variance extracted