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The trade-off between trust and distrust in supply chain collaboration

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Abstract

Trust and distrust can play an important role in a healthy supply chain collaborative relationship, and both carry potential shortcomings. Little attention has been paid to understanding and explaining the development process of trust and distrust in supply chain collaborations, especially in an international context. Using the Transaction Cost Economics theory, this study begins by discussing expressions of trust and distrust within the context of a supply chain collaboration dyad. Then, we explore how trust and distrust interact at a network level. Using a novel, longitudinal, multi-case-study approach, this paper provides new empirical evidence of the complementary roles of trust and distrust in supply chain collaboration, exploring how these concepts work together across different stages of the relationship and in different contexts. This study distinguishes between ‘competence trust’ and ‘integrity trust’ concerning collaboration contracts which typically create distrust. Finally, this paper offers unique insights into the influence of culture on the interpretation and performance of trust and distrust in international supply chain collaboration, grounded in the context of the Chinese automotive industry.

Keywords: trust; distrust; supply chain collaboration; inter-organizational relationships; case study; Chinese automotive industry

Highlights:

- We challenge the idea that trust and distrust substitute for each other as ends of a continuum.
- We provide a more nuanced platform on which to deploy a TCE-trust lens to understand productive and unproductive supply chain collaboration.
- We provide insights into more nuanced forms of trust predicting the conditions under which supply chain collaborations develop healthy versus unhealthy levels of trust, and the forms of that trust.
- We offer unique insights into the influence of culture on the interpretation and performance of trust and distrust in international SCC.

- We present longitudinal, multi-case data of international supply chain collaboration in the Chinese automotive industry.

1. Introduction

Trust, described as confidence in the competence and integrity of another party, is widely recognized as a precondition for positive inter-organizational relationships (IORs) and effective collaboration (Bouncken, Hughes, Ratzmann, Cesinger, & Pesch, 2020; Connelly, Crook, Combs, Ketchen & Aguinis, 2018; De Ruyter, Moorman, & Lemmink, 2001; Goffin, Lemke, & Szwejczewski, 2006; Ploetner & Ehret, 2006; Zaheer, McEvily, & Perrone, 1998). A close relationship between two organizations (e.g., supply chain partners) develops as trust accumulates and when there is evidence of good performance over time (Goffin *et al.*, 2006; Ploetner & Ehret, 2006). Because of this, trust is often perceived to be a relational means to mitigate the opportunistic behaviors of exchange partners and risks associated with collaboration (e.g., by a supply chain member, in the buyer-supplier dyad) (Li, Fan, Lee, & Cheng, 2015). Centered on Transaction Cost Economics theory (TCE), trustful collaborative relationships between supply chain partners may reduce the need for detailed contract specification and monitoring and reduce their associated costs (Yang, 2014). However, neither the closeness of the relationship nor the length of time it has sustained has a linear relationship with the level of trust between two parties (Hughes & Perrons, 2011). Trust can even be endangered by actions intended to foster it, creating a perverse effect (Skinner, Dietz, & Weibel, 2014; Villena, Revilla, & Choi, 2011). For instance, Villena *et al.* (2011) argue that excessive levels of trust may negatively affect the relationship if neither party wants to break trust by responding to market changes (see also Anderson & Jap, 2005; Herrero & Hughes, 2019). High levels of trust can then create high levels of lock-in and inertia that manifest unproductive outcomes.

To avoid the “dark side” of collaboration, characterized by excessive trust between two parties, managers should take care to control the progress of social relationships (Villena *et al.*, 2011). This raises the relevance of *distrust* as a control mechanism. Distrust is defined as “confident negative expectations regarding another’s intentions, behavior, actions and decisions” (Massari, Giannoccaro, & Carbone, 2019, p. 345). Divergence in opinions results from stakeholders in a contract having suspicions about each other, whereas agreements rest on trust. However, with a view to achieving consensus decision-making, a strong social relationship may result from a reasonable degree of suspicion between parties (Lewicki, Tomlinson, & Gillespie, 2006; Massari *et al.*, 2019). As early as the 1970s, it was acknowledged that cooperative relationships can benefit from distrust, including for monitoring purposes. One argument was that the avoidance of manipulation, guarantee of adherence, and monitoring of a partner’s conduct are facilitated by some level of suspicion (Kee & Knox, 1970). Creative capacity and personal attentiveness can also be maintained by a significant dose of suspicion (Luhmann, 1979). Nevertheless, in the context of long-term relationships between business parties, distrust has largely been perceived as a “lack of trust” and (mis)understood as a negative and unhelpful concept (Soundararajan & Brammer, 2018). This is not a surprise, as distrust is associated with caution, defensiveness, fear and hypervigilance, which may prevent individuals from collaborating and sharing resources (Lewicki, McAllister, & Bies, 1998). But the assumption that trust is inherently good and should be cultivated to high levels ignores the dangers posed by excessive trust in a business relationship. To date, very few studies have examined distrust in order to fully appreciate its

role in coordinating effective supplier-manufacturer relationships over time. We address this important gap.

We start from the position that both trust and distrust can play an important role in a healthy supply chain collaborative relationship, and both carry potential shortcomings. Trust between parties tends to be significant in close IORs or in the later stages of collaboration, while distrust is usually observed at the beginning of a relationship or after negative events or outcomes have occurred (Connelly, Miller, & Devers, 2012). Ashnai, Henneberg, Naudé & Francescucci (2016) note that trust in business relationships is a complex phenomenon. Such complexity is likely to be aggravated in a supply chain context because collaboration is highly dynamic and involves cultural diversity, cooperation, competition, motive, and drive (Huang, Han, & Macbeth, 2020). The importance of having a supply chain perspective in business relationships is increasingly recognized in industrial marketing management, with calls for studies on both the positive aspects of collaboration and the downsides of power and opportunism in relationships (Ellram & Murfield, 2019). Trust can be enhanced through collaboration in a supply chain (Kwon & Suh, 2004; Lumineau, 2017), but it can be threatened by contracting regimes, which may be perceived as a sign of distrust. Conversely, contracting regimes can also positively influence the relationship between supply chain partners (Weber & Mayer, 2011) by providing confidence to transacting partners. To enable effective supply chain collaboration, then, a balance must be found between levels of trust and distrust. Since little attention has been paid to understanding and explaining the conflict and complementarity between trust and distrust in the process of establishing and maintaining supply chain collaboration (Ashnai *et al.*, 2016; Vanpoucke, Vereecke, & Boyer, 2014), we attempt to answer two crucial research questions: *What is the trade-off between trust and distrust in the process of supply chain partnering relationships? How do trust and distrust complement each other to facilitate effective supply chain collaboration?*

Using a novel, longitudinal, multi-case-study approach, we analyze five pairs of supply chain collaborations in the Chinese automotive industry. We focus on interpreting indicators of trust and distrust to understand how these two concepts develop during these relationships, including in the pre-formation (establishing the relationship) and post-formation (managing the relationship) phases. Using the TCE lens, our study provides three contributions to the literature on trust in supply chain collaboration (SCC). First, we provide novel empirical evidence of trust and distrust's complementary effects, exploring how these concepts work together across different stages of the relationship and in different contexts. In doing so, our research challenges the idea that trust and distrust substitute for each other as ends of a continuum. By evaluating trust and distrust as complements, we provide a more nuanced platform on which to deploy a TCE–trust lens to understand productive and unproductive supply chain collaboration. Distrust in and of itself does not mean a supply chain collaboration becomes unproductive. Second, we distinguish between “competence trust” and “integrity trust” concerning collaboration contracts, which associate with distrust. By distinguishing between competence (skill-based) and integrity (character-based) trust, we provide insights into more nuanced forms of trust predicting the conditions under which supply chain collaborations develop healthy versus unhealthy levels of trust, and the forms of that trust. Third, we offer unique insights into the influence of culture on the interpretation and performance of trust and distrust in international SCC, grounded in the context of the Chinese automotive industry. Specifically, we explain the trust-related culture in Chinese firms and propose two new constructs to the literature on trust and supply chain relationships, namely, “*Guanxi*” and “*Li-nian*”. *Guanxi*, oftentimes revealed in studies of Chinese business relationships, denotes a social relationship between actors. “*Li-nian*” denotes a profound cultural reliance on the value of learning and equates to a preference for advanced ideas, innovative techniques, and progressive attitudes. We reveal that *guanxi* and “*Li-nian*” operate concurrently in the Chinese cultural context to

provide meaning to trust in supply chain collaborations, a feature overlooked among studies to date.

This paper is organized as follows. Section 2 presents the theoretical background of the study, drawing on TCE theory, which establishes the fundamental relevance of trust/distrust to transaction costs throughout the course of SCC. Section 3 explains the novel longitudinal multi-case-study approach employed in the study, followed by case evidence and a discussion of findings leading to three propositions regarding the complementary effect of trust and distrust in Section 4. Finally, Section 5 draws conclusions and identifies research limitations and potential directions for future research.

2. Theoretical background

2.1 Transaction Cost Economics theory

TCE seeks to reduce the costs of transactions by combating efficiency problems found in production and governance (Gulati, 1995; Ring & Van de Ven, 1994). Connelly, Ketchen Jr, Gangloff, & Shook (2016) refer to “ex ante costs” and “ex post costs.” Ex ante costs are the transaction costs incurred prior to the inception of an IOR; ex post costs become apparent after inter-organizational collaboration and knowledge-sharing have begun (Hardy, Phillips, & Lawrence, 2003; Majchrzak, Jarvenpaa, & Bagherzadeh, 2015). The chronological analysis of supplier-manufacturer relationships by Connelly *et al.* (2016) offers a conceptualization that is particularly useful for considerations of trust/distrust in different stages of collaboration. The formation of a collaborative relationship normally takes less time than its maintenance once the relationship is established and, as a result, ex post transaction costs are often far higher than originally predicted. During the pre-formation period of the IOR, both the manufacturer and the supplier are primarily focused on ex ante procedures, such as negotiating terms and conditions that apply to the relationship and the underwriting of legal contracts (Connelly *et al.*, 2016; Williamson, 1993). Although both parties are likely to have systems in place in an effort to improve the predictability of the other’s behavior (Das & Teng, 1998), it is not always possible to accurately and confidently anticipate whether the supplier or manufacturer will perform to a satisfactory level, and thus to anticipate ex post costs, once the working relationship has begun. As a result, there is often a degree of uncertainty present within the supply chain environment and regarding the potential for on-going change within the IOR.

2.2 Trust and distrust in supply chain collaboration

Trust is present at both an individual level and an organizational level. The latter level better reflects the context of SCC (Brinkhoff, Özer, & Sargut, 2015; Connelly *et al.*, 2018; Özer, Zheng, & Ren, 2014). Organizational affiliates’ attitudes toward associates in terms of the culture of trust and cooperative perspectives is defined as interorganizational trust (Zaheer *et al.*, 1998). Trust plays an important role in managing transaction costs in SCC. Kwon and Suh (2004) argue that when supply chain associates seek to nurture cooperation and expand allegiance to the agreement, a fundamental component is trust. Organizations are more open to sharing knowledge and ideas, highlighting strengths, weaknesses and goals, and working together to troubleshoot problems in relationships with other firms if they trust them (Bialaszewski & Giallourakis, 1985; Ghosh & Fedorowicz, 2008; Moorman, Zaltman, & Deshpande, 1992; Özer, Zheng, & Chen, 2011). Özer, Subramanian & Wang (2018) offer insight into the role of the assistance processes — such as information-sharing, advice provision and delegation — that give rise to trust. Panayides & Lun (2009) present empirical

evidence that shows that working to build trust within the relationship can improve supplier responsiveness, and this can be measured by cycle time reduction and strategic flexibility. Meanwhile, Choi, Özer & Zheng (2020) examine trust's impact on high-ranking executives' decisions in supply chain interactions. The benefits pertaining to SCC in complicated contractual scenarios related to trusts include the associated reduction in overall transaction costs, which comprise an amalgam of ex-ante or pre-contractual costs and ex-post or post-contractual cost.

Despite the beneficial role that trust plays in IORs, high levels of trust are argued to likely reduce reliance on contractual agreements, which may result in distrustful or opportunistic behaviors (Dyer, 1997; Gulati, 1995; Langfield-Smith & Smith, 2003; Madhok, 1995). If one party in a highly trusting relationship displays even a small sign that their intentions are not aligned with those of their partner, distrust can begin to develop (Bies & Tripp, 1996; Kramer, 1999; Searle & Ball, 2004). Connelly et al. (2018) explain the vulnerability of trust by distinguishing two types of trust: competence and integrity. The former is based on the competence of a partner, or their experience, reliability, and practical or technical knowledge and skill (Seckler, Heinz, Forde, Tuch & Opwis, 2015). The latter arises from their integrity, or character, personality, honesty and motives. Integrity trust is more challenging to establish and/or repair than competence trust. Also, competence trust does not always reduce transaction costs (Kim, Ferrin, Cooper, & Dirks, 2004). Since integrity trust is predicated upon honesty, it is implicitly accompanied by a decrease in the peril presented by opportunism. This contrasts with competence-based trusts which are founded upon the expectation of reliable performance. According to Connelly *et al.* (2018), IOR partners are willing to assume upfront investments in relation to transaction costs when the trust is based on competence and reliability, but not when the trust is founded upon integrity or honesty. IORs can be asymmetrically affected by these two dimensions of trust (Connelly *et al.*, 2018; Ghosh & Fedorowicz, 2008; Seckler et al., 2015).

Distrust is another concept in the research on trust that often leads to confusion. There is an implicit agreement in the majority of trust research that distrust has a negative connotation on a continuous scale (Kramer, 1999) and is the opposite of trust. As such, distrust is defined as negative reciprocity. Partners are likely to respond and reciprocate negatively if they believe that the framing of sustainability requirements or other associated procedures is unfair. Evidence shows that this negative reciprocity was interpreted as hostility and deception and ultimately as distrust" or "ultimately resulted in distrust" (depending on what party is not trusting) (Soundararajam & Brammer, 2018). On the other hand, distrust has been defined by some psychology theorists as having a formal contract in place, which emphasizes the need for control and legal protection. The focus on controlling and monitoring relationships in contracting regimes may lead to a breakdown in the relationship due to the perception of distrust between exchange parties, particularly when situations appear to lack certainty on relationship continuity (Liu, Luo, & Liu, 2009). Such a phenomenon can be explained by a commonly perceived connection between an arm's-length IOR and a contractual governance mechanism, while trustful collaboration is often associated with a relational governance mechanism (Delbufalo, 2012). Despite this typical negative perception of distrust, some researchers have argued that distrust is not necessarily dysfunctional and may even be healthy in certain circumstances (Lewicki *et al.*, 2006).

Indeed, distrust can play both positive and negative roles in contracting regimes (Connelly *et al.*, 2012; Weber & Mayer, 2011). Traditionally, it has been understood that the use of detailed legal contracts can damage longstanding, close supplier-manufacturer relationships, because such contracts may indicate distrust or caution on both sides, which may ultimately discourage both parties from openly sharing information and resources (Bouncken

et al., 2020; Ghoshal & Moran, 1996). The positive role that distrust can play in IORs relates to the dark side of trust: prospects for engaging in unscrupulous conduct and contextual observations might be limited by a substantial degree of trust (Langfred, 2004; Skinner *et al.*, 2014). Specifically, the hazard of duplicity may be exacerbated for companies when there are insufficient control apparatuses (Shapiro, 1987). Conversely, distrust relies on explicitly detailed contracts that can effectively prevent the hazards of opportunism in IORs (Connelly *et al.*, 2012). Ordinarily, contracts are more formal and specifically rely on courts and other regulatory bodies to resolve conflicts and deal with penalties or sanctions where necessary (McFadyen & Cannella Jr, 2004; Perry-Smith, 2006). As such, distrust of contracting control mechanisms may counteract the dark effects of trust. Distrust can then facilitate protective activities among stakeholders. These can include acting to mitigate impaired understanding or gullibility regarding an associate's motives and initiating productive inquiry. Collectively, these can increase the expectation of harmful behavior, monitoring and suspicion.

As the literature shows, trust is not inherently good, nor is distrust inherently bad in IORs. Recent research has pointed out that both trust and distrust potentially have positive and negative outcomes (Lumineau, 2017). The question is how to balance the trade-off and minimize the costs of the transactions of SCCs.

2.3 Research gap

This study utilizes the theoretical lens of TCE to build on existing literature on trust and distrust in SCCs. In this study, trust is defined as a foundation on which collaboration can be built to achieve successful outcomes in a supply chain (Brinkhoff *et al.*, 2015). A high degree of trust is needed in the context of a supply chain, given the difficulty of monitoring explorative activities (Das & Teng, 1998; Mayer, Davis, & Schoorman, 1995). Effective collaboration requires trust to achieve both performance- and behavior-based objectives, and the prospects for long-term collaboration are determined by the amount of trust established between partners (Cheung, Myers, & Mentzer, 2010). Connelly *et al.* (2012) explore the balance between trust and distrust in IORs and find that manufacturers and suppliers may reap greater benefits from reducing partner distrust than from increasing partner trust. In line with this view, Lumineau (2017) argues that trust and distrust are separate constructs and suggests that the factors contributing to trust are not necessarily the same factors that contribute to distrust. With this in mind, both trust and distrust need to exist in the relationship. To ensure satisfactory outcomes in SCC, it is vital to understand how both trust and distrust can ensure the relationship's satisfactory functioning and longevity. In response, this study investigates the roles of trust and distrust in establishing and maintaining SCCs, from pre-formation processes to post-formation processes, using Connelly and colleagues' (2018) theory of processing relationships. Trust and distrust will be holistically positioned in various types of collaborations, as part of dyad, triad or network analysis (Connelly *et al.*, 2018; Ellram & Murfield, 2019).

3. Research methods

Following the previous discussion, the theoretical narrative for the trade-off between trust and distrust in SCC requires further development as a result of the lack of existing research into this subject area. This study uses the case-study method (Eisenhardt & Graebner, 2007). The case-study method consists of four phases: research design, case selection, data collection and data analysis. Each phase is discussed in more detail below.

3.1 Research design

This study set out to explore how trust and distrust function in SCC. To answer the research questions, we followed the qualitative multiple-case approach (Barratt, Choi, & Li, 2011; Craighead & Meredith, 2008; Sousa & Voss, 2002). Through case-study research, researchers can answer “how” and “why” questions and give thorough explanations of observed phenomena (Barratt *et al.*, 2011; Eisenhardt, 1989; Tran, Zahra, & Hughes, 2019). A retrospective approach was used (Pettigrew, 1990) to understand how trust and distrust evolved across the relationship. We collected longitudinal dyadic data in the form of both the suppliers and manufacturers’ views on the evolution of the relationship, which enabled us to gain a deeper understanding of SCC. Moreover, Rubin and Parrish (2007) and Eisenhardt (1989) explain that the use of appropriate research methods facilitates data collection and analysis and the formation of conclusions, although time, transferability and accessibility pose potential limitations.

3.2 Case selection and data collection

One of the most common problems faced by researchers using the case study method is determining the amount of data, or cases, to use (Sousa & Voss, 2002). This research examined the Chinese automotive industry. Currently, this industry has gained the ability to take a key role in the Chinese domestic market. A fair, effective and gradually maturing competitive market environment has been established, which is more competitive than ever before in an increasingly globalized marketplace (Holweg & Oliver, 2016).

Greater scope and depth of observation can be achieved by using a smaller sample size (Eisenhardt, 1989). Five samples (SCC1–SCC5) were chosen for the study, based on the following criteria: the manufacturers and suppliers had to be inside China; all companies had to have originated in the Chinese market; managers on both the supplier and the manufacturer side had to be assigned already; and their understanding of the expectations for the relationship had to be established and developed. These criteria led to the identification of five SCCs for analysis. The researchers are confident that the sample is representative of SCC activities in the Chinese automotive industry (Han, Huang, & Macbeth, 2018; Huang *et al.*, 2020). It was determined that, since the addition of more cases did not offer any further significant insight into SCCs, the number of cases had reached the theoretical saturation point (Craighead & Meredith, 2008). Collecting the data itself was a complicated process. The necessary data required for the research was collected in line with established protocols, including data collection steps designed to reduce bias, increase reliability and validity and minimize attrition (Selltiz, Wrightsman, & Cook, 1976).

Semi-structured interviews with the primary contact at the organization were conducted. Thirty-four interview, including with manufacturers and suppliers, were carried out until a sample saturation point was achieved (Marshall, Cardon, Poddar, & Fontenot, 2013). The interviews were conducted face-to-face, on an individual basis, and in the interviewees’ native language. This allowed us to create a chronological graph charting the most important events and activities that occurred during each trajectory (Marshall *et al.*, 2013). We created a comfortable environment to ensure that interviewees would be in the best position to openly express their opinions, thoughts and feelings. The interviews were arranged using previously established relationships and were based on direct questioning to facilitate the investigation, exploration and expansion of links in the processing of the relationships and to account for the variations in personal experiences, perspectives and other individual discrepancies. Such interviews made it possible to realize, respond to and expand on research aims and questions,

and left open the possibility to uncover other areas of interest that had not previously been considered. Before each interview, respondents were made aware of the focus and aims of the research in the interest of full transparency.

3.3 The data analysis process

When considering how trust and distrust develop within SCCs in the automotive sector, this study used a cross-case analysis to identify and compare common patterns. We conducted the within-case analysis in two steps. The approach developed by Corley & Gioia (2004) and Gioia, Corley, & Hamilton (2013) provided a foundation for the data analysis and coding in the present study, particularly concerning concept development and theory articulation (see Table 1 and Table 2). The interview data was inputted into a databank to gain a more thorough understanding of the data and the links within it. To illustrate the coding process, we turn again to the five cases. We first began with reducing the data to quotes, sentences or paragraphs that had the greatest relevance to answering the research questions. This procedure allowed us to select first-order codes, which could be used to demonstrate the concepts and quotations. In the second-order code themes, we summarized trust competence and integrity (Connelly *et al.*, 2018) and distrust contract control mechanisms, such as contracts emphasizing control and legal rules (Liu *et al.*, 2009), imposing economic penalties through contractual terms (McFadyen & Cannella, 2004; Perry-Smith, 2006), unfair procedures (Soundararajam & Brammer 2018) etc., which were deduced from the literature as indicated in Table 1. Interview data were then analyzed against the impacts of trust evolution (negative, neutral and positive) and contract control mechanisms (strong and weak), to be further discussed for building a theoretical framework of propositions, in Table 2. We believe this approach aligns with best practice for theorizing from qualitative research advocated by Welch, Piekkari, Plakoyiannaki, & Paavilainen-Mäntymäki, (2011), iterating between interpretive sensemaking and contextualized explanation to come to understand the role of trust and distrust in the five pairs of SCC in our data.

During first-order coding, we sought to comprehend SCCs' history and the evolution of trust from collaboration pre-formation to post-formation. We engaged in axial coding to identify trust and distrust among interviewees at different stages of the SCC process. In this first-order analysis, when considering "competence" and "integrity" within the relationship, this paper noticed that suppliers and manufacturers had different ideas about these two concepts. At the second-order theoretical level, themes, dimensions and the larger narrative – indicators of trust and distrust – were identified and grouped. Table 1 shows the new constructs and themes that iterative axial coding revealed by facilitating data reduction, while new relationships among these constructs were also identified (see propositions). When we have obtained the full set of first-order concepts and second-order themes and aggregate dimensions, we have constructed a pivotal step in our research approach. It is important to note that formulating the data structure and the initial stages of analysis were not linear processes but part of a process-oriented analytical approach (Locke, 1996). This was repeated and continued until all the emerging theoretical relationships were realized and until we discovered no new concepts (Gioia *et al.*, 2013; Tran *et al.*, 2019).

Last, in finalizing the data analyses, iterative axial coding was used to reduce data and unveil new themes and constructs, allowing for further theorization by revealing relationships among these constructs (Wu & Jia, 2018). According to the case evidence and analysis (see 4.1), each relationship stage shows competence and integrity trust but in a different status. We summarize trust competence and integrity change in SCC, suppliers and manufacturers, illustrating different statuses such as negative, positive and neutral (see Table 2). We recognize

that distrust contract control mechanisms originally conceived as strong or weak were applied in the five cases. Nevertheless, the cases show their cultural background when we explored and articulated trust content at the pre-formation and post-formation process.

[Insert Tables 1 and 2 about here]

4. Analysis, findings, and discussion

Using multiple case studies of SCCs, we examined trust and distrust. The results are presented below.

4.1 Case evidence and analysis

During the study, evidence of trust and distrust was present throughout the stages of the collaborations (see Table 1). The cases detailed below provide insight into trust and distrust in automotive SCCs, contributing to a further understanding of institutional dynamics in this sphere (see Table 2).

4.1.1 SCC1: M1 and S1

M1 was founded by European and Chinese parties more than 30 years ago. M1's production departments include research and design, engine production, vehicle production, sales and after-sales services. S1 is a joint venture supplier and provides exhaust system production for M1.

At the pre-formation stage, M1 considers S1 as competent, and this is shown in M1's confidence in S1's technical skills, problem-solving capabilities with different manufacturers and reputation in the automotive industry. M1 further considers the product to be of high quality, with good after-sales services. As a stronger supplier, S1 has seen the benefits of competence trust. Both M1 and S1 show a positive attitude towards competence. Consequently, even if M1 suppresses S1, S1 is still willing to compromise in the relationship. If S1 cannot satisfy the manufacturer's requirements, the latter will impose economic penalties according to the contract. M1's actions reflect the negative integrity to S1 with a strong contract control mechanism.

After the formation of the relationship, S1 consolidated cooperation with the manufacturer and profited from the collaboration. S1 held a stronger competitive position in the industry and wanted to engage in core strategic development with M1. Even so, S1 still feared that products could be recalled or rejected by M1. M1 suppressed S1's bargaining power by competing with other suppliers to reduce dependence. But under the contract condition, S1 did not lose trust, still fully supported M1 and guaranteed the production operation of M1 at the expense of its own interests for a short period. During production, through strengthening the contract control mechanism, operational issues could be openly discussed on an equal platform, which helped M1 and S1 establish confidence in the quality of the products and increase operations flawlessly.

4.1.2 SCC2: M2 and S2

SCC2 was initiated by a government contract. M2 was established in the 1990s, with different international manufacturers. M2 has several thousand employees and tends to select and find suppliers through a complete evaluation system.

M2 expressed trust in S2 by describing S2's advanced technology capabilities. S2 is a clutch components specialist. When M2 innovated or updated the existing platform, they chose current suppliers such as S2, who could share resources and information and design and update their components together with M2. However, given that the arranged contracts stipulated economic punishments for transgressions, there was evidence of distrust. In SCC2, it was only if grave differences and problems arose that the complexity of ending the agreement would be considered worthwhile by M2.

Once the collaboration was established, the two companies had a common aim. M2 carried out cost control and required technology and quality optimization, and classified suppliers (such as S2) into different echelons within product operations. M2 increased the integrity trust of S2 and required S2 to have a high commitment to shared values, and goals. The contract control mechanism was investigated by looking at the discrepancies and idiosyncrasies regarding behavior, values, and beliefs in SCC2. M2 and S2 had different cultural backgrounds. In the current context, M2 and S2 denote the presence of diverse cultural backgrounds. Specifically, M2 indicated the culture of European manufacturers, whereas S2 represented the culture prevalent amongst state-owned suppliers. Thus, M2 can be characterized as procedure-driven and operationally rigorous, whilst M2 was defined by a more pragmatic approach that stressed the importance of efficiency. The focus on practical or procedural drivers differs from the value orientation that characterizes Chinese organizations.

According to Bourdieu (1994), "Li-nian" denotes a profound cultural reliance on the value of learning. Wu & Jia (2018) have suggested that, in a western context, "Li-nian" equates to a preference for advanced ideas, innovative techniques, and progressive attitudes. Hence, according to Wu & Jia (2018), cognitive content cannot be comprehended in the absence of "Li-nian". "Li-nian" is investigated by looking at the discrepancies and idiosyncrasies regarding behaviour, values, and beliefs at a national level in SCC2. A different "Li-nian" is almost always manifested in reactive communication and attitudes as well as differences in interpersonal communication and indirect communication. Trust diminishes if "Li-nian" between two parties does not match (Wu & Jia, 2018). There were differences in behavior and attitudes across the two parties. The most effective and successful collaboration could only be achieved when S2's implementation of "Li-nian" was equal to their own culture and to that of M2. Meanwhile, S2 was aware that the instability in the management team of M2 was likely to intensify threats, and trust was negative. The contract control mechanism should achieve meaningful interactions through committed and stable leadership.

4.1.3 SCC3: M3 and S3

M3 was established in the 2000s. M3 has a significant and sizable production capacity. S3 develops and produces electric power-steering systems. S3's technology development is well regarded across China and has made S3 the leading supplier in China's automotive industry.

In SCC3, S3 had advanced technology and an excellent reputation in the industry. S3 dominated the relationship with M3, because M3 had to depend on S3. M3 used different suppliers and sourcing methods. For standard suppliers, M3 signed a contract that outlined who was responsible for what. If there were problems with the parts, M3 would take all responsibility but lower the sourcing price. M3 developed a capital bond with S3 and exchanged equity to increase trust integrity, loyalty and the capability to develop mutual trust, information-sharing activities, the acquisition of interests and a high level of commitment. In SCC3, a committee held regular supplier meetings, in which suppliers could communicate directly with M3 and discuss the relationship's implementation and its future direction. Interviewees from M3 expressed a reliance on, and even a fear of, S3. M3 tried to reduce the supplier's bargaining power by creating competition among suppliers, which is a complex

process intended to increase profitability. But the process created tensions in trust and integrity. Unfortunately, the lack of Intellectual Property Protection made S3 vicious competition and unwilling to share its technology. As a highly competitive supplier, S3 had dedicated management resources and could access more shared information. Knowledge and information-sharing, particularly as it pertains to intellectual property and compromise, was found to be especially relevant to trust.

4.1.4 SCC4: M4 and S4

M4 is an IJV. M4's international party is a famous automotive manufacturer. S4 is specifically engaged in automotive exhaust system production. All technologies meet strict requirements for clients in terms of quality.

SCC4 was built on a social relationship (Guanxi), and this had a positive impact on M4's performance. Adopting a Guanxi standpoint to analysis SCC actions has been successfully undertaken on the basis of SC (Lawson, Tyler & Cousins, 2008; Matthews & Marzec, 2012). In SCC4, it was difficult to balance Guanxi and the organizational relationship. Villena et al.'s (2011) findings derived their implications from research into the role of the management of opportunism in SCC. The different negotiating styles and value of contracts and more Guanxi (Matthews & Marzec, 2012) illustrate that business relationships in China appear to be built very differently from the way they are in international countries. Compared to other SCCs, M4 chose suppliers first and then established trust with them. However, S4 established Guanxi first and then entered into the SCC with M4. Given that the contracts usually stipulated economic punishments for transgressions, M4 was more likely to work closely with regulators to find regulatory solutions in a spirit of consultative decision-making, rather than use confrontation.

Once the collaboration was established, trust was developed because of the employees' skills and personal relationships, which had a stabilizing effect on the development of the relationship. It is thought that these skills and capabilities improved partners' tolerance of one another, which helped avoid conflict and achieve commitment. A stable relationship is likely to reduce operational uncertainty. Once the relationship had reached a stable, predictable point, sourcing and procurement processes became more efficient, and communication more convenient. Both S4 and M4 had a good understanding and level of trust, so they operated well together.

4.1.5 SCC5: M5 and S5

M5 has four major production bases and eight vehicle production plants. M5 is one of the leading companies in the Chinese automotive industry, offering the broadest range of renowned vehicle brands in China. S5 is a transmission technology product and service supplier. S5 is recognized for its highly skilled workforce, rich experience, and resources.

The relationship in SCC5 lasted five years. S5 considered that their relationship was a distant relationship. S5 signed the contract with M5 based on a Guanxi, but manufacturers distrust the reliability of suppliers. Guanxi influences Chinese companies' institutional environments on the development of trust and information integration between suppliers and manufacturers. One aspect of China's institutional environment is the importance of Guanxi. This significantly affects trust, which subsequently influences two elements of information integration, namely information-sharing and collaborative planning. Furthermore, Guanxi had a direct, positive impact on information-sharing. In the beginning, M5 provided advanced management and facility equipment which were largely lacking in S5. Five years later, M5

ended the relationship, because the two parties could not agree on how to develop it (productively) further. Both parties' needs had to be built into the management of the relationship, including dependence monitoring and relationship control. M5 had a duty to foster S5's growth and provide mutual benefits to the relationship, and M5 needed to consciously incorporate these into its practices.

4.2 Discussion

This research takes a dynamic approach by examining trust and distrust in five samples throughout the pre- and post-formation of collaboration in order to address the research questions. Previous literature shows that the longer the relationship lasts, the higher the degree of trust and satisfaction between the parties, and the lower the likelihood that one will want to withdraw from the relationship (Ring & Van de Ven, 1994). Based on the case analysis, neither great longevity of SCC nor high a degree of trust were definitive indicators of a healthy IOR. For example, SCC5, on the one hand, shows that excessive trust could reduce the motivation to develop individual competence (thus competence trust). Conversely, it illustrates the importance of terminating the collaboration when mutual benefits and the effect of TCE – which are critical for a healthy partnering relationship – disappear. The element of distrust (e.g., strong contract control mechanism), as observed in SCC1 and SCC4, facilitates the development and maintenance of competence trust and mutual benefits between partners by preventing the negative effects associated with integrity trust (not enough or too much) during the course of the collaboration. Our findings on the interactions between integrity- and competence-based trust and the monitoring effect of the distrust mechanism on the evolution of trust throughout IORs fills gaps stressed by Lumineau (2017) and Connelly *et al.* (2018). Details of the contribution, including three propositions that add to extant literature, are discussed in what follows.

First, empirical evidence from case analysis suggests that competence trust tends to be the main motive that brings manufacturers and suppliers together at the pre-formation stage of collaboration. It is expected to promote joint benefits such as reduced transaction costs, knowledge exchange and performance enhancement (see SCC1, SCC2 and SCC3). This observation aligns with the argument by Connelly *et al.* (2018) regarding the importance of competence trust (rather than integrity trust) for investment decisions in advanced IORs (e.g., collaboration, partnering). Companies are more confident about receiving positive reciprocity from collaboration if their partners perform competently.

From the buying perspective, manufacturers tend to select suppliers with advanced technology and an excellent reputation in the industry, making them stronger and situating them at the dominant end of the relationship. Equally, suppliers may accelerate their position in the industry and upgrade their performance by taking a “ride” with competent manufacturers. However, in a manufacturer-supplier relationship, the manufacturer (the buyer) is often the stronger side, enjoying greater power (Johnston & Staughton, 2009; Stafford, 1994). This explains manufacturers' (e.g., M1 in SCC1) conflicting behaviors (e.g., stimulating competition by bringing new suppliers) at the post-formation stage of collaboration, as they fear losing their dominant position in the relationship. Having to compete with others despite being in a collaborative relationship undoubtedly led to a negative impact on S1's integrity trust of M1. Borys & Jemison (1989) pointed out that conflict, in at least some capacity, is unavoidable, and is a permanent feature of SCCs; what is of more interest is how conflict evolves and is handled. The reduced integrity trust did not affect S1's performance and its motivation to collaborate, as a contract signed upon the establishment of SCC1 explicitly defined each party's minimal duties and responsibilities that assured positive reciprocity. In other words, the contract ‘guaranteed’ S1 a worthwhile level of benefits (e.g., M1's competitive

market position), limited what M1 could offer to other suppliers, and prevented performance falls by imposing penalties. The adequate amount of distrust in SCC1 protects the main motive of collaboration. In contrast, the contract control mechanism fails to preserve confidence towards collaborative benefits within SCC2 in the situation of performance inadequacies due to unsteady leadership (and consequently damaged competence trust) and reduced integrity trust because of “Li-nian” discrepancy. Wu & Jia (2018) identified “Li-nian” as critical constructs to understand cognitive content; we furtherly discussed it in the context of trust to explain that cultural value orientation of “Li-nian” in the practical-driven and the procedure-driven. The implementation of “Li-nian” is practical-driven rather than procedure-driven value orientation of Chinese operators (e.g., S2 in SCC2). This is Western operating “Li-nian” performance after being localized in China, bearing new institutional content. Although Connelly *et al.* (2018) argue that integrity trust has a more substantial impact on “ex post costs” reduction than competence trust does, the main motive of collaboration vanishes as competence trust is damaged. In summary, the following proposition is offered as an overarching principle:

Proposition 1. *Distrust contract control mechanisms (i.e., strong contractual agreements) to a certain extent offset the detrimental impact (on collaborative benefits) of reduced/damaged integrity trust. However, such a facilitating role becomes ineffective in the absence of competence trust. [SCC1&2].*

While trust is often perceived as a critical prerequisite for effective collaboration (Goffin *et al.*, 2006) and an effective relational means to reduce opportunism in IORs (Li *et al.*, 2015), it is also referred to as a “poisoned chalice” if inadequately interpreted and dealt with by one or more supply chain partners (Skinner *et al.*, 2014). SCC3 had great potential to develop into a long-term strategic partnering relationship, given a rare symmetric supplier-buyer relationship due to S3’s leading position in novel technology. M3 obtained integrity trust from S3 at the pre-formation stage of collaboration by sharing equity. The hard-earned integrity trust did create a strong bond between S3 and M3 throughout the course of their relationship, which to a great extent stimulated collaborative activities (e.g., information-sharing, knowledge exchange and joint performance improvement) and further enhanced trust development. However, the growing trust – the confidence regarding decisions/reactions – gradually cultivated opportunism in M3 who decided to share S3’s novel technology with other suppliers to obtain bargaining power. As S3 lost intellectual property, so did it lose the integrity trust and the motivation for collaboration. The seemingly trustful relationship enabled by equity-sharing blurred the boundary related to whether the core technology could be shared and, if so, to what extent. The lack of protection of intellectual property, which could have been avoided if an explicit/strong contract control mechanism had been in place, eventually reverted trust, especially integrity trust, to the lowest level. The consequence of excessive trust observed in SCC3 leads to a second proposition:

Proposition 2. *A lack of distrust control mechanisms may increase the risks of opportunity costs because of too much trust. [SCC3].*

In China, some manufacturers establish SCC through a social relationship (Guanxi), which has been observed in both SCC4 and SCC5. These kinds of SCC initiatives do not necessarily involve mutual competence trust at the outset of the collaboration, as seen in SCC1, SCC2 and SCC3. Guanxi is a form of organizational social capital typically observed in the Chinese/Eastern culture of collectivism, in which personal relationships often play a role in IOR (Chen, Chen, & Huang, 2013). Huang *et al.* (2020) argue that Guanxi can be an effective SCC facilitator, as it brings a sense of trust between organizations even at the beginning of a collaborative relationship; gaining confidence in other organizations’ behavior (i.e., integrity

trust) can be a ‘life-long’ endeavor during the course of SCC under a Western culture of individualism. Neither S4 nor S5 held a unique technology-oriented position, as S1, S2 and S3 did, despite being good at what they do. Without personal relationships with the Chinese parties of M4 and M5, S4 and S5 would probably not have had the chance to join the ‘game’ in the first place, given the lack of evidence on their competence. An element of integrity trust that originated from Guanxi initiated both collaborations – SCC4 and SCC5. However, the collaborative relationships evolved into different (opposite) directions throughout the course of collaboration. A detailed contract that clearly defined expectations, responsibilities and norms was signed between M4 and S4 despite Guanxi, which could represent a barrier to or blur the importance of developing strong control mechanisms. As a result, in SCC4, Guanxi-enabled integrity trust promoted collaborative activities, while individual behaviors were ‘monitored’ and ‘guided’ by a contractual control mechanism. M4 quickly developed competence trust toward S4 at the post-formation stage of their SCC. On the contrary, Guanxi evolved to unrealistic beliefs on the part of S5 about what the other party (M5) should offer, and to excessive confidence in the ‘guaranteed’ collaborative benefits, which did not truly reflect the status of the SCC. Without a control mechanism that adequately addressed the purpose and expectation of the collaboration, Guanxi eventually grew into opportunistic behaviors and consequently caused damage to both competence and integrity trust in SCC5. Guanxi may trigger the initiative of collaboration in the absence of competence trust but does not warrant mutual benefits – the principle of TCE. This leads to the third proposition of the study:

Proposition 3. *Effective distrust control mechanisms can foster the development of both competence trust and integrity trust throughout the course of SCC, enhancing collaborative benefits. [SCC4&SCC5].*

3a. Social relationships (e.g., Guanxi) can help establish trust integrity between supply chain partners, which is typically lacking in the early stages of the collaboration.

3b. Trust integrity based on social relationships (i.e., Guanxi) can quickly be endangered by a lack of distrust control mechanisms; this damages trust (competence and integrity) between supply chain partners and violates the principle of TCE.

5. Conclusion, contributions, and future research directions

5.1 Theoretical contributions

This manuscript investigates the concurrence of trust and distrust in supply chain collaboration (SCC) and provides three specific contributions to theorizing and knowledge. First, we provide novel reasoning grounded in a dyadic view of trust and distrust shaped by Transaction Cost Economics (TCE) thinking and reveal trust and distrust’s complementary effects. Distrust in and of itself does not mean a supply chain collaboration becomes unproductive. In contrast to the tendency to view trust and distrust as a continuum and substitutive, we depict trust and distrust as distinct facets to be managed carefully and complementarily in SCC. In turn, we provide a theoretical framework containing three multi-part propositions depicting how these concepts work together across different stages of the relationship and in different contexts. Our research challenges the idea that trust and distrust substitute for each other as ends of a continuum. By evaluating trust and distrust as complements, we provide a more nuanced platform on which to deploy a TCE–trust lens to understand productive and unproductive supply chain collaboration.

Second, we reveal interaction of competence and integrity-based trust in SCC and consider the role of distrust contract control mechanisms and how they may influence variation

among ex post and ex ante transaction costs. In distinguishing between competence trust and integrity trust concerning collaboration contracts, we provide new insights into more nuanced forms of trust predicting the conditions under which SCCs develop healthy versus unhealthy levels of trust, and the forms of that trust. By using longitudinal data, two important facets emerge to our second contribution, and both extend the findings of Connelly *et al.* (2018). To begin, this study reveals new insights into how the stages (pre-formation and post-formation) of SCC create competence and integrity trust and distrust contract control mechanisms, and what exists at different levels of this relationship (responding to Connelly *et al.*, 2012, 2018). Relatedly, our study provides insights how trust develops during the relationship. When trust is built, suppliers and manufacturers can share knowledge, enhance their industry reputation, and foster mutual dependencies. The level of trust between both parties influences their willingness to work with one another. Meanwhile, more dedication, valuing of knowledge, and openness efforts characterize mutual dependency, which initiates the supplier management phase. Collectively then, our study provides new insight into how competence and integrity trust appear to operate in long-term SCCs, the explanation for which originates from a TCE perspective. TCE proposes that different distrust control mechanisms, such as contracts and management style, affect the levels of competence and integrity trust. The lack of a distrust control mechanism such as a contract will increase opportunity costs inside the SCC. Subsequently, regulations, procedural remedies, and penalties are stressed in any official contract that requires management actions.

Third, we offer new insights into the influence of culture on the interpretation and performance of trust and distrust in international SCC, grounded in the context of the Chinese automotive industry. Specifically, we explain the trust-related culture in Chinese firms and propose two new constructs to the literature on trust and supply chain relationships, namely, Guanxi and “Li-nian”. Guanxi, oftentimes revealed in studies of Chinese business relationships, denotes a social relationship between actors. “Li-nian” denotes a profound cultural reliance on the value of learning and equates to a preference for advanced ideas, innovative techniques, and progressive attitudes. In terms of social relationships (Guanxi), parties typically perceive some processes to be unjust at the outset of the relationship. The Chinese culture reflected in SCC in the industry could be defined as relationism (Guanxi). Indeed, scholars have found that collectivism and high-power distance in Chinese culture influence power and commitment in SCC (Choi et al., 2020; Huang et al., 2020; Özer et al., 2014). A “Li-nian” mismatch also shows cultural value orientation difference is almost always manifested in reactive communication and a reactive attitude, and in differences in interpersonal communication and indirect communication. It transpired that in many cases, cultural differences and a lack of cultural understanding hindered supply chain managers from doing their jobs effectively, as anticipating the actions and counteractions of the supplier were made more difficult. Similarly, the provision of adequate stimuli and value propositions for suppliers is more complicated when such misalignment exists. As the collaboration progresses, a personal relationship (Guanxi) between different organizations will not increase the opportunity cost if there are distrust (contract) control mechanisms in place. Moreover, cultural differences impact integrity trust. However, with a distrust control mechanism such as a contract in place, even if integrity trust is very low, the relationship will not be easy to terminate and will increase behavior uncertainty. Guanxi and “Li-nian” operate concurrently in the Chinese cultural context to provide meaning to trust in supply chain collaborations and shape aspects of SCC functioning. The contribution addresses the tendency of literature to date to overlook these important cultural features.

5.2 Contributions for managers, suppliers and manufacturers

Global marketing managers should be aware that the impact of trust on performance and the importance of building trust-based customer loyalty are similar across different national markets. Thus, managers may find it beneficial to use a standardized approach to building trust to establish and maintain customer loyalty across different foreign markets. The examples given in this study are concerned with the start of the relationships, even though all relationship phases are summarized as part of SCC. Where collaborations have been in place for a long time, each party's self-assurance will strengthen, likely based on the SCC's inclusion of various distrust control mechanisms. Furthermore, distrust control mechanisms are more likely to be developed—alongside greater confidence in the relationship—the longer a relationship endures. Indeed, the adoption of casual and official governance techniques for successful SCC has been deemed necessary. Distrust control mechanisms could be used at the beginning of the relationship, while more casual governance could be used as the relationship develops.

5.3 Limitations and future research directions

As with any case-study research, there are limitations to the findings and conclusions generated in this study. First, we limited our study to examples of successful SCC with high-level activities. Nonetheless, our theoretical findings can be generalized. This research has shown expressions of trust and distrust in SCC. Our cases indicate that competence trust is essential and accelerated at the onset of the relationship, while a formal contract as a distrust control mechanism has a significant effect on managing the SCC and affects the level of trust between parties during the relationship. Future research should try to understand the impact of multi-culture working on levels of trust and distrust in SCC. A final limitation is related to our retrospective data collection strategy. We focused on successful SCCs. Despite our efforts to capture a vast amount of data (i.e., by using multiple data collection techniques), our data collection strategy likely restricted some of our ability to obtain a micro-level understanding of essential processes and events. Therefore, we point to real-time research as a viable option to further elaborate on the findings that emerged from our study.

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Table 1. Illustration of the coding process, themes and concepts

Case Information	Aggregate Dimensions	2 nd Order Themes	1 st Order Concepts and Quotations	Emerging theoretical insight
SCC1	Trust	Competence (Connelly <i>et al.</i> , 2018)	“Outstanding supplier resources will become the focus of competition in the future. We [M1] will give priority to the global suppliers, then will also consider costs and cooperate with localized suppliers. We select supplier priority the experience of quality services for the similar level products. We are caring [for] suppliers’ technical skills, problem-solving with different manufacturers, and reputation in the automotive part industry. The advanced supplier has the ability for sharing risk and responsibility. Accordingly, the reliabilities of supplier increase the level of relationship satisfaction.”	Manufacturer realizes the centrality of supplier resources to longer term competitive advantage, requiring productive, trustful relationships, and their maintenance. This cannot be one-dimensional and must rely on the supplier sharing an investment in the collaboration.
		Integrity (Connelly <i>et al.</i> , 2018)	“We [M1] need to have a clear understanding from the strategic perspective, not for the partnership or for suppliers. We do just for ourselves, ensuring own operations.” “After the product lifecycle, we [M1] will bring the new suppliers into the competition; some suppliers have a good industry reputation and control rights, we do not allow monopolization by one supplier.” “We [S1] will fully support the development of M1 and even guarantee the production operation of M1 at the expense of our own interests for a short period.”	Disconnect between M and S would indicate power dependence or imbalance.
	Distrust Contract Control Mechanism	Contract emphasizing control and legal rules (Liu <i>et al.</i> , 2009)	“We [M1] lower the possibility of conflict through contract constraints or early intervention. Protecting our [M1] benefits are also important. Cooperation with suppliers’ depth is different, conflict is inevitable in areas such as cost and profit; however, conflict can be resolved under the precondition of guaranteeing our rights.” “The strong contract control establish confidence in the quality of products and increase operations flawlessly. Following the establishment of the SCC, we [S1] should communicate together and mutually negotiate in dealing with problems that could arise.” “As a strong supplier may accelerate the position shift on the industrial pyramid. We [S1] have to enhance the intelligent supporting capabilities and enter manufacturers’ core strategic development. M1 has to rely on us, even fear us.”	The inevitability of some conflict suggests the need for some minimum contracting to protect the investment of both parties in the SCC. Both sides are aware that a strong strategic relationship creates some vulnerability necessitating at least some contracting.
			“Bring new suppliers into competition and do not allow monopolization to reduce suppliers’ bargaining power. There are a few suppliers in the monopolistic competition market. If we [M1] desire to break through the	

			monopoly and find another supplier, both suppliers and us can form a partnering relationship, and suppliers can apply modifications according to problems proposed by us. Meanwhile, existing goods suppliers can be modified.”	
		Impose economic penalties through contractual terms (McFadyen & Cannella 2004; Perry-Smith, 2006)	“[M1] will terminate the relationship if [M1] discovers problems (quality or operations) and delete the supplier from the suppliers’ pool.”	
SCC2	Trust	Competence (Connelly <i>et al.</i> , 2018)	Complete evaluation system including development, process, field equipment and design capabilities. Embarking on joint projects’ successful experience. Advanced in technology and leading the technology trends in the industry.	A common framework supports trustful efforts to build a productive and even seemingly proactive SCC. A common vision seems central to that, but so seems stability.
		Integrity (Connelly <i>et al.</i> , 2018)	“Our partner [S2] lacks the big picture. We [M2] create a production standard framework and suggest that our supplier follows the framework’s procedures. Accordingly, we could focus on technology innovation and new generation research. However, our supplier considers just being standard is not enough; they do not believe in standard, they pay more attention to details and are lowering the operations’ efficiency. We [M2] consider it valuable to reduce cost, but our supplier will reduce cost directly without any research. The supplier will spend a lot of time and resources to find a way of cost reduction.” The M2 personnel at a high management level are changed frequently, the companies’ policy loses continuity, and contradiction and crisis would subsequently damage the image.	
	Distrust Contract Control Mechanism	Procedure as unfair (Soundararajam & Brammer, 2018)	The relationship between M2 and S2 starts with the government facilitating the collaboration.	Contract seems to enforce trustful behavior even as a distrust mechanism.
		Contract emphasizing control and legal rules (Liu <i>et al.</i> , 2009)	Arrange a contract that stipulates economic punishments for transgressions in accordance.	
		Negative reciprocity and profitability (Soundararajam & Brammer, 2018)	Cost control requires technology and quality optimization, and suppliers’ competition. M2 classify suppliers into different echelons.	
SCC3	Criteria	Competence (Connelly <i>et al.</i> , 2018)	“We [M3] reduce the sourcing price for our low technic (weak) suppliers. At the same time, we have to take responsibility for weak suppliers, e.g., the auto parts recall. We will cover the cost for a recall provided that it seldom happens.”	Suppliers serve different purposes that varies the strength of ties needed (see also Hughes and Perrons, 2011). This appears to initiate some guarding behavior too.
		Integrity (Connelly <i>et al.</i> , 2018)	“We [S3] have a lack of intellectual property protection pathways. The stealing of intellectual property makes us feel negative towards research and design. Our new research outcomes are easily copied by our competitors. Meanwhile, from the cost reduction perspective, the manufacturer tolerates suppliers’ counterfeit and copy. So, as the partner,	

	Distrust Contract Control Mechanism		the manufacturer has to increase the IPP, and we can improve our technology application for them. But we will not share our technology.”	Guarding behavior needed for trust seems to encourage additional contractual distrust mechanisms, possibly as an offset to the time taken for trust to build.
		Contract emphasizing control and legal rules (Liu <i>et al.</i> , 2009)	Communicate with the committee and hold regular supplier meetings, so suppliers can communicate directly with manufacturers. Fear the stronger suppliers. M3 divides suppliers into different levels and sourcing methods. “We [M3] developed a capital bond with key suppliers and exchange equity for loyalty.” M3 also involved in supplier sub-branch IJV or subsidiaries.	
		Negative reciprocity and profitability (Soundararajam & Brammer, 2018)	Profit through suppliers’ competition. Manufacturer tolerates suppliers’ counterfeit and copy; lack of intellectual property protection makes suppliers vicious competition. Suppliers will not share technology through lack of IPP.	
SCC4	Trust	Integrity (Connelly <i>et al.</i> , 2018)	First is ability – what the supplier can do. The second is history – what supplier did previously. The third is attitude – what will the supplier achieve? Honesty and credibility are important.	Historical actions frame trust along with ability and attitude.
		Competence (Connelly <i>et al.</i> , 2018)	“When we [M4] select suppliers, from the important to the basic capabilities, such as communication platform and ability, understanding the business rules and laws.”	
	Distrust Contract Control Mechanism	Procedure unfair (Soundararajam & Brammer, 2018)	Relationship between M4 and S4 is the building of social relationship (Guanxi).	Guanxi important to trust and so transgressions are potentially harmful if generate rippling effects. Guarded against by contractual distrust mechanisms.
		Contract emphasizing control and legal rules (Liu <i>et al.</i> , 2009)	Arrange contracts that stipulate economic punishments for transgressions in accordance. Work closely with regulators to find regulatory solutions in a spirit of consultative decision-making, rather than confrontation. Skills and high-level social relationships stabilize the collaboration. Improve a partner’s tolerance of mutual behavior and avoid conflict to achieve commitment. Efficient sourcing and procurement processes and convenient communication.	
SCC5	Trust	Integrity (Connelly <i>et al.</i> , 2018)	“[M5] pressure to reduce prices will be transferred to us [S5] and suppresses us. However, we also face a cost pressure as the prices of the raw materials, resources and labor force are constantly increasing. Dual pressures make our profitability decline. In addition, as there are a large number of suppliers for M5, we have to adopt improper ways of surviving; thus, the industrial competition order is breached.”	M and S are in a semi-symbiotic relationship, but this can become abusive if the M advantages on the S to solve its problems without care and reciprocity. Resource sharing is one example of a mitigation.
		Competence (Connelly <i>et al.</i> , 2018)	“[M5] provided advance managing and facility equipment. According to the five-year relationship, the manufacturer required us to update our product platform by ourselves, unless we reduce our price. We [S5] hope that the manufacturer not only makes orders for us but also provides more	

			facilities and information technology to us. Meanwhile, in governing the relationship, we could have more voices, we want them to listen to us.” The manufacturer had a duty to foster the supplier growth and provide mutual benefits.	
	Distrust Contract Control Mechanism	Procedure unfair (Soundararajam and Brammer, 2018) Contract emphasizing control and legal rules (Liu <i>et al.</i> , 2009)	The relationship between M5 and S5 was established through social relationship (Guanxi). “We [M5] need both of us should balance the Renqing and Contract, including dependence on monitoring and relationship control.” “We [M5] developed and produced products in accordance with our standards and send the engineers to provide technical support and research assistance for the local suppliers, but some of them are the least technology oriented. We try to trust these suppliers, but we must put in more effort.”	Contract control may prevent unfair imbalances to help support guanxi.

Table 2. An illustration of trust and distrust in supply chain collaboration across and within each case

Case Sample		Relationship Stage: Pre-formation			Relationship Stage: Post-formation		
		Trust Criteria		Distrust	Trust Criteria		Distrust
		Competence	Integrity	Contract control mechanism	competence	Integrity	Contract control mechanism
SCC1	M1	+	-	Strong	+	-	Strong
	S1	+			+		
SCC2	M2	+		Strong	+	+	Strong
	S2	+				-	
SCC3	M3	+		Weak	+	+	Weak
	S3	+	+		+	-	
SCC4	M4		+	Strong	+	+	Strong
	S4	+	+		+	+	
SCC5	M5		+	Weak	-	-	Weak
	S5	+	+		+	-	
Note: + positive; - negative; blank means neutral; M means manufacturer; S means supplier							