

Trustworthiness, Trust, and Control in Sino-German Business Cooperation

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Forming cross-border cooperation has become a popular strategy for companies to act successfully in today's global marketplace. Despite their surging popularity, international cooperative arrangements are difficult to handle. Literature highlights that both mutual trust of business partners and control of the partner's behavior contribute to the cooperation's performance. So far, however, there is little empirical evidence on how both factors operate in different national business environments. Differences in national cultures and labor institutions may influence the way in which trust in and control of a foreign business partner is perceived and developed. A survey of 40 Chinese and 50 German small and medium-sized enterprises (SMEs) involved in Sino-German cooperation addressed trust formation, control, and performance. The results suggest that in German SMEs ascriptions of benevolence, integrity and predictability play an important role in trust-building, while the partner's competence did not emerge as a strong antecedent of trust. In contrast, for Chinese SMEs, only the perception of the partner's benevolence significantly contributes to the development of trust. In addition, data reveal that - depending on the SME's home country - exercising control over the cooperation's transactions differently relates to trust. In German SMEs trust and control show a reciprocal relationship, i.e. relying on formal controls will be more (less) intense when there is a low (high) level of trust. On the other hand for Chinese SMEs trusting the German business partner does not imply less exercise of controls. Trusting neither substitutes nor supplements control mechanisms in the relationship. Finally, it was found for SMEs from both countries that trusting the partner constitutes a more effective factor for the collaboration's economic success than exercising formal controls. In sum, this research suggests that in order to fully understand the role of trust and control in cross-border business relationships, it is necessary to look at the socio-cultural contexts from which the partnering companies and individuals originate.

Keywords: Trust, control, international business collaboration, small and medium-sized enterprises.

1. Introduction

Companies worldwide become increasingly involved in cross-border business activities. An organization's competence to manage different forms international cooperative arrangements such as research and development projects, distribution partnerships, licensing agreements and joint ventures has become an important source of competitive advantage. The significance of managing international business cooperation is reflected in the extensive literature on this topic (for a review see Buckley and Casson 2010; Christofferson 2013; Forsgren and Johanson 2014; Gomes, Barnes and Mahmood 2016).

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However, international business partnerships do not only represent a means to survive in today's global marketplace but also constitute a source of risk - a fact, that is reflected in the high failure rates of business partnerships (Das and Teng 2000; Gomes et al. 2011; Hofstede 2010; Reus and Ritchie 2004). One of the most fundamental risks in business partnerships is the relational risk, i.e. the risk that a partner acts opportunistically and hence, no mutually satisfactory cooperation can be attained (Das and Teng 2001; Şengün and Wasti 2007; Vlaar 2008). This type of risk seems especially important in the context of international business partnerships since cooperating *internationally* – compared to cooperating *intra-nationally* – is challenging for several reasons: Written contracts are difficult to enforce due to national differences in the legal system; a partner's opportunistic tendencies may remain undetected because of infrequent encounters; reliable information about a partner's reputation is lacking. Thus, in order for business partnerships to work successfully, an effective strategy for managing relational risk is important.

Fundamentally, two alternative strategies for handling relational risk are distinguished in the literature: exercising controls and trusting the partner (e.g. Das and Teng 2001; De Man and Roijackers 2009; Faulkner 2001; Şengün and Wasti 2009). The trust-centered approach argues that building trust among the business partners is of paramount importance to the collaboration's success. As a consequence, numerous empirical studies have examined the development and impact of mutual trust in international business cooperation (Child and Möllering 2003; Fink and Kessler 2010; Huff and Kelley 2003; Krishnan, Martin and Noorderhaven 2006; Robson, Katsikeas and Bello 2008; Silva, Bradley and Sousa 2012).

Other studies focus more closely on the use of control mechanisms (Kumar and Khanna 2000; Newburry and Zeira 1999; Wang, Wee and Koh 1998). The control-centered approach proposes a wide range of formal (e.g. written contracts) and informal mechanisms (e.g. visits to the partnering company) that partners establish to direct business directions toward a mutual successful completion (Sundaramurthy and Lewis 2003). Yet, even though both trust and control are supposed to be central contributing factors to a collaboration's success, the relationship between the two concepts is far from clear (Costa and Bijlsma-Frankema 2007; Puranam and Vanneste 2009; Yang, Zhou and Jiang 2011). Scholars have either argued that trust and control operate separately, or are mutually supportive, or remove each other (Hsieh and Rodrigues, 2014; Mellewigt, Madhok and Weibel 2007; Möllering 2005; Vlaar 2013). These long-standing disputes and conflicting results prevent us from developing a thorough understanding of the impacts of trust building and control mechanisms on the outcomes of business cooperation.

Cross-border partnerships usually involve different national cultures and societal institutions. Despite a magnitude of studies that have explored phenomena like trust and control in business partnerships, relatively few scholars have directly linked different cultural and institutional backgrounds with the formation of trust as well as the application of control mechanisms in cooperative relationships (Bachmann 2011; Ertug et al. 2013; Huff and Kelley 2003; Li 2013).

This paper contributes to the field of international business cooperation in several ways. Building on the above-mentioned research gaps the objective of this paper is to advance understanding of how trust and control in Sino-German business partnerships influence each other as well as the performance of international business cooperation. It is shown empirically that the different institutional and cultural contexts which are involved in Sino-German business cooperation impact on the development of trust in one's business partner as well as on the contingent working of trust and control as transaction safeguards in cross-border business relationships.

China provides an ideal setting in which to test the influence of institutional and cultural contexts on the choice of transaction safeguards for international business relationships. The two

countries' contrasting values, norms, and economic institutions promise novel and context-sensitive insights into the functioning of trust and control as governance mechanisms. Compared to Germany, the Chinese business environment is known for their weak institutional support and guarantees regulating against such practices as late payments, unfair pricing, and ignoring intellectual property rights (Kaufmann, Kraay and Mastruzzi 2007; Zhou and Poppo 2010). In addition, Chinese collectivistic values allow for interacting more opportunistically and less cooperatively with a foreign business partner who usually are considered outgroup members (Koch and Koch 2007). Therefore, business transactions in China are supposed to be strongly dependent on trustful relations between business partners. Additionally, trusting relationships may be complemented by control mechanisms to ensure that a partner acts in a cooperative, non-opportunistic fashion (Yang, Zhou and Jiang 2011).

This paper not only contributes to the analysis of the trust-control-nexus in international business collaboration but will also provide practical recommendations for the choices to rely on trust and/or control strategies in different cultural and institutional contexts. A major implication for managers directing international business collaboration will be that they have to check whether the partner's environment enables effective legal safeguards against opportunistic partner behaviors before they invest in costly control mechanisms.

The remainder of the paper proceeds as follows: First, a literature review is provided and central concepts of the study are clarified. Then the research hypotheses are presented. The next two sections describe the research design and the empirical results of the study. The paper concludes by discussing the results and reflecting on their significance for future research on trust and control in the international business context.

2. Literature Review

2.1 Definition of Terms

In business partnerships, the partners often make cooperation specific investments, share valuable know-how, or refrain from competition with each other. These actions provoke vulnerability. Even though the partners agree to cooperate, the risk still exists that the collaborating companies "may not work toward the mutual interests of the partners and that they may not cooperate in a manner specified in the alliance arrangement or as expected by their partners" (Das and Teng 1996: 831). In order to overcome that relational risk, two alternative approaches have been proposed: developing trust in one's business partner and/or exercising controls over him (Vlaar, Van den Bosch and Volberda 2007; Puranam and Vanneste 2009).

The organizational and management literature on *trust* is extensive and reveals various conceptualizations of trust (for recent reviews see Dietz and Den Hartog 2006; McEvily and Tortoriello 2011; PytlikZillig and Kimbrough 2016). A review of the multidisciplinary literature on trust shows that most of the previous definitions have three constituent parts in common: (1) Risk is a prerequisite for trust to arise. The risk is defined as the potential of negative outcomes for the trustor if the trustee does not prove trustworthy (Rousseau et al. 1998). Lewis and Weigert aim at the condition of risk when they state "...if one were omniscient, actions could be undertaken with complete certainty, leaving no need, or even possibility, for trust to develop" (1985: 970). (2) Trust is based on a set of beliefs the trustor holds about the trustee's characteristics, in particular competence, benevolence, integrity and predictability (Dietz and Den Hartog 2006). These beliefs constitute an assessment of the partner's *trustworthiness*. (3) While trustworthiness is a quality that the trustor attributes the partner, trusting is a conclusion the trustor draws for his own actions. Beliefs of the other party's trustworthiness stimulate the

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trustor's willingness to put its fate in the hand of the trustee and to take actions which make him vulnerable to the trustee (Mayer, Davis and Schoorman 1995; Schoorman, Mayer and Davis 2007). Trust associated behaviors might be disclosing potentially damaging information to the partner, reducing the observation of the partner's behavior or surrendering control over valuable resources. Thus, incorporating these arguments, *trust* is defined as a willingness to rely on another party under a condition of risk based on positive evaluations of the competence, intention, and behavior of the trustee (for similar definitions see Dietz and Den Hartog 2006; Huff and Kelley 2003; Inkpen and Currall 2004; Schoorman, Mayer and Davis 2007; Rousseau et al. 1998).

Collecting evidence of the trustworthiness of the partner is just one source for confidence in the partner's cooperation. The extant literature on control in inter-organizational cooperation suggests the application of control mechanism as a second source. The term *control* is widely used in organization theory and practice (Sundaramurthy and Lewis 2003). Its definition varies among scholars which has led to the fact that "control is referred to simultaneously as an organizational setup, a process of regulating behaviors, and an organizational outcome" (Das and Teng 1998: 493). In the context of business collaboration the concept of control involves monitoring as well as influencing the partner's behavior and its outcomes. In sum, control refers to the actions one partner develops in order to influence the other partner's behaviors in a way that helps to attain the partnership's goals (Inkpen and Currall 1997). Control includes a broad range of formal and informal (social) governance mechanisms (Geringer and Hebert 1989). Formal controls are codified in rules and procedures. They also involve regular and explicit information transfer. Informal control utilizes values and norms to foster a partner's desirable behavior. The latter is more uncertain and embedded in the social relations between the partners (Das and Teng 1998). While trust reflects the perceived likelihood of desirable actions of the trustee, control mechanisms are enhancing the occurrence of cooperative behaviors by influencing the partner's behaviors (Das and Teng 1998).

Both, trusting the partner as well as exercising controls over the partner are measures to reduce uncertainty regarding another's future conduct. Societies feel more or less comfortable with ambiguous situations and an unpredictable future. To capture this aspect of social life, in his seminal work on national culture and its impact on business Hofstede (1980) proposed the term *uncertainty avoidance*. Subsequently, the GLOBE study program (House et al. 2004) adopted uncertainty avoidance as a basic concept for classifying social practices as well as values. Uncertainty avoidant cultures consider ambiguous or unpredictable events as threatening and try to control them by developing and enforcing formalized rules and procedures. People from countries with high uncertainty avoidance scores prefer stability and order. They only take moderate and carefully calculated risks. In a low uncertainty avoidant country people are more comfortable with ambiguity and unpredictability. They take risks and are less dependent on strict social norms and formalized practices. Laws and rules are handled flexibly in order to suit the situation.

According to Hofstede's country scores (Hofstede and Hofstede 2005), Germany ranks in the discussion of uncertainty avoidance higher than China. The GLOBE research has found comparable results (Sully de Luque and Javidan 2004). Germany outruns China on this dimension. Therefore it can be stated that Chinese people generally are more comfortable with uncertainty, while German people are more disposed to avoid or control uncertain situations.

So far, only very few scholars have directly linked trust in cross-borders business relationships to the societal cultures involved in the transactions (Ertug 2013; Noorderhaven 1999). The level of uncertainty a society considers tolerable may influence the development of trusting relationships between business partners (Doney, Cannon and Mullen 1998). In high uncertainty

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avoidant countries it is likely that trustors place a high value on multiple evidence of a partner's trustworthiness. That evidence helps to convince the trustor that the risk to be the subject of detrimental actions on the part of the business partner is minimal. In particular, multiple proofs of trustworthiness is important, when the trustor knows that his partner belongs to a country where adherence to norms and rules may be flexible and situation-specific. Conversely, people from low uncertainty avoidant countries deal more easily with risk and may rely their decision to trust on a limited set of trustworthy partner attributes. Thus, the first hypothesis is as follows:

Hypothesis 1: *In Sino-German business cooperations German companies value a broader array of trustworthy partner behaviors to develop trust than Chinese companies.*

Trust based on the perception of the partner's trustworthiness and control have been viewed as substitutes by many researchers, since both are instrumental in contributing to a high level of confidence that the partner will act in the best interests of the cooperation (Inkpen and Currall 2004; Knights et al. 2001; Long and Sitkin 2006; Mohr 2007; Vlaar, Van den Bosch and Volberda 2007; Wuyts and Geyskens 2005). A negative or substitutive relationship implies that perceiving trustworthiness and developing trust reduces the need of applying control mechanisms. Otherwise, a low level of trust in the partner leads to attempts to install control mechanisms. This argument gains even more weight when one keeps in mind, that trust building as well as implementing control mechanisms are costly for companies (Creed and Miles 1996; McEvily, Perrone and Zaheer 2003; Poppo and Zenger 2002). As expressed in Hypothesis 1 it was expected that people from a high uncertainty avoidant society build trust based on a broad range of trustworthiness criteria. Consequently, a higher trust level in these societies makes excessive controls more redundant than in low uncertainty avoidant societies, where less importance is placed on different trustworthy attributes. For the latter, a high trust level does not automatically lead to a lowering of the control level. Trust and control work as a parallel mechanism to increase confidence in the partner cooperation (Das and Teng 1998). Hence:

Hypothesis 2: *The negative relationship between trust and control will be stronger for German companies than for their Chinese counterparts.*

Scholars increasingly recognize the role that trust plays in the success of cross-border business partnerships. A sizable amount of research resulted in mixed findings on this issue (Fink and Kessler 2010; McEvily, Perrone and Zaheer 2003; Silva, Bradley and Sousa 2012; Van de Ven and Ring 2006). Trust does not always improve a cross-borders cooperation's success and scholars have recognized that the relationship between trust and cooperation success may be contingent on moderating variables. In a survey of 126 international alliances Krishnan, Martin and Noorderhaven (2006) found that the relationship between trust and international alliance performance depends on the level of behavioral uncertainty, i.e. the difficulties in predicting and understanding the actions of the business partner. Trust mattered more to performance under high levels of behavioral uncertainty. Given that German and Chinese business partners are embedded in rather different institutional and cultural environments, it was expected that both sides experience a high amount of behavioral uncertainty, magnifying the positive impact of trust on the cooperation's success. The following hypothesis is proposed:

Hypothesis 3: *The more trust one partner in a Sino-German business cooperation has in his counterpart the stronger its success.*

Based on arguments from agency theory and transaction cost theory scholars have proposed a positive relationship between control and an international business cooperation's success (Dyer 1997; Ramanathan, Seth and Thomas 1997; Sundaramurthy and Lewis 2003). Yet, empirical research has produced inconsistent results and the relation of control and business success of

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partnering companies is far from clear (Child and Faulkner 1998; Geringer and Hebert 1989; Vlaar, Van den Bosch and Volberda 2007). Based on the reasoning used for the development of Hypothesis 3 it was expected for control to have a positive impact on a collaboration's success. Control may act as an alternative approach toward reinforcing partner behaviors that are beneficial for the cooperation's goals. This positive impact should be particularly strong when behavioral uncertainty is considerable and limits the partner's capacity to act. Thus, it is proposed:

Hypothesis 4: *The more control mechanisms one partner deploys in a Sino-German business cooperation the stronger its success.*

3. Methodology

3.1 Sample

To define the sample two approaches were used. First, the Delegation of German Industry and Commerce in China was contacted and asked for their support in identifying German small and medium-sized enterprises (SMEs) which collaborated with Chinese partners. Second, several international trade fairs in Germany were visited in 2012 in order to contact German and Chinese companies.

These two approaches resulted in the identification of 81 German and 152 Chinese companies. In 2013 a questionnaire was mailed to the key-informant of each company who had a primary responsibility for managing the day-to-day relationship with the partner. The response rate for the German sample was 63 % and 26 % for the Chinese sample. Usable questionnaires were obtained from 51 German respondents and 40 Chinese respondents. The main industries covered by the sample are engineering (24%), automobile (19%), and electronics (22%). A majority of the companies has less than 250 employees. The most frequent forms of collaboration are the equity joint venture (58%), followed by distribution partnerships and contract production (each about 20%).

3.2 Measures

The questionnaire was fully structured and the responses had to be given on a 5-point Likert-type scale ranging from (1) 'strongly disagree' to (5) 'strongly agree'. Using the back-translation strategy a German and a Chinese version of the questionnaire was constructed with multiple-item scales for trustworthiness, trust, control, and a cooperation's performance. Items that measured the partner's trustworthiness were addressing four categories of trustworthiness: benevolence, integrity, predictability and competence (Dietz and Den Hartog 2006). Benevolence is measured by five items capturing a genuine concern for the welfare of the partner (e.g. "The partner protected our interests before third partners"). Cronbach's alpha was .85. The integrity scale includes five items addressing the partner's adherence to principles of fair and honest interaction (e.g. "The partner canceled agreements"). This scale had a Cronbach's alpha of .78. Three items directed to the partner's reliability and consistency formed the predictability scale with a Cronbach's alpha of .71 (e.g. "The partner fulfilled his contractual obligations"). Competence was measured with a three-item scale covering different capabilities to contribute to the cooperation's success (e.g. "The partner delivered unsatisfying quality"). The coefficient alpha for this scale was .75. These antecedents of trust were selected by surveying the literature (Butler 1991; Cummings and Bromiley 1996; Dietz and Den Hartog 2006; Schindler and Thomas 1993).

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Three items were designed to measure organization-oriented *trust*. The internal consistency of the trust scale is .89 (Cronbach's alpha). A sample item is "In our business relationship reigns a high level of mutual trust". *Control* was measured by using five statements about the use of specific formal as well as informal control mechanisms. The selection of control mechanisms was guided by the existing literature on control in business cooperation (Child and Faulkner 1998; Geringer and Hebert 1989; Mellewigt, Madhok and Weibel 2007; Mohr 2007). The items were combined into one scale that reflects the extent of controls one business partner deploys in the relationship (e.g. "We signed detailed contracts with our partner"). Cronbach's alpha for this scale was .76.

As the participating companies were not willing to provide 'hard' data about the *collaboration's success*, its performance was measured by a three-item scale requiring the respondents to evaluate the cooperation's performance (e.g. "We are satisfied with the cooperation's performance").

Prior research suggested that the length of a relationship affects the development of trust and control mechanisms as well as the cooperation's performance (Krishnan, Martin and Noorderhaven 2006). Therefore, the cooperation's duration was included as a control variable. Respondents were asked to indicate the number of years the cooperation had been in existence.

4. Findings

Table 1 reports the means, standard deviations, and correlations for each of the measures in the study both for the German and the Chinese sample.

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Table 1 Means, Standard Deviations and Correlations of Study Variables by samples

German SMEs		Chinese SMEs											
	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	<i>Mean</i>	<i>SD</i>	
1. Trust	3.25	1.24	–	.08	.66 ^{xx}	.41 ^{xx}	.31 ^{xx}	.23	.61 ^{xx}	.16	3.81	.94	
2. Control	3.31	.89	-.41 ^{xx}	–	.28	.17	.33 ^x	.06	.10	.16	3.28	.71	
3. Benevolence	3.02	.92	.71 ^{xx}	-.31 ^x	–	.52 ^{xx}	.42 ^{xx}	.17	.46 ^{xx}	.41 ^{xx}	3.74	.58	
4. Integrity	2.92	.93	.73 ^{xx}	-.43 ^x	.63 ^{xx}	–	.54 ^{xx}	.44 ^{xx}	.44 ^{xx}	.38 ^x	3.54	.54	
5. Predictability	3.36	1.03	.69 ^{xx}	-.50 ^{xx}	.56 ^{xx}	.75 ^{xx}	–	.24	.31	.30	3.90	.56	
6. Competence	3.25	1.09	.45 ^{xx}	-.51 ^{xx}	.36 ^x	.62 ^{xx}	.45 ^{xx}	–	.17	.12	3.13	.86	
7. Performance	3.25	1.16	.77 ^{xx}	-.50 ^{xx}	.66 ^{xx}	.73 ^{xx}	.70 ^{xx}	.54 ^{xx}	–	.16	3.80	.59	
8. Duration	5.81	3.84	.07	-.10	.18	.11	.10	.08	.22	–	6.35	5.70	

Notes: ^{xx} $p \leq 0.01$ (two-sided); ^x $p \leq 0.05$ (two-sided); $n_1 = 50$ (German SMEs); $n_2 = 41$ (Chinese SMEs); correlations for the German sample are listed below the diagonal; correlations for the Chinese sample are above the diagonal.

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As all variables were measured using a single questionnaire and a single respondent per company all the variables used in the regression analysis were checked for common method bias by conducting Harman's (1967) one-factor test. An unrotated principal factor components analysis revealed 7 factors with eigenvalues greater than 1 which together accounted for 72% of the total variance. The first factor explained only 30% of the variance. Based on this check it can be excluded that a common-method bias plays an important role in the findings.

Hypothesis 1 predicts that German managers utilize a broader evidence of trustworthy behaviors for developing trust in their Chinese partners than vice versa. Two regression models were employed. The first one shows the effects of the control variable duration of collaboration on trust. The regression coefficients for both samples did not reach the level of significance, suggesting that length of collaboration and trust are not correlated. The second regression added the explanatory variables benevolence, predictability, integrity and competence into the regression. The Variance Inflation Factor (VIF) for all predictor variables showed a range between .828 and .996, indicating that there are no substantial problems of multicollinearity. Multicollinearity was also not evident for any of the other regressions models discussed below. As can be seen from the regression analyses reported in Table 2 in the German sample the variables benevolence, integrity and predictability of the Chinese business partner are positively related to trust in that partner. For the Chinese sample, only the perception of a German business partner's benevolence was a significant predictor of trust. This supports Hypothesis 1. In both samples, a business partner's competence does not contribute to the predictive power of trustworthiness.

Table 2: Regression analysis: dimensions of trustworthiness with trust

	Sample	
	German	Chinese
Benevolence	.383**	.611**
Integrity	.269*	.048
Predictability	.264*	.004
Competence	.033	.100
R	.816	.666
R ²	.666	.443
F	22.916**	6.971**

Notes: ** $p \leq 0.01$; * $p \leq 0.05$; one-sided significance levels reported; standardized regression coefficients shown.

Hypothesis 2 proposes that for German business partners the relationship between trust and control is more negative than for Chinese partners. Table 3 reports the results of a linear regression analysis with the length of collaboration as a control variable and trust as a predictor of control. Data from the German sample show that trusting the Chinese partner results in a smaller amount of control. For the Chinese sample trust level and control level are not affected by each other. Therefore, Hypothesis 2 is supported.

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Table 3: Regression analysis: trust with control

	Sample			
	German		Chinese	
	Model 1	Model 2	Model 1	Model 2
<i>Control variable</i>				
Cooperation length	-.095	-.070	.156	.148
<i>Independent variable</i>				
Trust		-.391**		.053
R ²	.009	.161	.024	.027
Δ R ²	.009	.152	.024	.003
F	.423	4.319**	.946	.513

Notes: ** p ≤ 0.01; * p ≤ 0.05; one-sided significance levels reported; standardized regression coefficients shown.

Finally, it was suggested that trust, as well as control, contribute to a cross-border collaboration's success. A regression analysis with trust and control as predictors of the cooperation's performance supports the positive relationship of trust with the performance for both samples as predicted in Hypothesis 3. The regression coefficients for trust from both samples are significant and in the hypothesized direction (Table 4). But, the results for control contradict the expected positive impact of control. In the German sample, the reported regression coefficient is significant but negative, indicating that a high intensity of trust is detrimental to the collaboration's success. In the Chinese sample, the regression coefficient for control is not significant. Hypothesis 4 is thus not supported.

Table 4: Regression analysis: trust and control with performance

	Sample			
	German		Chinese	
	Model 1	Model 2	Model 1	Model 2
<i>Control variables</i>				
Cooperation length	.217	.150	.155	.054
<i>Independent variables</i>				
Trust		.687**		.602**
Control		-.243**		.047
R ²	.047	.707	.024	.383
Δ R ²	.047	.659	.024	.358
F	2.282	35.307**	.940	7.437**

Notes: ** p ≤ 0.01; * p ≤ 0.05; one-sided significance levels reported; standardized regression coefficients shown.

5. Discussion

This research makes several contributions to the extant literature on trust and control in inter-organizational cooperation. One primary purpose of the study was to test whether the embeddedness of trustors and trustees in different socio-cultural contexts promotes specific relationships between trustworthiness, trust, control and performance. It was of particular interest to find out whether managers from high uncertainty avoidant societies develop trust in their foreign business partners and rely on control mechanisms in different ways as managers from low uncertainty avoidant societies. While Mayer, Davis and Schoorman (1995) assert that trust formation universally builds upon the perception of a partner's ability, benevolence and integrity this research demonstrates that there are differences in the salience of antecedents across countries. The results provide clear support for the assumption that members of a high uncertainty avoidant country relative to members of a low uncertainty avoidant country utilize more criteria of trustworthiness for the development of trust. This makes it easy for the trustor from a high uncertainty avoidant culture to refrain from the exercise of control after a trust relationship has been established. It was also observed that the attribution of the partner's benevolence is a good foundation for trust-building in both countries.

The present study emphasizes that for Chinese business partners trust in and control of the German partner are not related to one another. High levels of trust in the German partner correspond to low or high levels of control a Chinese company exerts over the German partner. This evidence confirms that for Chinese business partners the substitutability of trust by control is limited (Tsui-Auch and Möllering 2010). One reason leading to this result may be the status of China's legal system. Although during the last two decades many legal reforms with implications for the business sector have been put forward, the enforcement of laws and regulations remain a source of uncertainty for Chinese as well as foreign companies (Yang, Zhou and Jiang 2011). Regional interpretations of legal norms vary tremendously (Boisot and Child 1999). On the contrary, for German companies trust seems to be a substitute for control. Control becomes less important as trust increases. This finding implies that a German partner, who exerts a high (low) level of control over the Chinese partner, has developed a low (high) level of trust in the other partner. These results concur with a previous investigation of the relationship between trust and control in Sino-German equity joint ventures (Mohr 2007). While the data from German managers of the joint ventures showed a negative relationship between the extent of trust and the application of strategic control mechanisms the relationship between both variables was insignificant in the sample of their Chinese colleagues.

Finally, concerning the success of cross-cultural cooperation, the regression analyses of the variables 'trust' and 'control' indicate that trust has a significant effect in both samples. This result corresponds to prior research showing that inter-organizational trust is positively related to performance in business collaboration (Aulakh, Kotabe and Sahay 1996; Inkpen and Currall 1997; Mohr 2007; Park and Ungson 1997; Saxton 1997; Silva, Bradley and Sousa 2012; Smith and Barclay 1997). The higher the trust, the more successful the working relationship will be. The multitude of studies conducted in different industries and countries that found a positive relationship between inter-organizational trust and collaboration's performance suggest that it is not a cliché to argue that trust is crucial to an inter-organizational collaboration's success (Inkpen and Currall 1998).

In contrast with the numerous literature suggesting the importance of control mechanisms for a collaboration's success (e.g. Sundaramurthy and Lewis 2003; Vlaar, Van den Bosch and Volberda 2007) this study does not confirm this relationship. In the German sample, even a

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negative relationship between partner control and performance was found. This finding might reflect the different economic contexts in which the partnerships in this study are embedded. From the perspective of German business partners implementing and exercising informal and formal control mechanisms require investments. Due to the highly dynamic and unreliable business environment in China, these investments are time-consuming and cost-intensive. On the other hand, from the Chinese business partners' perspective control does not constitute a significant factor for business success, when collaborating with partners originating from a highly regulated and stable business system like the German one. The time spent in a business collaboration was not found to influence trust building, exercising controls and the collaboration's success. This is in line with findings of Inkpen and Currall (1997) and Child and Möllering (2003).

6. Conclusion

Companies that collaborate bear the risk that partners behave opportunistically, i.e. violate the agreed upon cooperative arrangements in order to maximize their own advantage. Literature suggests that in order for intra-national and in particular international business partnerships to be successful applying control mechanisms as well as trusting the partner companies are decisive strategies to handle that relational risk. Research on the contribution of control and trust to a cross-border business partnership's success has grown considerably in recent years. Scholars typically focus on companies from one single country collaborating with companies located in other countries and do not invest many efforts to consider the respective socio-cultural contexts that embed the collaborating partners. However, this paper diverges from this approach by considering the different situational settings in which the cross-border collaboration take place. The relationships between trustworthiness, trust, control, and business performance from both the perspectives of representatives of German and Chinese companies collaborating with each other were examined. The findings show that the socio-cultural contexts in which the collaborating companies are located indeed moderate the association between trustworthiness and trust, between trust and control as well as the impact of trust and control on a collaboration's performance. Also, overall support was found for the argument that trust facilitates a business collaboration's economic success. Moreover, the results show that- depending on the context- control mechanisms do not contribute to a collaboration's performance or even may be detrimental.

As for relevance to management practice, this study has shown that developing trust in a business partner has a positive effect on the inter-organizational collaboration's performance regardless of the countries the partnering companies are domiciled in. Hence, cooperating companies from different countries ought to expend efforts in developing mutual trust. The potential benefits of investing in trust are considerable. On the other hand, the findings imply that the effectiveness of control mechanisms in cross-border business partnerships strongly depends on the cultural and institutional background of the controlled partner. In the presence of a (German) environment with norms and institutions that enforce contracts and resolve conflicts, the proposed positive control-performance relationship disappears. The costs of applying control mechanisms seem to offset their potential benefits for Chinese business partners. When the cultural and institutional context does not sufficiently safeguard regular business transactions (China) the control-performance relationship even becomes negative. This finding indicates that an intense exertion of control mechanisms may be not performance-enhancing for the German business partners and merely causes expenses.

There are several limitations to this study. Due to limited resources and the small size of the participating companies, only one key person from each company was interviewed. Thus, single-informant bias is a potential shortcoming of the research presented above. Yet although

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single informants provided data on trustworthiness, trust, control mechanisms and the cooperation's performance, there are some reasons to believe that single-informant bias is not a serious concern in this study. Multiple provisions were made, including protecting respondent anonymity, reducing item ambiguity, separating scale items for trustworthiness, trust, control mechanisms and performance and applying Harman's (1967) one-factor test of all scales in the study.

Although the answers of the survey respondents agree with the argument that trust is a prerequisite for business success the study lacks 'hard' data about the economic success. Inability to capture the cooperation's performance based on objective performance indicators is another limitation of this paper. The majority of companies included in this study denied reporting key economic performance indicators. Further research is needed to explore the separate as well as joint effects of trust and control on economic performance indicators of cross-border business partnerships.

This research has focused on organizational level variables, such as organizational trust formation and control mechanisms. A more comprehensive approach toward trust and control in cross-border collaborative arrangements requires attempts to understand the interrelationship of individual-level as well as organizational-level variables. For example, the trustworthiness criteria for trust in the partner's boundary spanning person may be very different from the antecedents of trust in the business partner as a whole. Addressing the interpersonal level of trusting and exerting control mechanisms would respond to repeated calls for more micro level analyses of inter-organizational relationships (McEvily and Zaheer 2006; Van de Ven and Ring 2006).

Generalizing the findings is constrained by the fact that the analysis is based on samples collected from specific forms of inter-organizational collaboration, in specific countries and from small samples of specific individuals. Clearly, there is a need for more research representing different forms of business collaboration including more countries and addressing larger samples.

Finally, a potential ethnocentrism embedded in the research instrument that was applied has to be mentioned self-critically. The questionnaire approach might have reproduced a specific understanding of trust and control which corresponds with popular western theorizing but not necessarily with the Chinese respondents' point of view. This approach is particularly questionable if the respondents live and work in socio-cultural contexts that are different from the researchers'. Therefore, more qualitative, in-depth approaches and the collaboration of scholars from the socio-cultural contexts under research are needed.

In sum, the results of this research suggest that in order to fully understand the role of trust and control in cross-border business collaboration it is not enough to study the relationship per se but rather seems necessary to also look at the socio-cultural contexts from which the partnering companies originate. Therefore, future research is encouraged to examine the interdependencies of trust, control, and performance in cross-border business partnerships by incorporating socio-cultural differences that exist across countries. Applying a contextualized understanding of trust and control is essential to transcend some limitations of the mainstream literature dealing with the role and functioning of these two governance mechanisms that are supposed to safeguard transactions in international business relationships.

References

- Aulakh, PS, Kotabe, M and Sahay, A 1996, 'Trust and performance in cross-border marketing partnerships: A behavioral approach', *Journal of International Business Studies*, vol. 27, no. 5, pp. 1005-1032.
- Bachmann, R 2011, 'At the crossroads: Future directions in trust research', *Journal of Trust Research*, vol. 1, no. 2, pp. 203-213.
- Boisot, M and Child, J 1999, 'Organizations as adaptive systems in complex environments: The case of China', *Organization Science*, vol. 10, no. 3, pp. 237-252.
- Buckley, PJ and Casson, M 2010, *The Multinational Enterprise Revisited*, Palgrave Macmillan, Basingstoke.
- Butler, JK 1991, 'Toward understanding and measuring conditions of trust: Evolution of a conditions of trust inventory', *Journal of Management*, vol. 17, no. 3, pp. 643-663.
- Child, J and Faulkner, D 1998, *Strategies of cooperation*, Oxford University Press, Oxford.
- Child, J and Möllering, G 2003, 'Contextual confidence and active trust development in the Chinese business environment', *Organization Science*, vol. 14, no. 1, pp. 69-80.
- Christoffersen, J 2013, 'A review of antecedents of international strategic alliance performance: synthesized evidence and new directions for core constructs' *International Journal of Management Reviews*, vol. 15, no.1, pp. 66-85.
- Costa, AC and Bijlsma-Frankema, K 2007, 'Trust and control interrelations new perspectives on the trust-control nexus', *Group and Organization Management*, vol. 32, no. 4, pp. 392-406.
- Creed, WED and Miles, RE 1996, 'Trust in organizations: A conceptual framework linking organizational forms, managerial philosophies, and the opportunity costs of controls', in RM Kramer and TR Tyler (eds), *Trust in organizations: Frontiers of theory and research*, Sage, Thousand Oaks, pp. 16-38.
- Cummings, LL and Bromiley, P 1996, 'The Organizational Trust Inventory (OTI). Development and validation', in RM Kramer and TR Tyler (eds), *Trust in organizations: Frontiers of theory and research*, Sage, Thousand Oaks, pp. 302-330.
- Das, TK and Teng, B-S 1996, 'Risk types and inter-firm alliance structures', *Journal of Management Studies*, vol. 33, no. 6, pp. 827-843.
- Das, TK and Teng, B-S 1998, 'Between trust and control: Developing confidence in partner cooperation in alliances', *Academy of Management Review*, vol. 23, no. 3, pp. 491-512.
- Das, TK and Teng, B-S 2000, 'Instabilities of strategic alliances: An internal tensions perspective', *Organization Science*, vol. 11, no. 1, pp. 77-101.
- Das, TK and Teng, B-S 2001, 'Trust, control, and risk in strategic alliances: An integrated framework', *Organization Studies*, vol. 22, no. 2, pp. 251-283.
- De Man, AP and Roijakkers, N 2009, 'Alliance governance: balancing control and trust in dealing with risk', *Long Range Planning*, vol. 42, no. 1, pp. 75-95.
- Dietz, G and Den Hartog, DN 2006, 'Measuring trust inside organisations', *Personnel Review*, vol. 35, no. 5, pp. 557-588.
- Doney, PM, Cannon, JP and Mullen, MR 1998, 'Understanding the influence of national culture on the development of trust', *Academy of Management Review*, vol. 23, no. 3, pp. 601-620.
- Dyer, JH 1997, 'Effective interfirm collaboration. How firms minimize transaction costs and maximize transaction value', *Strategic Management Journal*, vol. 18, no. 7, pp. 545-556.
- Gomes, E, Barnes, RB and Mahmood, T 2016, 'A 22 year review of strategic alliance research in the leading management journals', *International Business Review*, vol. 25, no.1, pp. 15-27.
- Ertug, G, Cuypers IR, Noorderhaven, NG and Bensaou, BM 2013, 'Trust between international joint venture partners: Effects of home countries' *Journal of International Business Studies*, vol. 44, no. 3, pp. 263-282.

Kühlmann

- Faulkner, DO 2001, 'Trust and control. Opposing or complementary functions?' in DO Faulkner and M De Rond (eds), *Cooperative Strategy. Economic, Business, and Organizational Issues*, Oxford: University Press, pp. 341-361.
- Fink, M and Kessler, A 2010, 'Cooperation, trust and performance—empirical results from three countries', *British Journal of Management*, vol. 21, no. 2, pp. 469-483.
- Forsgren, M and Johanson, J 2014, *Managing networks in international business*, Routledge, New York.
- Geringer, JM and Hebert, L 1989, 'Control and performance of international joint ventures', *Journal of International Business Studies*, vol. 20, no. 2, pp. 235-254.
- Harman, HH 1967, *Modern factor analysis*, University of Chicago Press, Chicago.
- Hofstede, GJ 2010, 'Why do international alliances fail? Some insights from culture and human social biology' in Ulijn, JM, Duysters, G and Meijer, E (eds) *Strategic alliances, mergers and acquisitions: The influence of culture on successful cooperation*, Edward Elgar Publishing, Cheltenham, pp. 30-59.
- Hofstede, G 1980, *Culture's Consequences: International Differences in Work-Related Values*, Sage, Beverly Hills.
- Hofstede, G and Hofstede, GJ 2005, *Cultures and Organizations: Software of the Mind*, McGraw-Hill, New York.
- House, RJ, Hanges, PJ, Javidan, M, Dorfman, PW and Gupta, V 2004, *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, Sage, Thousand Oaks.
- Huff, L and Kelley, L 2003, 'Level of organizational trust in individualist versus collectivist societies: A seven-nation study', *Organization Science*, vol. 14, no. 1, pp. 81-90.
- Inkpen, AC and Currall, SC 1997, 'International joint venture trust. An empirical examination', in PW Beamish and JP Killing (eds), *Cooperative Strategies: North American Perspectives*, New Lexington Press, San Francisco, pp. 308-334.
- Inkpen, AC and Currall, SC 1998, 'The nature, antecedents, and consequences of joint venture trust', *Journal of International Management*, vol. 4, no. 1, pp. 1-20.
- Inkpen, AC and Currall, SC 2004, 'The coevolution of trust, control, and learning in joint ventures', *Organization Science*, vol. 15, no. 5, pp. 586-599.
- Kaufmann, D, Kraay, A and Mastruzzi, M 2007, *Governance matters VI: Governance indicators for 1996*, Washington DC: World Bank Policy Research Working Paper 2196.
- Knights, D, Noble, F, Vurdubakis, T and Willmott, H 2001, 'Chasing shadows: Control, virtuality and the production of trust', *Organization Studies*, vol. 22, no. 2, pp. 311-336.
- Koch, BJ and Koch, PT 2007, 'Collectivism, individualism, and outgroup cooperation in a segmented China', *Asia Pacific Journal of Management*, vol. 24, no. 2, pp. 207-225.
- Krishnan, R, Martin, X and Noorderhaven, NG 2006, 'When does trust matter to alliance performance?' *Academy of Management Journal*, vol. 49, no. 5, pp. 894-917.
- Kumar, BN and Khanna, M 2000, 'Increasing competitiveness of Indo-German joint ventures. The role of joint venture autonomy for success', in FJ Richter (ed.), *The Asian Economic Catharsis*, Quorum Books, Westport, pp. 165-184.
- Lewis, JD and Weigert, A 1985, 'Trust as a social reality', *Social Forces*, vol. 63, no. 4, pp. 967-985.
- Li, PP 2013, 'Inter-cultural Trust and Trust-building: The Contexts and Strategies of Adaptive Learning in Acculturation', in R Bachmann and A Zaheer (eds), *Handbook of Advances in Trust Research*, Cambridge University Press, Cheltenham, pp. 146-173.
- Hsieh, LHY and Rodrigues, SB 2014, 'Revisiting the Trustworthiness–Performance–Governance Nexus in International Joint Ventures', *Management International Review*, vol. 54, no. 5, pp. 675-705.
- Long, CP and Sitkin, SB 2006, 'Trust in the balance: How managers integrate trust-building and task control', in R Bachmann and A Zaheer (eds), *Handbook Of Trust Research*, Edward Elgar, Cheltenham, pp. 87-106.

Kühlmann

- Mayer, RC, Davis, JH and Schoorman, FD 1995, 'An integrative model of organizational trust', *Academy of Management Review*, vol. 20, no. 3, pp. 709-734.
- McEvily, B and Tortoriello, M 2011, 'Measuring trust in organisational research: Review and recommendations', *Journal of Trust Research*, vol. 1, no. 1, pp. 23-63.
- McEvily, B, Perrone, V and Zaheer, A 2003, 'Trust as an Organizing Principle', *Organization Science*, vol. 14, no. 1, pp. 91-103.
- Mellewigt, T, Madhok, A and Weibel, A 2007, 'Trust and formal contracts in interorganizational relationships – Substitutes and complements', *Managerial and Decision Economics*, vol. 28, no. 8, pp. 833-847.
- Mohr, AT 2007, 'Exploring the relationship between trust and control – an empirical analysis of Sino-German joint ventures', *Asian Business and Management*, vol. 6, no. 3, pp. 247-263.
- Möllering, G 2005, 'The trust/control duality: An integrative perspective on positive expectations of others', *International Sociology*, vol. 20, no. 3, pp. 283-305.
- Newbury, W and Zeira, Y 1999, 'Autonomy and effectiveness of equity international joint ventures: A comparative analysis of Hungary and Britain', *Journal of Management Studies*, vol. 36, no. 2, pp. 263-285.
- Noorderhaven, NG 1999, 'National Culture and the Development of Trust: The Need for More Data and More Theory', *Academy of Management Review*, vol. 24, no. 1, pp. 9-10.
- Park, SH and Ungson, GR 1997, 'The effect of national culture, organizational complementarity, and economic motivation on joint venture dissolution', *Academy of Management Journal*, vol. 40, no. 2, pp. 279-307.
- Poppo, L and Zenger, T 2002, 'Do formal contracts and relational governance function as substitutes or complements?' *Strategic Management Journal*, vol. 23, no. 8, pp. 707-725.
- Puranam, P and Vanneste, BS 2009, 'Trust and governance: Untangling a tangled web', *Academy of Management Review*, vol. 34, no.1, pp. 11-31.
- PytlíkZillig, LM and Kimbrough, CD 2016, 'Consensus on Conceptualizations and Definitions of Trust: Are We There Yet?' in E Shockley, TMS Neal, LM PytlíkZillig and BH Bornstein (eds), *Interdisciplinary Perspectives on Trust*, Springer International Publishing, New York, pp. 17-47
- Ramanathan, K, Seth, A and Thomas, H 1997, 'Explaining joint ventures. Alternative theoretical perspectives', in PW Beamish and JP Killing (eds), *Cooperative Strategies. North American Perspectives*, The New Lexington Press, Lexington, pp. 51-85.
- Reus, TH and Richie, WJ 2004, 'Interpartner, Parent, and Environmental Factors Influencing the Operation of International Joint ventures: 15 years of Research', *Management International Review*, vol. 44, no. 4, pp. 369-395.
- Robson, MJ, Katsikeas, CS and Bello, DC 2008, 'Drivers and performance outcomes of trust in international strategic alliances: The role of organizational complexity', *Organization Science*, vol. 19, no. 4, pp. 647-665.
- Rousseau, DM, Sitkin, SB, Burt, RS and Camerer, C 1998, 'Not so different after all: A cross-discipline view of trust', *Academy of Management Review*, vol. 23, no. 3, pp. 393-404.
- Saxton, T 1997, 'The effects of partner and relationship characteristics on alliance outcomes', *Academy of Management Journal*, vol. 40, no. 2, pp. 443-460.
- Schindler, PL and Thomas, CC 1993, 'The structure of interpersonal trust in the workplace', *Psychological Reports*, vol. 73, no. 2, pp. 563-573.
- Schoorman, FD, Mayer, RC and Davis, JH 2007, 'An integrative model of organizational trust: Past, present, and future', *Academy of Management review*, vol. 32, no. 2, pp. 344-354.
- Şengün, AE and Wasti, SN 2007, 'Trust, Control, and Risk. A Test of Das and Teng's Conceptual Framework for Pharmaceutical Buyer-Supplier Relationships', *Group and Organization Management*, vol. 32, no. 4, pp. 430-464.

Kühlmann

- Şengün, AE and Wasti, SN 2009, 'Revisiting trust and control', *International Small Business Journal*, vol. 27, no. 1, pp. 39–69.
- Silva, SC, Bradley, F and Sousa, CM 2012, 'Empirical test of the trust–performance link in an international alliances context', *International Business Review*, vol. 21, no. 2, pp. 293-306.
- Smith, JB and Barclay, DW 1997, 'The effects of organizational differences and trust on the effectiveness of selling partner relationships', *Journal of Marketing*, vol. 61, no. 1, pp. 3-21.
- Sully de Luque, M and Javidan, M 2004, Uncertainty Avoidance, in House et al. (eds), *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, Thousand Oaks: Sage, pp. 602-654.
- Sundaramurthy, C and Lewis M 2003, 'Control and collaboration: Paradoxes of governance', *Academy of Management Review*, vol. 28, no.3, pp. 397-415.
- Tsui-Auch, LS, Möllering, G 2010, 'Wary managers: Unfavorable environments, perceived vulnerability, and the development of trust in foreign enterprises in China', *Journal of International Business Studies*, vol. 41, no. 6, pp. 1016-1035.
- Van de Ven, AH and Ring, PS 2006, 'Relying on trust in cooperative inter-organizational relationships', in R Bachmann and A Zaheer (eds), *Handbook Of Trust Research*, Edward Elgar, Cheltenham, pp. 144-164.
- Vlaar, PW 2013, 'Trust and contracts: together forever, never apart?', in R Bachmann and A Zaheer (eds), *Handbook of Advances in Trust Research*, Cambridge University Press, Cheltenham, pp. 82-105.
- Vlaar, P 2008, *Contracts and trust in alliances: Discovering, creating and appropriating value*, Edward Elgar Publishing, Cheltenham.
- Vlaar, PW, Van den Bosch, FA and Volberda, HW 2007, 'On the evolution of trust, distrust, and formal coordination and control in interorganizational relationships toward an integrative framework', *Group and Organization Management*, vol. 32, no. 4, pp. 407-428.
- Wang, P, Wee, CH and Koh, PK 1998, 'Control mechanisms, key personnel appointment, control and performance of Sino-Singaporean joint ventures', *International Business Review*, vol. 7, no. 4, pp. 351-375.
- Yang Z., Zhou, C., and Jiang, L. 2011, 'When do formal control and trust matter? A context-based analysis of the effects on marketing channel relationships in China' *Industrial Marketing Management*, vol. 40, no.1, pp. 86-96.
- Zaheer, S and Zaheer A 2006, 'Trust across borders', *Journal of International Business Studies*, vol. 37, no. 1, pp. 21-29.
- Zhou, KZ and Poppo, L 2010, 'Exchange hazards, relational reliability, and contracts in China: The contingent role of legal enforceability', *Journal of International Business Studies*, vol. 41, no.5, pp. 861-881.