

Collectivist values for learning in organizational relationships in China: the role of trust and vertical coordination

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Abstract Partners must engage in integrative interaction in order to combine diverse expertise and experiences into effective learning. Results from 103 pairs of customer and supplier organizations in China indicate that trust and vertical coordination are useful ways to characterize this integrative interaction and together they promote learning. Structural equation analysis suggests that collectivist but not individualist values are important foundations for integrative interaction between partners that result in learning. These findings were interpreted as reaffirming the value of effective relationships for coordination between partners and suggesting that collectivist values can be a source of effective organizational relationships.

Keywords Collectivism · Individualism · Vertical coordination · Trust · Learning · Organizational relationships

Organizations are forming ongoing relationships in order to learn from each other so that they can deliver value to serve customers and meet market demands. Learning how to explore emerging problems and develop creative solutions is increasingly considered a requirement for success in rapidly changing marketplaces (Luo, & Peng, 1999). Research has confirmed that learning can contribute substantially to organizational performance (Luo, & Peng, 1999; VandeWalle, Brown, Cron, & Slocum, 1999). Forming organizational relationships has been considered especially useful for learning because it promotes interaction among diverse people (Eisenhardt, & Martin, 2000; Hitt, Dacin, Levitas, Arregle and Borza, 2000; Nonaka, & Takeuchi, 1995). However, research is needed to clarify the kind of interaction that facilitates learning in organizational relationships and to identify the conditions that underlie this interaction. In investigating organizational

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partners in China, this study proposes that vertical coordination and trust are useful ways to characterize the integrative interaction that promotes learning. It also argues that a collectivist relationship between partners is a foundation for effective interaction and learning in partnerships.

Interaction and Organizational Learning

Learning from experience, though challenging, is thought to have powerful effects on organizational performance (Carter, & West, 1998). Interdependence and interaction between organizations, as well as between individuals and groups, have been theorized very much to influence the ability of organizations to learn from experience (Fisher, & White, 2000; Lane, & Lubatkin, 1998). Organizational relationships have the advantage in that partners have a range of expertise and experience that, when combined and integrated, can lead to new insights and productive actions (Beckman, & Haunschild, 2002). Partners who can learn together are more likely to make their alliances successful (Luo, & Peng, 1999).

But for diversity to promote learning, the partners must be able to exchange their various views and ideas (Bastos, 2001; Kale, Singh, & Perlmutter, 2000). However, exchange itself may not promote learning and indeed it can reinforce biases and defensiveness rather than openness and learning (Houghton, Simon, & Goldberg, 2000; Van Knippenberg, Van Knippenberg, & Van Dijk, 2000).

Researchers have emphasized the difficulties of learning. For example, learning from experience can be very challenging as organizations are trapped into their original biased thinking without being able to appreciate its shortcomings (Cohen, & Levinthal, 1990; Cyert, & March, 1963). According to Argyris and Schon (1996), many organizational members are unable to discuss and learn from their experiences because their underlying values inhibit the open, integrative discussion needed for learning to occur. They are too closed-minded and remain rigidly committed to their current practices. Thus, in order to understand how to foster learning in alliances, it is important to investigate the nature of interaction between partners.

This study makes several contributions to the literature. It adds to the empirical base linking collectivist and individualistic values to important organizational outcomes and provides an initial test whether collectivist values of an organizational relationship can promote integrative interaction among organizational partners that results in learning. The study tests the utility of the western developed idea of vertical coordination for understanding the kind of interaction among partners that promotes learning in China. It also explores the relationship between trust and vertical coordination and examines how they together affect learning.

Theoretical Background and the Research Hypotheses

Trust and Vertical Coordination

Trust and vertical coordination have been theorized to be important bases for effective organizational relationships (Friman, Garling, Millett, Mattsson, & Johnston, 2002; Kasper-Fuehrer, & Ashkanasy, 2001; Rao, Pearce, & Xin, 2005;

Zaheer, McEvily, & Perrone, 1998). This study argues that they are useful in part because they promote learning in partnerships.

This study proposes that trusting interaction between organizational partners very much promotes learning. Trust is the willingness to rely on an exchange partner in whom one has confidence (Ganesan, 1994). Trusting interaction communicates credibility and benevolence (Lewicki, McAllister, & Bies, 1998). Partners demonstrate their credibility by using their expertise to perform effectively and reliably; they demonstrate their benevolence by showing they have the intentions and motives to assist each other. Recognizing each other's expertise and positive intentions, partners are confident that they can rely upon the other's word and written statements (Williams, 2001).

Trust has long been considered critical for organizational performance (Williams, 2001) and, in particular, for organizational relationships (Johnson, Cullen, Sakano, & Takenouchi, 1996; Kumar, 1996). Trust allows the partners to focus their attention and apply their resources to promote joint outcomes rather than pursue individual agendas (Dirks, 1999).

Trust would seem to be an important contributor to learning as it helps partners be more open with and to each other. Trusting partners are apt to express their opinions and ideas freely as they expect each other to be oriented toward helping each other (Deutsch, 1973; Johnson, & Johnson, 1989; Lewicki et al., 1998). As they feel accepted and valued, they listen to each other with little defensiveness. Suspicion, on the other hand, leaves partners closed-minded as they doubt that each other will consider their ideas and suggestions as motivated by a desire to help them succeed. Based on the literature, it is proposed that

H₁: Trust between partners facilitates partner learning.

This study proposes that vertical coordination is a useful complement to trust for organizational learning. Vertical coordination is the ongoing flow of activities and information between independent firms (Buvik, & Andersen, 2002; Buvik, & John, 2000; Reve, & Stern, 1986). It involves the willing, organized exchange of ideas and experiences between partners. In addition to being over and above legal and contractual requirements agreed upon by the partners, this exchange is designed to help partners cope and deal with uncertainties and improve mutual productivity and market performance (Dahlstrom, & Nygaard, 1999).

Vertical coordination is considered very valuable because it can help partners reduce the barriers and costs and improve coping with emerging matters on such issues as cost documentation, product design changes, production planning, and quality control (Frazier, Spekman, & O'Neal 1988). Vertical coordination then should facilitate adaptation and economic performance (Noordewier, John, & Nevin, 1990), although empirical studies have not always supported that vertical coordination improves adaptation and performance (Lusch, & Brown, 1996; Uzzi, 1996).

In particular, vertical coordination as the exchange of ideas and experiences should be quite useful for learning as it can help partners challenge present assumptions and thinking. Partners express their own perspectives and experiences and these various views stimulate exploration, understanding, and learning (Arygris, & Schon, 1996; Cohen, & Levinthal, 1990; Cyert, R.M., & March, J.G. 1963; Eisenhardt, & Martin, 2000). Diverse views of partners can challenge outmoded thinking and promote creative solutions (Beckman, & Haunschild, 2002). Vertical exchange would seem then to be an important way to characterize the interaction

between partners that promotes their curiosity and adoption of new ways of thinking and working.

Studies reviewed suggest that partners should actually engage in vertical coordination so that they exchange their various ideas and experiences and thereby help a partner develop its capabilities. Based on the literature, it is proposed that

H₂: Vertical coordination between partners facilitates partner learning.

This study measures learning from the standpoint of one partner, specially, how much the supplier organization learned from the customer. We thought that the supplier would be in a good position to provide data on their own learning.

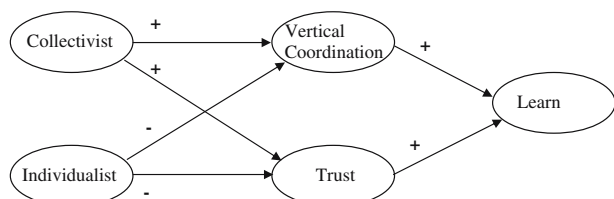
Trust and vertical coordination are based on conclusions partners make about each other. Based on their experiences with each other, partners have concluded that they can rely upon each other to contribute to their alliance flexibly for mutual benefit. These conclusions are more likely when partners believe that they have a strong relationship. This study proposes that forming a collectivist relationship between partners is a foundation for trust and vertical coordination.

Collectivist and Individualistic Values

Collectivist and individualist values have a prominent role in such important areas as cross-cultural psychology, international management, politics, and religion (Hofstede, 1993; Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994; Triandis, 1995). They have been fundamental in theorizing and research on differences between organizing in the West and the East and in recommendations for how managers should be flexible in the global marketplace. Although theorists have argued that these values affect leadership and relationships, more empirical evidence is needed to document the processes by which these values have their effects (Oyserman, Coon, & Kimmelmeier, 2002). This study proposes that collectivist values facilitate learning by promoting trust and vertical coordination whereas individualist values weaken integrative interaction and learning (see Fig. 1).

Collectivist and individualist values consist of a set of related dimensions. These values differ in their emphases on a collective or personal self, whether personal goals are considered more or less important than the goals of in-groups, and the extent that social norms or individual attitudes should determine behavior (Kashima, Siegel, Tanaka, & Kashima, 1992; Kim et al., 1994; Markus, & Kitayama, 1991; Triandis, 1995). These values are in turn expected to affect behavior.

Fig. 1 Hypothesized model



Collectivism values involve the emphasis on the importance of the larger group and for individuals to give high priority on their in-groups (Triandis, 1990; Triandis, et al., 1990; Tung, 1991). These collectivist values have been hypothesized to lead to valuing harmony and relationships (Morris et al., 1998). For example, Chinese people, as collectivists, are expected to be highly oriented toward protecting social face and maintaining relationships (Leung, 1997).

In contrast, individualist values involve the importance placed on individual development and expression even at the expense of the group and collective (Triandis, 1990; Triandis, et al., 1990; Tung, 1991). Individualists emphasize how they are unique and different from others. Individualistic values, common in the US and other Western countries, are thought to lead people to be more aggressive and focused on interests and outcomes rather than on relationships (Leung, 1997).

Research on collectivist and individualist values has traditionally been conducted at the individual and cultural levels. Studies have assessed how individual differences in values predict behavior and personality and the role of cultural differences on behavior and outcomes (Wheeler, Reis, & Bond, 1989). Values, although not often collectivist and individualist ones, have been studied at the group and organizational level. Corporate culture is thought to have major effects on the dynamics and success of organizations (Deal, & Kennedy, 1982; Pfeffer, 1994). This study uses collectivist and individualist values at the organizational relationship level in that it measured the extent that partners felt their relationship was collectivist and individualist. Values measured at the relationship level may well have a stronger, more demonstrable effect on partner dynamics and partner learning than values measured at the individual or cultural level. We explore the role of collectivist and individualist relationships on the interaction between partners.

Although there is considerable research on outcomes of collectivism and individualism, research is needed on the processes by which collectivist and individualist values affect interaction and productivity (Oyserman et al., 2002). This study proposes that relationships characterized by collectivist values may be quite useful for promoting the integrative interaction that facilitates learning. Relationships have long been considered critical for effective work in organizations in Asia. However, recent research has found that relationships promote decision-making, leadership, and other aspects of organizational work in the West as well (Hitt, Lee, & Yucel, 2002; Lovett, Simmons, & Kali, 1999).

Collectivist values with their emphasis on mutual benefit and assistance would seem to facilitate the development of trust in the belief that the partners are beneficent and can be relied upon (Lewicki et al., 1998; Williams, 2001). They should also encourage the two-way exchange of vertical coordination. Partners with these values are likely to be positively oriented toward assisting the other and thus use their resources for mutual gain (Deutsch, 1973; Johnson, & Johnson, 1989). Individualist values with their emphasis on the self and independence with little regard for the goals of others are likely to limit trust and vertical coordination.

Based on the above research and reasoning, it is hypothesized that:

H₃: Collectivist values promote trust and vertical coordination in the partner relationship.

H₄: Individualist values restrict trust and vertical coordination in the partner relationship.

The study makes methodological contributions to previous research in that it allowed independent measures of collectivist and individualist values, vertical

coordination, trust, and learning. Customer organizations rated the collectivist and individualist values, vertical coordination, and trust in the partnership whereas the supplier organization indicated the level of its learning. This study directly tests the assumption that organizational relationships with collectivist but not individualist relationships promote vertical coordination and trust that in turn result in learning in a sample of organizational relationships in Shanghai, China.

Method

Participants

One hundred fifty customer companies and their respective supplier companies were recruited in Shanghai to participate in the study. We identified the persons highly knowledgeable about the relationship in each organization. We first approached the customer organization and then asked a person very knowledgeable about their relationship with a supplier organization to complete the questionnaire. The informant also identified the supplier organization. We then independently contacted the supplier organization to identify a person knowledgeable and willing to complete the questionnaire. Consequently, respondents did not know who was completing the corresponding questionnaire. Respondents from both the customer and supplier organizations were assured that their responses would be kept confidential.

One hundred fifty sets of questionnaires were distributed but 16 sets were not completed because of the lack of time or interest in the study; 134 sets were collected. However, 31 sets lacked the pairing response from either the customer company or supplier company. Thus, 103 sets of questionnaires were included in the data analysis. There were 206 companies for the study, 103 customer organizations and 103 supplier organizations, and each pair included one customer and one supplier.

Regarding the respondents in customer organizations, 46.6% were junior managers, 38.8% were middle managers, and 14.6% were senior managers. Thirty-three percent of the respondents were from the purchasing department, 12% were from engineering, 7% were from the president office, 6% from administration, and the rest from such departments as warehouse, finance, and business. For the respondents in supplier organizations, 32% were junior managers, 49.5% were middle managers, and 18.5% were senior managers. Twenty-four percent of the respondents in supplier organizations were from the sales department, 14% marketing, 13% business, 11% administration, 8% manufacturing, and the rest from other departments.

Regarding the industry of the customer organizations, 22 companies were in machinery, 22 in electronic, 10 in automobile, eight in household appliances, five in chemical, five in metallurgy and less than five companies in the industries of textile, garment, medicine, mechanical and electronic, leathers, paper product, rubber, tour, and plumber product; 16 companies were in other areas. As for the supplier organizations, 15 companies were in machinery, 27 in electronic, 11 in automobile, nine in chemical, seven in rubber product, five in metallurgy and less than five companies in the industries of textile, garment, medicine, mechanical and electronic, household appliances, leathers, paper product, tour, and plumber product; eight companies were in other areas. This pattern is similar to the industry structure in Shanghai. Average relationship tenure between the customer and supplier companies was 3.93 years.

Collectivist and Individualist Values

Scales for collectivist and individualist values were developed from Triandis and Gelfand (1998) and cast in terms of the organizational relationship. The four collectivism items measured the emphasis on in-group solidarity in the organizational relationship. A sample item for the collectivism scale is “If our supplier were in financial difficulty, we would help within our means.” Participants were asked to rate on a 5-point scale (1 = strongly disagree, 5 = strongly agree) their degree of agreement to the statements of this scale and other scale used in this study.

The six individualism items measured the emphasis on the well-being of individual companies in the organizational relationship. A sample item for this scale is “The supplier and we rather depend on our own than on each other.” (Appendix A has all the items for the scales used in this study.) Both scales demonstrated acceptable reliability. The coefficient alpha for collectivism is 0.67 and individualism 0.78.

Trust

The trusting relationship scale was taken from a study on the roles of trust in determining the long-term orientation of buyers and sellers (Ganesan, 1994). It measures the general extent that the manufacturer believes the supplier is frank and honest about problems, is knowledgeable about its products, and makes credible promises. This six-item scale had a Cronbach alpha of 0.77.

Vertical Coordination

Vertical coordination is an organized flow of activities and information between parties (Heide, & John, 1990; Noordewier et al., 1990). The scale was adapted from previous research (Heide, & John, 1990; Reve, & Stem, 1986). Studies have indicated that the items compose one scale and have been found to have acceptable reliabilities (Buvik, & Andersen, 2002; Buvik, & John, 2000). A sample item for this scale is “We regularly exchange information about price development and market conditions with this supplier.” The five-item scale had a Cronbach alpha of 0.85.

Learning

The scale of learning was taken from a study on learning and know-how transfer among strategic alliances (Kale et al., 2000). It measures the general extent that the supplier believes that it can learn new and important information and critical capability from the manufacturer, and the alliance has helped it to enhance its existing capabilities. The 3-item scale had a Cronbach alpha of 0.74.

Analyses

Scale validation

Because some of the scales used in our analyses were specifically designed for this study, we conducted a series of confirmatory factor analyses to test whether the partner members' rating would load on five distinct factors, namely Collectivism,

Individualism, Vertical Coordination, Trust, and Learning, so as to ensure that the items were measuring distinct constructs.

We assessed discriminant validity by analyzing possible pairs of constructs in a series of four-factor models (Anderson, 1987). These three alternative four-factor models were selected based on the inter-correlations among the four variables rated by the customer organizations. Table 1 shows that Collectivism has high correlation with Vertical Coordination ($r = 0.45$) and Trust ($r = 0.56$), while Vertical Coordination has high correlation with Trust ($r = 0.40$). These three pairs of variables were therefore combined to form one aggregate factor in turn. The aggregate factor together with the remaining two factors and the supplier organizations rated factor of learning formed a four-factor model. The CFA results of the three different four-factor models (M_1 , M_2 , and M_3) were compared to that of the five-factor model (M_0).

The series of confirmatory factor analyses were conducted using the LISREL 8 program (Joöreskog, & Soörbom, 1996) and are reported in Table 2. Model M_0 in Table 2 shows that our proposed five-factor model fits the data quite well ($\chi^2 = 319.95$, $df = 239$, $IFI = 0.90$, $CFI = 0.89$, $RMSEA = 0.05$, Standardized RMR = 0.096). The χ^2 test, RMSEA and Standardized RMR are fit indices used to test the absolute fit of the model, i.e., testing the ability of the model to reproduce the correlation/covariance matrix. A rule of thumb is that a good fitting model may be indicated by the ratio of the χ^2 and its degrees of freedom of less than 5 (Kelloway, 1998). Steiger (1990) suggested that RMSEA values below 0.10 indicate a good fit to the data, and values below 0.05 a very good fit to the data. CFI and IFI are comparative fit indexes which deal with whether the model under consideration is better than some competing model. Bentler and Bonett (1980) suggested that a level of 0.90 indicates a good fit to the data.

Results in Table 2 show that model chi-square increases significantly when we move from the five-factor model (M_0) to any of the three four-factor models (M_1 , M_2 and M_3). Three four-factor models had marginal (<0.90) fit indices measures. Given the strong support from the nested series of confirmatory factor analysis, we concluded that the five-factors are distinct measures of five different constructs in our study.

We also tested convergent validity to determine whether the items in a scale converge or load together on a single construct in the measurement (Steenkamp, & van Trijp, 1991). Dunn, Seaker, & Waller (1994) suggested that convergent validity exists if the factor loadings are statistically significant. CFA results show that all the

Table 1 Correlations among the variables

	Mean	SD	1	2	3	4	5
Collectivist	3.70	0.64	(0.67)				
Individualist	3.34	0.65	-0.18	(0.78)			
Vertical coordination	3.72	0.67	0.45**	-0.05	(0.85)		
Trust	3.76	0.54	0.56**	-0.27**	0.40**	(0.77)	
Learning	3.49	0.67	0.21*	-0.27**	0.30**	0.26**	(0.62)

(1) $N = 103$.

(2) Values in bracket are reliability (coefficient alpha) estimates.

(3) ** $p < 0.01$, * $p < 0.05$.

Table 2 Results of the confirmatory factor analysis of the measurement models

Model	<i>df</i>	Model χ^2	$\Delta\chi^2$	CFI	IFI	RMSEA	Std. RMR
Baseline five-factor model (M_0)	239	319.95		0.89	0.90	0.05	0.096
Combined collectivist and vertical coordination (M_1)	246	399.88	79.93**	0.80	0.81	0.077	0.11
Combined collectivist and trust (M_2)	246	365.23	45.28**	0.84	0.85	0.065	0.10
Combined vertical coordination and trust (M_3)	246	451.53	131.58**	0.73	0.74	0.10	0.12

(1) Five-factor model (M_0) includes collectivist and individualist values, vertical coordination, trust, and learning.

(2) ** $p < 0.01$.

(3) χ^2 is the model chi-square; $\Delta\chi^2$ is the change in model chi-square; $\Delta df = 7$ for alternative models M_1 , M_2 and M_3 .

factor loadings of the indicators for each of the five factors in this study are statistically significant. Moreover, the measurement model also has a good overall fit. These results support convergent validity of the scales. Since the items for each factor were developed from previous studies to tap information on different constructs, they appeared to have face validity.

As we collected data for the four customer organizations rated factors from the same individuals and using the same method, we also tested for common method variance (CMV). We used the Harmon one-factor test (Podsakoff, & Organ, 1986) where all the four variables were submitted to an exploratory factor analysis (EFA). The basic assumption of this approach is that CMV exists when there is only one factor or the first factor explains a majority of the variance. The EFA results indicated that the first factor only explained 26.7%. Therefore, CMV does not pose a potential threat to this study.

Hypotheses Testing

Correlational analyses were used as an initial test of the hypotheses. To more vigorously test the hypotheses, structural equation analysis with the LISREL 8 program (Jöreskog, & Sörbom, 1996) was used to examine the underlying causal structure between collectivist values, individualist values, trust, vertical coordination, and learning. These analyses involved only the structural model, not the measurement model. The research reviewed suggests that trust and vertical coordination mediate the relationship between collectivist and individualist values and outcome of learning. A nested model test commonly adopted in causal model analysis was used where the theorized model was compared to the saturated model and other alternative models.

Results

Table 1 shows the means, standard deviations, reliabilities and correlations among the constructs in this study. In support of the first hypothesis, correlations indicated

that collectivist values were positively related to trust ($r = 0.56, p < 0.01$) and vertical coordination ($r = 0.45, p < 0.01$). Results provide support for the second hypothesis in that the individualist values were negatively related to trust ($r = -0.27, p < 0.01$). Although individualist values were negatively correlated with vertical coordination ($r = -0.05, ns$), this relationship was not statistically significant.

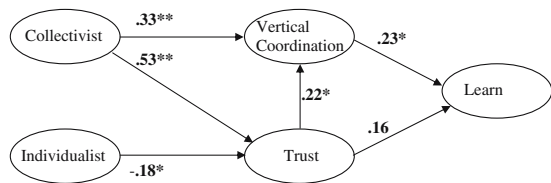
In support of the third and fourth hypotheses, trust ($r = 0.26, p < 0.01$) and vertical coordination ($r = 0.30, p < 0.01$) were positively correlated with learning.

Structural equation analyses were used to examine possible causal relationships. Originally, it was assumed that trust and vertical coordination were reinforcing, parallel processes resulting in learning. However, trust did not have a significant path to learning in the hypothesized model. Upon reflection, it may be that trust affects learning by reinforcing vertical coordination between partners. Therefore, we modified the model so that trust predicted vertical coordination as well as learning. As correlation results indicated that individualism was not related to vertical coordination, we also deleted the path from individualist values to vertical coordination (Fig. 2). In addition to a significant effect of trust on vertical coordination, the fit statistics indicate that the Modified Hypothesized Model (with trust affecting vertical coordination) fits the data well (Table 3). In addition, there is no significant difference between the Modified Hypothesized Model and the Saturated Model.

In regards to model fit, the Modified Hypothesized Model (A3 Model) had a chi-square of 6.45 with 3 degree of freedom. The Incremental Fit Index (IFI) and Comparative Fit Index (CFI) for the model were 0.96 and 0.96, respectively. Both fit indices were considered as indicating quite good model fit, given the usually accepted critical value of 0.90 (Bentler, & Bonnett, 1980). The RMSEA value of 0.05 of the model also indicated a close fit to the data. Results of the causal model comparison suggest accepting the Modified Hypothesized Model. The Modified Hypothesized Model was also compared to three alternative models (Hypothesized, A1 and A2 models). These models did not improve model fit and did not fit the data very well compared to the Modified Hypothesized Model.

In order to test the mediating effect of trust and vertical coordination, the Mediated Model (A2) and the Non-mediated Model (A1) were compared. The of the Mediated Model was 5.88 ($df = 2$) and the of Non-mediated Model was 7.36 ($df = 2$). The differences between the Mediated Model and the Saturated Model were not significant (difference = 5.88, df difference = 2, $p = n.s$) while the differences between the Non-mediated Models the Saturated Model were significant (difference = 7.36, df difference = 2, $p < 0.05$). Results indicate that the Mediated

Fig. 2 Modified hypothesized model



** $p < .01$

* $p < .05$

Table 3 Saturated, hypothesized and alternative models

	χ^2	<i>df</i>	$\Delta\chi^2$	CFI	IFI	RMSEA	Std RMR
<i>Models:</i>							
Saturated : collectivist and individualist values have direct links to vertical coordination, trust and learning; trust has direct links to vertical coordination; vertical coordination and trust have direct links to learning	0	0	–	–	–	–	–
Hypothesized: collectivist and individualist values have direct links to vertical coordination and trust; vertical coordination and trust have direct links to learning (deleting links from collectivist and individualist values to learning and from trust to vertical coordination)	10.59	3	10.59*	0.91	0.91	0.16	0.07
<i>Alternative models:</i>							
A1: Collectivist and individualist values have direct links to vertical coordination, trust and learning; trust has direct links to vertical coordination (deleting links from vertical coordination and trust to learning)	7.36	2	7.36*	0.93	0.94	0.16	0.06
A2: collectivist and individualist values have direct links to vertical coordination and trust; trust has direct links to vertical coordination; vertical coordination and trust have direct links to learning (deleting links from collectivist and individualist values to learning)	5.88	2	5.88	0.95	0.96	0.14	0.06
A3 (Modified hypothesized model): collectivist values have direct links to vertical coordination and trust; trust has direct links to vertical coordination; vertical coordination and trust have direct links to learning (deleting links from collectivist and individualist values to learning and from individualist values to vertical coordination)	6.45	3	6.45	0.96	0.96	0.10	0.05

Dashes indicate statistic cannot be computed for the saturated model.

IFI Incremental-fit index, *CFI* comparative fit index.

* $p < 0.05$.

Model is superior to the Non-mediated Model. The better fit of the Mediated Model provides support to the Modified Hypothesized Model that includes indirect effects on learning.

The path coefficients of the Modified Hypothesized Model help to explore the findings more specifically (Table 3). Collectivist values had a significant impact on trust ($\beta = 0.53, p < 0.01$) and vertical coordination ($\beta = 0.33, p < 0.01$). Individualist values had a significant negative impact on trust ($\beta = -0.18, p < 0.05$). These results provide good support for H1 and some support for H2.

Results provide good support for Hypothesis 3 and some support for Hypothesis 4. Trusting relationship ($\beta = 0.16, ns$) and vertical coordination ($\beta = 0.23, p < 0.05$) had positive effects on learning, though the effects for trusting relationship were not statistically significant.

Results overall provide general support for the framework developed in this study. Organizational relationships with collectivist but not individualist relationships were found to promote trust and vertical coordination, which in turn predicted learning.

Discussion

This study supports previous research emphasizing the value of trust and vertical coordination for organizational relationships and suggests that they are valuable in part because they contribute to learning. Results support the study's overall framework that trust and vertical coordination facilitate learning in organizational relationships and that collectivist, in contrast to individualist, values lay the basis for this integrative interaction. Forming a relationship provides the potential for learning but does not insure that partners incorporate new ideas into their thinking and action (Crossan, Lane, & White, 1999). Consistent with considerable theorizing, open, integrative interaction appears to be vital for partners to combine their diverse expertise and experiences so that they learn (Arygris, & Schon, 1996; Cohen, & Levinthal, 1990; Cyert, & March, 1963; Fisher, & White, 2000; Lane, & Lubatkin, 1998).

Findings also indicate that the relationship between trust and vertical coordination is more complex than originally considered. It was initially proposed that they are parallel, reinforcing processes that develop from collectivist relationships and together promote learning. However, trust was not found to have a significant direct effect on learning in the path analyses. Upon reflection, it seemed reasonable that trust might very much affect vertical coordination directly as trust provides the foundation upon which vertical coordination's open exchange of ideas and experiences occurs (Deutsch, 1973; Lewicki et al., 1998). With trust, partners would seem to be more willing to share their views and thus engage in more vertical coordination. Indeed, in the accepted Modified Hypothesized Model, trust was found to have a significant path to vertical coordination.

The antecedents to trust and vertical coordination may also be somewhat different from our expectations and from each other. Although collectivist and individualist values both predicted to vertical integration in the accepted Modified Hypothesized Model, individualist values had a significant negative path to trust but not one to vertical coordination. It may be that individualist values are quite

disruptive of trust but only indirectly disruptive of the exchange of vertical coordination. Future research is needed to explore this exploration.

This study supports previous arguments that relationships contribute to organizational work in Asia. Chinese and other collectivist people in Asia are thought to consider quality interpersonal relationships central for effective work (Hui, Law, & Chen, 1999; Leung, 1997; Tung, 1991). This study specifies that an important reason for valuing strong relationships is that they promote the kind of interaction that strengthens learning. With collectivist relationships, the partners can more easily rely upon each other and exchange their abilities and resources. With this interpersonal support, they can learn from each other.

Collectivist values have typically been considered more fitting for traditional societies whereas individualist ones are more supportive of the contemporary workplace with its emphasis on fast pace and innovation. Indeed, individualist values have been found to intensify and collectivist ones weaken as an economy develops (Heuer, Cummings, & Hutabarat, 1999; Ralston, Egri, Stewart, Terpstra, & Kaicheng, 1999; Westwood, & Posner, 1997). However, this study indicates a constructive role for collectivist values for they provide a relationship foundation that supports effective interaction between partners. Researchers in the West have also begun to suggest that relationships are critical for decision-making, negotiation, and other aspects of organizational work (Hitt et al., 2002; Lovett et al., 1999). Collectivist values then may have considerable value for contemporary organizations to the extent that they support productive work relationships.

These results may have more general significance for the study of cultural values. Traditionally, cultural values have been associated with and used to explain behavior, for example, collectivist values have been thought to underpin harmony and conflict avoidance among Chinese people (Bond, Wan, Leung, & Giacalone, 1985; Tse, Francis, & Walls, 1994). But it may not just be values but how values are applied within situations that affect behavior (Morris et al., 1998). Leung (1997; Leung, Koch, & Lu, 2002) has argued, for example, that the Chinese valuing of collectivism and harmony does not lead directly to avoiding conflict to defuse potential interpersonal problems. Collectivist harmony values can also promote the desire to strengthen relationships and solve interpersonal problems out of a genuine concern for the relationship as a value in and of itself.

Collectivist and individualist values are unlikely to be uniformly constructive or destructive but should be developed appropriately so that they contribute to learning and other important outcomes. More generally, Chinese and other people make choices about how they consider and implement their cultural values. Cross-cultural researchers have begun to investigate how the situation and the expression of values alter their consequences in specific situations (Bond, 2003; Smith, 2003).

Rather than the traditional cross-cultural research of comparing individuals or samples from different cultures regarding the strength and effects of values (Leung, 1997), we used ideas developed in the West to explore the role of collectivist and individualist values in organizational relationships in China. The present research attempts to develop both the ideas of trust and vertical coordination and our understanding of the effects of collectivist and individualist values on organizational relationship dynamics in China. Although theories developed in one culture cannot be assumed to apply in another (Hofstede, 1993), findings suggest that the concepts of collectivism, individualism, trust, and vertical coordination can be useful for understanding learning in Chinese settings.

Limitations

The sample and operations, of course, limit the results of this study. The data are self-reported and subject to biases, and may not be accurate, although recent research suggests that self-reported data are not as limited as commonly expected (Spector, 1992). These data are also correlational and do not provide direct evidence of causal links between collectivism, individualism, trust, vertical coordination, and learning. However, supplier organizations completed the measure of their learning, and their customer partners completed the measures of collectivism, individualism, vertical coordination, and trust. Developing different sources for the independent and dependent measures should reduce the possibilities of same source method as an alternative explanation of the results.

Spector and Brannick (1995) have argued that the most effective way to overcome recall and other methodological weaknesses is to test ideas with different methods. Developing experimental verification of the effects of collectivism, individualism, trust, and vertical coordination on learning in East Asian partnerships would very much strengthen this study's findings. For example, on the interpersonal level, experiments could randomly assign pairs to collectivist and individualistic relationship conditions and then measure the effects of these inductions on trust, exchange, and learning.

Practical Implications

In addition to developing theoretical understanding, continued support for the hypotheses could have important practical implications for developing organizational relationships and promoting learning. Results reaffirm the importance of relationships in Asia and suggest that emphasizing strong collectivist values could promote trust and vertical coordination between partners. The partners might be able to strengthen their collectivist relationship by emphasizing that they are positively oriented toward each other's well-being, that they are proud of each other's achievements, and enjoy sharing and working with each other. They can also downplay their desires to show that they are unique and independent of each other. Collectivist values may well help them feel that they can trust and rely upon each other and develop ways and procedures to consult with each other and exchange information and ideas. These ways of working should lay the foundation for partner learning.

Learning is becoming increasingly important as organizations are pressed to provide value to customers in rapidly changing marketplaces. Forming organizational relationships may be a basis for learning as it allows the integrating of the diverse expertise of organizations. However, relationships between supplier and customer organizations do not inevitably result in learning. Indeed, partners may worry that the other is pursuing their own interests without regard to theirs and fail to exchange their ideas. Results of this study though suggest that partners who develop a strongly collectivist relationship are likely to feel trusting of each other and engage in vertical coordination that in turn helps a partner learn. Future research could explore the extent to which collectivist values, trust, and vertical coordination promote learning in various organizational relationships in Asia and in the West.

Appendix

Customer Organization Questionnaire

Collectivist values

- The well-being of each company is important to this partnership.
- If our supplier were in financial difficulty, we would help within our means.
- If our supplier gets a prize, we would feel proud.
- The supplier and we have pleasure in working with each other.

Individualist values

- The supplier and we like to do our own thing.
- Being unique is important to this partnership.
- The supplier and we rather depend on our own than on each other.
- The supplier and we having identity independent from the other is very important to us.
- The supplier and we having our own identify is very important to us.
- The supplier and we enjoy being unique and different from each other.

Vertical coordination

- We regularly exchange information about production costs with this supplier.
- We regularly consult with this supplier about its selection of raw materials and components incorporated in the products we order.
- We regularly exchange information about price development and market conditions with this supplier.
- Our firm makes regular joint efforts to improve the quality of the products we order from this supplier.
- We cooperate closely with this supplier on quality control of products delivered to our company.

Trust

- We learn things that can help us be more effective in the future from working with the supplier.
- This supplier has been frank in dealing with us.
- Promises made by this supplier are reliable.
- This supplier is knowledgeable regarding his products.
- This supplier does not make false claims.
- If problems such as shipment delays arise, the supplier is honest about the problems.

Supplier Organization Questionnaire

Learning

- Our company learned or acquired some new or important information from the customer.
- Our company learned or acquired some critical capability or skill from the customer.
- The alliance has helped our company to enhance our existing capabilities/skills.

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