Work group member culture and relational demography as antecedents of trustworthiness

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ABSTRACT

Today's global economy has yielded a workplace that is diverse and highly competitive. There is a clear need for research focusing on factors impacting functioning of culturally heterogeneous work groups, among these are perceptions of group members and how they are formed. Specifically this study examined the relationship between employee cultural and demographic differences and the formation of perceptions of others' trustworthiness. Qualified support was found for a relationship between employee differences and the formation of perceptions of others' trustworthiness. Strong support was found for a model, moderated by cultural values, revealing affective dimension of trustworthiness mediating cognitive dimensions of trustworthiness and overall perceptions of trustworthiness. Implications of this research for practitioners and business educators who are utilizing diverse teams are discussed, as are suggestion for future research.

Keywords: trustworthiness, culture, groups, diversity, relational demography

INTRODUCTION

The global world economy and continued utilization of groups in the workplace make understanding the dynamics of culturally diverse work groups especially important. Given this, researchers have devoted considerable attention to the identification of important factors associated with work group effectiveness. Based upon a survey of the literature, perceptions of trustworthiness appear to be important with regard to work group performance and effectiveness (Hosmer, 1995; Hirsch, 1978).

Utilizing previous research in the areas of trustworthiness, relational demography and cultural values a model of the relationship between these factors is proposed. Together with the theoretical rationale for the proposed linkages a description of the data collection, analysis and results are presented. Implications for practitioners and academics are detailed in conclusion.

Trustworthiness

Numerous organizational researchers have studied the concepts of trust and trustworthiness in numerous contexts, utilizing various definitions that limited generalizability of the research results. Luhmann (1988) related trust to situations that involve recognized risk, while confidence in another's ability and intentions was central to Deutsch (1960). Both Dasgupta (1988) and Gabarro (1978) highlighted predictability in their definitions. Mayer, Davis and Schoorman (1995), defined trust, as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (p.712)". This definition has been employed by recent research including Mayer and Norman (2004), as well as this effort.

The distinction between trust and trustworthiness is important when researching phenomena in work groups (Mayer et al., 1995, Mayer and Norman, 2004). Trust can be viewed as a behavioral intention, whereas trustworthiness is a multidimensional construct for forming judgments about another person, subsequently impacting behaviors. An individual makes an assessment of the trustworthiness of another when determining behavioral intentions. When examining the behavior and behavioral intentions of individuals in work groups, trustworthiness is the relevant concept; however both terms referenced in the research are used to ascribe behavioral intentions in this research.

A survey of the literature confirms that considerable attention has been devoted to identification of the important factors in an individual's trustworthiness attribution process (Butler, 1991 Robbins 2001, Schindler and Thomas 1993; Strickland, 1958). Some agreement is found with regard to the important factors, specifically ability, which is similar to what is called cognitive-based, (e.g. Cook & Wall, 1980; Griffin, 1967; Good, 1988, Nooteboom, 1996), integrity (Lieberman ,1981, Ring and Van deVen, 1992) and benevolence which can be equated with affective-based conceptualizations (Cook and Wall, 1980, Deutsch, 1960, Griffin, 1967, Good, 1988, Kee and Knox, 1970). The research detailed here adopted the model developed by Mayer et al. (1995) which identifies ability, integrity and benevolence as the three primary factors: dimensions that are related to how individuals evaluate others including: leaders (Pancer, Brown, & Barr, 1999), job candidates (T. Cook & Elmer, 1999), and potential collaborators (Kee & Knox, 1970).

A relationship between expectations of others' actions and the behavior of work group members has been confirmed by many researchers (Olsen 1971, Earley, 1989). Satisfaction, commitment (Flaherty and Pappas, 2000) productivity and employee morale Spreitzer and Mishra (1999) have been shown to be positively related to trust, as have helpful behaviors such as open communication and information sharing (Curall & Judge, 1995; Silvadas & Dwyer, 2000, Inkpen & Li, 1999; Silvadas & Dwyer, 2000 Volery & Mensik, 1998). There is some evidence that employee adjustments to organizational change may be facilitated by higher levels of interpersonal trust (Raghuram, Gamd, Wiesenfeld, & Gupta, 2001). At the organizational level, sales, profits and employee turnover have been shown to be associated with trust (Davis, Shoorman, Mayer, and Tan, 2000). Increased levels of trust between organizations have also been connected to performance and satisfaction (Cullen, Johnson, & Sakano, 2000; Mohr & Spekman, 1994).

Support for the contention that individual differences differentially relate to aspects of trustworthiness was found by Mayer et al. (1995) and Caldwell and Jeffries (2001). Respectively, they found that the factors vary independently of one another, and are subjectively perceived by individuals. Other research reveals some inherent differences in the way people assess information and circumstances related to the factors of ability and integrity (Snyder & Stukas, 1999). Findings include the tendency of individuals to weigh positive information about ability more heavily than negative information, and negative information about integrity more heavily than positive information (Madon, Jussim, & Eccles, 1997; Martin, Spears, Van der Plight, & Jacobs, 1992,. Reeder and Brewer, 1979).

Cultural values and perceptions of trustworthiness

Considerable evidence has been gathered of systematic cross-cultural differences in values and individual perceptions (Hofstede, 1980, 1991, 1994, 2001). Support for the role of culture in determining the trustworthiness of others can be found in a number of empirical studies. Kim, Ferrin, Cooper and Dirks (2004) observed differences across cultures with regard to work relationships, linking interpersonal perception and relationship development. Evidence that individuals in many Asian cultures are less forgiving of trust violations than are individuals in the United States, and their finding that the use of various trust repair efforts and reactions to violations of trust vary across cultures strengthens the case for systematic cultural differences in the formation of group member perceptions of trustworthiness. Poelmans, Spector, Cooper, and Allen, (2003) looked at work/family demands and resources and found that different cultures assign different levels of significance and importance to the concepts of work and family. Workplace perceptions were found to be influenced by individualized beliefs by Primeaux, Katti, and Caldwell (2003), who concluded that cultural attributes as well as other demographic characteristics play an integral part in determining perceptions.

Research has also looked specifically at the Hofstede dimensions. Caldwell and Clapham (2003) used Hofstede's dimensions to explore differences between North Americans and Asians with regard to perceptions of ability. They found that North Americans perceive competence (ability) as more important than Asians in forming perceptions of trust. They also found a distinction between individuals with regard to formation of perceptions of integrity and competence. People intuitively believe that those with high integrity will refrain from dishonest behaviors in any situation, whereas those with low integrity may exhibit either dishonest or honest behaviors depending on their incentives and opportunities. Fine (2010), in an

examination of aggregate data across 27 countries, found that integrity was negatively correlated with corruption and power distance, but had a non-significant positive relationship with individualism. Finally, Kim et al. (2004) found that reactions to a mistrusted party's integrity-based violations differed from reactions to competence-based violations.

Collectivistic and individualistic orientation has been shown to be related to the phenomenon of social loafing (Earley, 1989, 1993; Gabrenya, Latane, and Wang, 1983). Earley (1989) found the dimension of individualism-collectivism to be relevant to social loafing, with American managers holding individualistic beliefs engaging in social loafing but not Chinese managers holding collectivist beliefs. Individualists were found to exhibit lower levels of performance in a group setting than when working alone whereas collectivists performed better in a group than when working alone. Further, collectivists did not exhibit social loafing regardless of level of accountability.

Another study by Earley (1993) found that the composition of the group that a manager was in affected the manager's level of participation. When managers with collectivistic orientations worked in groups that shared their orientations, they felt more efficacious, both alone and as a group member, than if they worked in a group with an individualistic orientation. Managers with individualistic orientations were found to perform better while working alone than while working in a group, both with individuals with the same and different value orientations. Further, he found that social loafing applies to individualists who work in any type of group but only to collectivists who work in a group with a different value orientation. In other words, Earley (1993) found that in addition to an individual's cultural orientation, the value orientation of the work group they are a part of affects social loafing. Along these same lines, Jackson and Harkins (1985) found that individuals in groups contributed effort in relation to the anticipated contributions of other group members. For example, they found that individuals did not loaf if they worked with others whom they expected to work hard, but did loaf if they expected their partners to loaf.

Taken together, this research provides support for the notion that there are culturally based differences in the ways that individuals form perceptions of other work group members, specifically the three components of trustworthiness utilized in our model such that:

> Hypothesis 1: Cultural values that represent high levels of individualism, masculinity, and power distance, and low levels of uncertainty avoidance lead to lower ratings of others' integrity.
> Hypothesis 2: Cultural values that represent high levels of individualism, masculinity, and power distance, and low levels of uncertainty avoidance lead to lower ratings of others' ability.
> Hypothesis 3: Cultural values that represent high levels of individualism, masculinity, and power distance, and low levels of uncertainty avoidance lead to lower ratings of others' benevolence.

Relational Demography and Perceptions of Trustworthiness

Theoretical rationale for including relational demography in this model is found in the substantial amount of research addressing the importance of group member demographics on formation of work group member perceptions. Caldwell and Clapham (2003) found that perceptions of trustworthiness are individually determined. The subjective nature of the

interpersonal trustworthiness process has been used by researchers to explain the presence of individual differences in interpretations of others (Caldwell and Jeffries, 2001). McKnight, Cummings, & Chervany (1998) found a relationship between levels of trust and a variety of individual factors including personality, group membership and stereotypes. While it had generally been thought that trust develops gradually over time research has found that individual characteristics can lead individuals to exhibit surprisingly high levels of trust for others almost immediately (Meyerson, Weik, & Kramer, 1996). Finally, diversity can provide groups resources that can be leveraged for competitive advantage, by offering novel insights and perspectives (Weigand, 2007). Harrington (2007) found that gender diverse investment clubs outperformed more homogeneous ones. Group members may see diversity as a mechanism by which ideas are fostered and governance is not influenced by social embeddedness (Granovetter, 1985) and cultural familiarities, which may increase within group trust in a work context.

While admittedly limited, the above research provides some theoretical support for a model that relates formation of perceptions of trustworthiness to individual differences in group member culture, age and gender

Hypothesis 4: Group diversity is positively related to perceptions of others' integrity
Hypothesis 5: Group diversity is positively related to perceptions of others' ability.
Hypothesis 6: Group diversity is positively related to perceptions of others' benevolence.

Cognitive antecedents of the affective dimension of trustworthiness

While interpersonal trustworthiness scales have been validated, Lewis and Weigert (1985) conceptualize that cognitive trust provides a basis for affective trust. Previous research has found a positive relationship with cognitive trust being an antecedent of affective trust (Johnson and Grayson, 2003), which is consistent with the literature although a recursive relationship or decoupling is suspected over time (McAllister, 1995). This model proposes that the cognitive dimensions of interpersonal trustworthiness are positive antecedents of the affective dimension, *i.e.*, integrity and ability are positive antecedents of benevolence.
Hypothesis 7: Cognitive dimensions of interpersonal trustworthiness (ability and integrity) are positively related to the affective dimension (benevolence)
The seven hypotheses are depicted in our conceptual model (Figure 1)

METHODS

The data are from a questionnaire administered to 99 international MBA students in 24 groups from 26 countries studying in the Netherlands. There were three groups with missing respondents, resulting in four total missing cases and a 95% response rate. In addition to the measures described below, the questionnaire also contained a number of demographic items including country of origin, age, and gender.

The model requires the simultaneous estimation of many relationships with a relatively small sample size (*i.e.*, n=99), which makes the use of "hard modelling" techniques problematic. The use of the "soft modelling" partial least squares (PLS) algorithm allows for the estimation of complex models that does not go beyond the data (Falk and Miller, 1992; Fornell and Bookstein, 1982).

PLS creates two models, the measurement model or outer model with the manifest variable weights and loadings for each of the constructs, and the structural model or inner model with the paths between the constructs. As indicated in Table 1 (Appendix) the measurement model consists of 22 manifest variables. PLS allows for both reflective and formative indicators. Reflective indicators are used when manifest variables are expected to behave like a scale, *i.e.*, unidimensionality (Gudergan et al. 2008), while formative indicators are used when a combination of manifest variables underlies a latent construct (Bagozzi and Fornell, 1982; Fornell and Bookstein, 1982).

Reflective indicators are used for perceptions of trustworthiness ($\eta 1$), integrity ($\eta 2$), ability ($\eta 3$), and benevolence ($\eta 4$), On the other hand, dimensions of culture ($\xi 1$) and relational demography ($\xi 2$) are à priori not expected to behave like a scale, so formative indicators are used. Formative indicators are analogous to regression, where manifest variables give rise to a latent construct. The two controls, group size ($\xi 3$) and age of respondent ($\xi 4$), are single-item indicators. All of the constructs, except the controls, are quantified by at least three measures. The PLS algorithm (Ringle et al., 2005) also uses a bootstrapping procedure (resampling) to approximate standard errors, which provide *t*-statistics for loadings and path weights. The bootstrapping procedure also yields indicators that can be used to assess reliability and validity, discussed below.

MEASURES

Cultural values

Cultural values was assigned to respondents using four of Hofstede's dimensions (individualism-IDV, power distance-PDI, masculinity-MAS, and uncertainty avoidance-UAI), with the scores for the respondent's home country used. There is no expectation that cultural values represent a scale, but are dimensions giving rise to a construct, hence formative indicators in PLS are used (Milberg, Smith, and Burke, 2000). Hofstede's indices are used here as very rough proxies for cultural values, with the assumption that country of origin provides a lens through which individuals perceive others.

Relational Demography

To control for the effects of self-categorization and social identity relational demography measures were calculated for age, country of origin, and gender. For each respondent, the square root of the summed squared differences between the value on the three demographic variables, *Si*, and the value on the same variable for every other individual, *Sj*, in the group, divided by the total number of group members (*n*) (Tsui, Egan, and O'Reilly III, 1992) was identified. The following formula is used for the calculations:

*R*DS = (Relational demography equation)

There is no à priori reason to expect relational demography measures to behave like a scale, so formative indicators are used. Tsui, Egan and O'Reilly III (1992) found relatively low correlations between five relational demography measures, *i.e.*, typically below |0.10|, with the highest being between age and tenure (0.34) and education and sex (0.24).

Ability, benevolence, integrity.

The three-factor model of interpersonal trustworthiness is used to measure the constructs of ability, integrity, and benevolence (Mayer et al., 1995). Ability is measured by three manifest variables, measuring perceptions of other group members' capability of performing tasks, having confidence in other members' skills, and how well-qualified the other members are to be in the program. Integrity is measured by three variables, addressing: fairness, sense of justice, and shared values. Benevolence is measured by three items: looking out for what is important to the group, importance of the group's needs and desires, and going out of their way to help the group.

Perceptions of trustworthiness.

Trustworthiness is measured using a scale developed by Mayer and Norman (2004) and modified to address peers or team members, rather than subordinates and superiors. Four manifest variables are used indicating the degree to which the respondent felt about: the other member not allowing the group to have influence (reverse coded), giving others responsibility of on a critical task without being watched, others having complete control over the group's future, and wanting a way to keep an eye on other members (reverse coded).

A summary of the questionnaire items used for ability, integrity, benevolence, and perceptions of trustworthiness is provided in the Appendix.

RESULTS

Descriptive statistics and a correlation matrix pertaining to the manifest variables are provided in TABLE 2 (Appendix). The PLS algorithm used supplies a composite reliability score for each latent construct, which can be used to address convergence validity, in addition to Cronbach's alpha and average variance extracted (AVE). The rule-of-thumb for composite reliability scores is that they should be greater than 0.6 (Chin, 1998; Höck and Ringle, 2006), while Cronbach's alpha scores should be greater than 0.7 (Nunnaly and Bernstein, 1994) and AVE should be greater than 0.5 (Bagozzi and Yi 1988).

Discriminant validity is assessed using AVE scores, using the assessment procedure in Fornell and Larcker (1981) where the square root of the AVE is compared to the latent variable correlations. Specifically, a constructs root AVE should be greater than any of its latent variable correlations, which is the case.

TABLE 3 (Appendix) summarizes the measurement model (weights, loadings, *t*-values), along with the composite reliability, Cronbach's alpha, and AVE scores for each reflective construct. The four item perceptions of trustworthiness scale failed to meet all three criteria, while the remaining scales for integrity, ability, and benevolence did. A new model was created that eliminated two items with low loadings from the perceptions of trustworthiness construct, which resulted in a model similar to the original.

The structural model consists of 15 path relationships simultaneously estimated (SEE TABLE 4). There are 4 endogenous dependent constructs (η), integrity, ability, benevolence, and perceptions of trustworthiness, each with $R2$ of 8%, 14.4%, 65.4%, and 46.6%, respectively. The hypotheses are discussed in the sections below. The three interpersonal trustworthiness constructs of integrity (β=.006, n.s.), ability (β =.455, p<.001), and benevolence (β =.275, p<.05) are all positively related to trustworthiness.

Cultural values. H1-H3

The cultural values construct weights are positive for individualism, masculinity, and power distance, and negative for uncertainty avoidance. The weights and signs are consistent with the pattern found in Milberg, Smith, and Burke (2000). The following are the formative weights for individualism (1.977, $p<.01$), power distance (1.372, $p<.05$), and uncertainty avoidance (-0.475, $p<.05$). Masculinity (.586, $p<.07$) was marginally significant, but was not included in the model. While there is no support for the hypothesized relationship between the cultural values latent variable (individualism, masculinity, power distance, and lower uncertainty avoidance), the results are opposite of what was hypothesized. Cultural values are actually positively related to integrity ($\gamma=.220$, $p<.06$) and benevolence ($\gamma=.156$, $p<.17$), albeit marginally significant. So, those from countries with values of individualism, masculinity, tolerant of inequities, and tolerant of uncertainty tended to rate others' integrity positively. Conversely, those from countries with collectivist values, less masculine orientation, embracing of equality, and avoiding of uncertainty tended to rate others' integrity negatively.

Relational demography (group diversity): H4-H6

The relational demography formative weights were all found to be positive for age (.490, $p<.07$), culture (.563, $p<.05$), and sex (.597, $p<.01$). While age was marginally significant as a formative weight for relational demography, it was not included in the model. The structural path results indicate relational demography especially is important to consider when analyzing behavior of work group members, due to their relationship with perceptions of trustworthiness. There is a positive relationship between group diversity and perceptions of ability ($\gamma=.181$, $p<.05$) & benevolence ($\gamma=.249$, $p<.05$), providing support for hypotheses 5 and 6, but only a marginally significant effect on integrity ($\gamma=.249$, $p<.07$) therefore hypothesis 4 is not supported.

Cognitive dimensions of interpersonal trustworthiness: H7

Hypothesis 7 was tested by examining the path weights for the relationships of integrity and ability on benevolence, summarized in TABLE 4 (Appendix).The results show integrity ($\beta=.510$, $p<.001$) and ($\beta=.422$, $p<.001$) have a positive and significant relationship with benevolence, supporting hypothesis 7. The relationship turned out to be quite complex. Integrity is perfectly mediated (Baron and Kenney, 1986), as it is not significant with respect to perceptions of trustworthiness, when benevolence is modelled as a mediator. Ability on the other hand, is not perfectly mediated, as ability has a strong direct effect with perceptions of trustworthiness, $\beta=.455$, $p<.000$.

While not hypothesized, an examination was undertaken of the relationships in subsamples of two groups. One was an "individualist" culture group and the other was a "collectivist" culture group. The collectivist cultures were represented primarily by Chinese and Indonesian respondents (n=36), while the remainder of the sample was primarily individualistic, according to the Hofstede IDV index. We could not model cultural values or relational demography, due to linear dependencies in the data matrix. The results show that there are key differences with the two groups, as the positive relationship between ability and benevolence is weaker and less significant with the collectivists (βcoll=.194, $p<.05$), when compared to the individualists (βindiv=.510,

p<.000). Moreover, the relationship between benevolence and perceived trustworthiness is not significant with the individualists (βindiv=.070, n.s.), while positively and strongly significant with the collectivists (βcoll=.435, p<.000). The relationship with the full sample was modest (βfull=.275, p<.05).

DISCUSSION

While the results of this research are equivocal, nonetheless they can shed some light on the nature of dynamics in work groups in today's workplace. With the world economy becoming increasingly global and the use of groups and teams becoming pervasive, this effort provides some support for the importance of employee culture and demographic differences on work group functioning. The portion of the model focusing on relational demography enjoyed some support. Less significant were the results associated with cultural values. Our analysis yielded interesting results that were the opposite of those hypothesized, although only integrity was significantly (and positively) related to cultural values (individualism, masculinity, tolerant of inequities, and tolerant of uncertainty). This seems to suggest that cultural diversity is less important to formation of trust perceptions than are other variables such as age or gender.

One issue that may be affecting the results is an ecological fallacy (Grenness, 2012), as the Hofstede dimensions are not intended to be used on the individual level. We used the Hofstede data as a proxy for one's cultural lens, but what also may be occurring is that the sample, which consisted of MBA students, is reflective of a global professional class that is confounding the results. Future research should examine the intra group interactions affected by these variables, as well as additional socio-demographic factors related to the process. Additionally, ethnographic research may shed light on the nuances of cultural values in a global professional context.

The most significant results related to relational demography. These finding highlight the importance of the demography of the work group, and perhaps actively managing it, to impact on perceptions of trustworthiness. The positive relationship between group diversity and perceptions of ability and benevolence, and to a lesser extent, integrity, supports the idea that the benefits of diversity can be far ranging. Diversity can set the groundwork for trust through perceptions of ability and benevolence, but integrity is arguably linked to shared values, which could be limited in a global work group context. Future research might examine whether at some level, diversity's positive effects diminish.

Another interesting result was the specification of a mediated relationship, where cognitive dimensions of trustworthiness are antecedents of affective ones. The relationship is one of partial mediation, as the relationship between ability and perceptions of trust is both strong and significant, along with benevolence. The direct effect of integrity on perceptions of trustworthiness is attenuated by mediation, but the specific relationships are not clear. Future research should address the interplay with these dimensions, but perhaps with specific contexts in mind in order to examine if there can be a general model of trustworthiness or if it is best understood with respect to particular tasks, organizational types, industries, or strategies.

Examination of the individualist and collectivist subsamples was also noteworthy. Individualistic respondents perceived ability to be positively related to benevolence, but benevolence was not significantly linked to trust. Collectivist respondents perceived a strong relationship between ability and benevolence, as well as between benevolence and trust.

Collectivists appear to link both the affective and cognitive dimensions of trustworthiness, while individualists focus on the cognitive (namely, ability).

From a practical standpoint, it is possible that employees will be involved in work groups with other employees that process trust related information differently. Knowing how perceptions of trustworthiness are formed might allow individuals to actively manage, or at least influence, the trust formation process. For example, freely sharing information about ability or integrity among work group members with different cultural backgrounds may be beneficial, or encouraging team building to enhance perceptions of benevolence for intercultural teams may be useful to enhance perceptions of trustworthiness. Future research may expand the model to include outcome variables for more practical application. In sum, in a global economy that utilizes teams in a number of contexts, identifying how individuals decide whom they trust may be increasingly important. Understanding the issues involved in perceptions of trustworthiness may allow organizations to compete more successfully.

APPENDIX

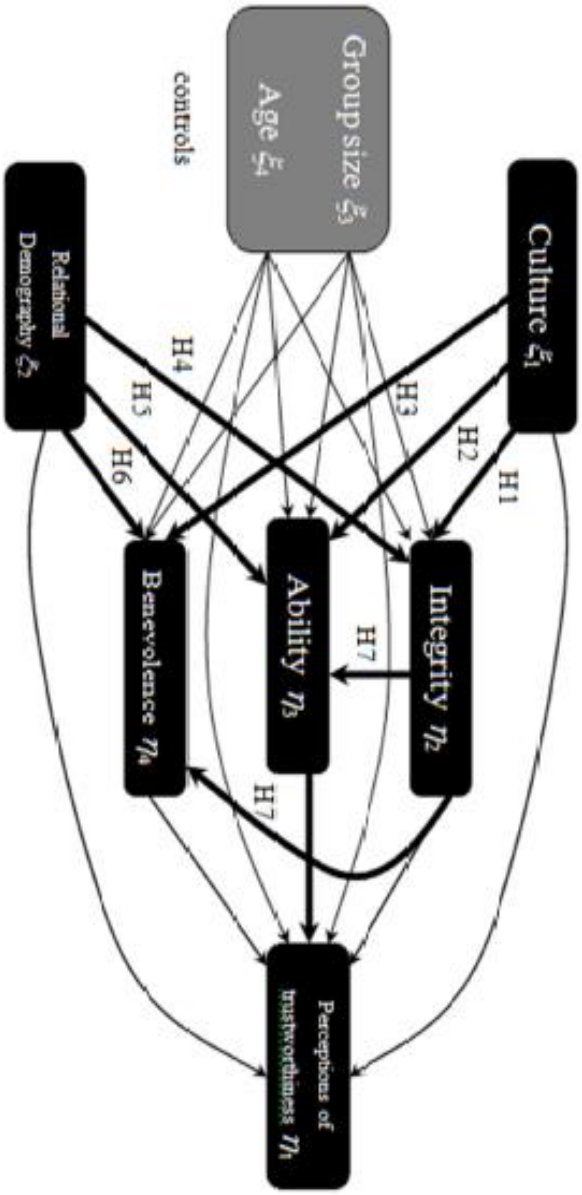

FIGURE. Framework of the Study

TABLE 1. Descriptive statistics and correlation matrix

	Manifest variable	Mean	SD σ	1	2	3	4	5	6	7	8	9
1	Integrity1	4.761	1.583	–								
2	Integrity2	5.197	1.139	.398	–							
3	Integrity3	5.431	1.094	.347	.727	--						
4	Ability1	5.696	0.955	.280	.164	.326	–					
5	Ability2	5.605	1.050	.357	.280	.391	.788	–				
6	Ability3	5.737	0.958	.437	.437	.545	.688	.740	--			
7	Benevolence1	5.378	1.227	.328	.500	.655	.448	.560	.642	–		
8	Benevolence2	5.296	1.216	.399	.612	.676	.491	.512	.625	.792	–	
9	Benevolence3	4.798	1.291	.370	.370	.435	.328	.329	.300	.429	.444	--
10	Trustworthiness1	3.830	1.472	-.104	-.036	-.014	.002	.033	-.113	-.046	-.024	.018
11	Trustworthiness2	5.050	1.204	.244	.325	.368	.563	.592	.495	.514	.460	.211
12	Trustworthiness3	4.575	1.338	.101	.264	.432	.520	.581	.450	.475	.439	.305
13	Trustworthiness4	3.311	1.668	-.108	-.044	-.073	-.317	-.402	-.403	-.190	-.150	-.238
14	Individualistic (IDV)	43.222	27.236	-.036	-.019	-.058	-.074	.021	-.027	-.003	-.066	.101
15	Power-distance (PDI)	63.657	18.757	.031	.088	.102	.047	-.034	.046	.075	.105	-.062
16	Uncert. avoidance (UAI)	50.444	18.709	-.200	-.058	-.124	-.014	.123	.093	-.025	-.047	-.102
17	Masculinity (MAS)	23.010	3.382	.123	.134	.117	.022	-.049	.042	.062	.100	.010
18	Relational demog.-age	3.147	2.134	.071	.079	.009	.199	.145	.123	.050	.124	-.065
19	Relational demog.-culture	3.315	1.806	.040	.068	.086	.156	.174	.196	.135	.069	.055
20	Relational demog.-sex	0.470	0.284	.144	.164	.054	.203	.185	.251	.150	.200	.025
21	Groupsize	4.475	0.761	.002	.026	.046	.261	.284	.346	.033	.040	-.105
22	Age	23.010	3.382	-.026	.101	.110	.104	.047	.050	.002	.034	-.093

Table 1 Descriptive statistics and correlation matrix (cont.)

	Manifest variable	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Integrity1													
2	Integrity2													
3	Integrity3													
4	Ability1													
5	Ability2													
6	Ability3													
7	Benevolence1													
8	Benevolence2													
9	Benevolence3													
10	Trustworthiness1	–												
11	Trustworthiness2	.143	--											
12	Trustworthiness3	.142	.721	–										
13	Trustworthiness4	.477	-.122	-.116	--									
14	Individualistic (IDV)	-.248	-.227	-.088	-.284	–								
15	Power-distance (PDI)	.211	.176	.036	.256	-.913	–							
16	Uncert. avoidance (UAI)	-.294	-.063	.010	-.196	.346	-.326	--						
17	Masculinity (MAS)	.161	.034	.013	.142	-.633	.690	-.301	–					
18	Relational Demog.-Age	-.118	.214	.112	-.034	.049	-.133	.242	-.162	–				
19	Relational Demog.-Culture	-.069	.066	.074	-.014	.263	-.219	-.027	-.282	-.095	--			
20	Relational Demog.-Sex	-.116	.102	.035	-.203	-.064	.066	.109	.172	.180	.050	–		
21	Groupsize	-119	.202	.098	-.177	-.039	-.053	.108	-.025	.382	.123	.463	--	
22	Age	.175	.178	.122	.205	-.204	.139	.068	.215	.442	-.229	-.028	.089	--

Table 2 Summary of measurement (outer) PLS model results

Latent Variable Construct	Manifest Variable	Composite Reliability Score	Cronbach's α	AVE	$\sqrt{AVE}$	Loading/ weight	t-value
Integrity η_2	Integrity1	0.855	0.743	0.668	0.817	0.614	5.198
	Integrity2					0.902	35.771
	Integrity3					0.900	23.843
Ability η_3	Ability1	0.934	0.894	0.826	0.909	0.910	51.463
	Ability2					0.932	37.163
	Ability3					0.883	22.018
Benevolence η_4	Benevolence 1	0.877	0.789	0.708	0.841	0.925	51.936
	Benevolence 2					0.921	37.078
	Benevolence 3					0.646	5.903
Trustworthiness$_1$* η_1	Trustworthiness1	0.333	0.511	0.429	0.654	-0.126	0.876
	Trustworthiness2					0.858	12.464
	Trustworthiness3					0.844	11.572
	Trustworthiness4					-0.504	2.735
Trustworthiness$_2$* η_1	Trustworthiness2	0.924	0.838	0.860	0.927	0.935	76.421
	Trustworthiness3					0.920	49.320
Cultural values ξ_1	Individualistic (IDV)					1.997	2.901
	Power-distance (PDI)					1.372	2.070
	Uncert. avoidance (UAI)					-0.475	1.993
	Masculinity (MAS)					0.586	1.689
Relational demography ξ_2	Relational Demog.-Age					0.490	1.915
	Relational Demog.-Culture					0.563	2.299
	Relational Demog.-Sex					0.597	2.549
Groupsize ξ_3	Size of the group					1.000	
Age ξ_4	Age of the respondent					1.000	

*Trustworthiness$_1$ suffered reliability issues, with very low measures of composite reliability, Cronbach's alpha, and average variance extracted. A two-item scale, Trustworthiness$_2$, is used in the analyses.

TABLE 3. Latent variable correlations and root AVE on the diagonal

	Latent variable	1	2	3	4	5	6	7	8
1	Integrity η_2	0.817							
2	Ability η_3	0.490	0.909						
3	Benevolence η_4	0.722	0.631	0.841					
4	Perceptions of trustworthiness η_1	0.400	0.632	0.533	0.927				
5	Cultural values ξ_1	0.194	0.062	0.151	0.152	–			
6	Relational demography ξ_2	0.156	0.188	0.188	0.175	0.095	--		
7	Group size ξ_3	0.035	0.323	0.007	0.164	0.216	0.522	–	
8	Age ξ_4	0.091	0.074	-0.007	0.163	0.124	0.071	0.089	--

Table 4 Summary of the structural (inner) models results

Independent constructs ξ	Dependent constructs η									
	Integ-rity	Ability	Benevo-lence[1]	Benevo-lence[2]	Benevo-lence[3] Individualist Subsample N=63	Benevo-lence[4] Collectivist Subsample N=36	Trustworth-iness[1] Full Dataset (No mediation)	Trustworth-iness[2] Full Dataset (Mediation)	Trustworth-iness[3] Individualist Subsample N=63	Trustworth-iness[4] Collectivist Subsample N=36
Hypotheses (those supported are bolded)	H1, H4	H2, **H5**	H3, **H6**	H3, **H6**, **H7**	**H7**	**H7**				
Controls										
Age	0.107	0.041	0.002	0.007	-.052	-0.160***	0.132	-0.115†	0.174*	0.056
Group Size	0.022	-0.208*	0.089	0.170**	-.181***	-0.045	-0.004	0.005	0.106	0.144
Exogenous Constructs										
Cultural values	0.220*	0.008	0.156	0.211				-0.158†		
Relational demography	0.181†	0.220*	0.249*	0.061				-0.049		
Endogenous Constructs										
Integrity				0.510***	.480***	.556***	-0.025	0.006	-0.040	0.047
Ability				0.422***	.510***	.194*	0.479***	0.455***	0.570***	0.368***
Benevolence							0.250†	0.275*	0.070	0.435***
R^2	8.0%	14.3%	7.0%	65.4%	75.3%	46.5%	44.7%	47.0%	47.9%	56.5%

Benevolence[1] is a model where integrity and ability are independent of benevolence. Benevolence[2] is a model where integrity and ability are independent variables affecting benevolence. Benevolence[3] is a model without the exogenous constructs with an individualist subsample. Benevolence[3] is a model without the exogenous constructs with a collectivist subsample. Trustworthiness[1] is the original model with the full dataset, where the endogenous latent variables (integrity, ability, and benevolence) only have direct effects on perceptions of trustworthiness. Trustworthiness[2] builds on Trustworthiness[1], modeling indirect effects, where integrity and ability are mediated by benevolence. Trustworthiness[3] is identical to Trustworthiness[2], but is based on the individualist subsample. Trustworthiness[4] is identical to Trustworthiness[2], but is based on the collectivist subsample.

†p<0.1, *p<0.05, **p<.01, ***p<.001

Questionnaire items

Latent Variable Construct	Manifest variable	Item
Integrity η_2	Integrity1	He/she tried to fair in dealings with other group members.
	Integrity2	He/she has a strong sense of justice.
	Integrity3	I like his/her values.
Ability η_3	Ability1	Is very capable of performing his/her group related tasks.
	Ability2	I have confidence in his/her skills.
	Ability3	I believe that he/she is well qualified to be in this program.
Benevolence η_4	Benevolence1	He/she really looks out for what is important to the group
	Benevolence2	The group's needs and desires are important to him/her.
	Benevolence3	He/she went out of their way to help the group.
Trustworthiness η_1	Trustworthiness1	If he/she had their way, they wouldn't let the rest of the group have any influence over important issues (reverse coded).
	Trustworthiness2	I would be comfortable giving him/her a task or problem that was critical to the group, even if I could not monitor his/her actions.
	Trustworthiness3	I would be willing to let him/her have complete control over the future of the group.
	Trustworthiness4	I really wish there was a good way to keep an eye on him/her (reverse coded).

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