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### A Social Exchange Model of Subordinate's Trust in Supervisors

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## A Social Exchange Model of Subordinate's Trust In Supervisors

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## Abstract

This study demonstrates how the subordinate's defensiveness predicts perception of managerial behaviors, which in turn leads to trust in supervisors. From a social information processing perspective, defensiveness, the affective reaction to uncertainty and vulnerability, serves as the "frame" subordinates use to decode and evaluate managerial behaviors. Trust in supervisors is anchored in this perception. A two-group analysis in Structural Equation Modeling (SEM) is used to test this model by a Chinese and a US sample.

**Key Words:** trust, social information processing, structural equation modeling

## A Social Exchange Model of Subordinate's Trust In Supervisors

The importance of trust in organizational as well as interpersonal relations has been increasingly recognized by sociologists and psychologists (e.g., see Bianco, 1994; Blumberg, 1989; Brown, 1994; Garment, 1991; Miller, 1992; Putnam, 1993; Sitkin & Roth, 1993). Because environments have become more uncertain and competitive, trust has been recognized as central to organizations (Barnard, 1938) through its effect on cooperation (Axelrod, 1984; Deutsch, 1962; Kramer, 1993), interpersonal and group solidarity (Barber, 1983; Blau, 1964; Fox, 1974), and facilitating social infrastructure (Williamson, 1981; Zucker, 1986). Peters (1987, p. 627), for example, argues that “the uncertainty of the environment can be swiftly dealt with only if the firm can fall back upon the certainty of relationships among people and among groups—in other words, upon trust and integrity.” In the hierarchy of supervisors and subordinates in organizations, what determines subordinate's trust in his/her supervisor? This is the research question this paper attempts to answer.

In organizations, the hierarchy of supervisors and subordinates is the most important and prevalent form of relationship. Trust plays a central role in hierarchical relationships (e.g., see Barber, 1983; Hill, 1992; Kanter, 1977; Miller, 1992; Sitkin & Roth, 1993; Tyler & Lind, 1992) because of the vulnerabilities and uncertainties that are inherent in such relationships. Hierarchical relationships are characterized by profound and consequential differences in the power, status, dependence, and control that subordinates and their supervisors enjoy. Researchers on trust such as Tyler and Kramer (1996) pointed out that one central question regarding the dynamics of trust in hierarchical relationships is to find out the antecedents or determinants of trust. Previous research on this question has focused primarily on the social and structural determinants of trust within hierarchical systems (e.g., see Barber, 1983; Fox, 1974; Kanter,

1977; Christie & Geis, 1970; Deutsch, 1962; Rotter, 1971; Strickland, 1958). The importance of psychological processes in trust in hierarchical relationships has not been systematically explored although there are a number of general cognitive theories of trust (Lindsfold, 1978; Rotter, 1980). In particular, the perceptual and judgmental bases of trust within such relations remain unspecified. This question will be addressed in this paper.

Another important factor to be incorporated in studies on trust is national culture. Although sociological research on trust has made “stunning conceptual progress” (Kramer, 1996) on social context, few researchers have examined the role of national culture in determining subordinate’s trust in his/her supervisor. Although recently, Whitener, Brodt, Korsgaard, and Werner (1998) emphasized the importance of national culture on trust, there is still a paucity of research in this area (Doney, Cannon & Mullen, 1998; Whitener, Maznevski, Hua, Sæbø, & Ekelund, 2001 are two important exceptions). It is not clear whether national culture has a main or moderating effect on trust, which raises the question of generalizability of US-based trust models across cultures. This question will also be addressed in this paper.

The purpose of this study is to demonstrate how two main sets of independent variables, namely “the subordinate’s defensiveness” and “the subordinates’ perception of managerial behaviors”, work together to lead to trust in his/her supervisor. More importantly, perception is hypothesized to be a mediator between defensiveness and trust. The model is tested in the context of two countries, Mainland China and USA, to test for its robustness across cultural boundaries. From a social information processing perspective, defensiveness, the affective reaction to uncertainty and vulnerability, serves as the “frame” subordinates use to decode and evaluate managerial behaviors. According to the social exchange theory, subordinate’s trust in

his/her supervisor is anchored in this perception. This paper uses Structural Equation Modeling (SEM) to test the hypothesized model.

## **A Social Exchange Model of Subordinate's Trust in Supervisors**

### **Definition of Trust**

Numerous researchers have taken great effort to arrive at a generally agreed upon definition of trust. Although trust is a construct most people intuitively know about, previous research on trust has often been definitionally and conceptually vague (Barber, 1983; Hosmer, 1995; Mayer, Davis & Schoorman, 1995; Whitener et al., 1998). Most extant research on trust typically suffers from unidimensional conceptualizations and operationalizations and fails to discriminate it from related constructs such as cooperation or familiarity (Barber, 1983; Luhmann, 1988).

In this paper, the following definition of trust is formulated on the basis of previous research (Butler, 1991; Swan, Tranick, Rink, & Roberts, 1988; Mishra, 1996; Shoda, Mischel, & Wright 1994; Kramer, 1996) to reflect subordinate's trust in his/her supervisor: Trust is the subordinate's willingness to be vulnerable to his/her supervisor based on their cumulative interactions as a managerial dyad. This definition emphasizes the affective dimension of trust—that is, trust is a conscious although not necessarily rational choice of attitude in dealing with the supervisor.

### **The Development of the Subordinate's Trust in His/her Supervisor**

As trust is the subordinate's affective reaction to prior interactions with his/her supervisor, the development of such affection is essentially a psychological process. Individual differences in processing the accumulated information will definitely play a significant role. In this paper, "defensiveness" is chosen to be the key differentiating factor among subordinates, for reasons explicated below. The difference in this mental setup has a direct impact on the way subordinates process the information they gathered through the interaction with their supervisors, which in turn, leads to trust.

**Subordinates' Defensiveness Toward Supervisors.** Defensiveness is the natural human reaction to the uncertainty and vulnerability subordinates have to face in dealing with their supervisors. First, in all cases that trust is involved, there is uncertainty and vulnerability. Blau (1964, pp. 112-113) argues that trust develops because social exchange involves unspecified obligations for which no binding contract can be written. Kipnis (1996) proposed that trust arises out of our dependency on other people. Because we have needs that require the services of other people, we must deal with issues of trust, especially under conditions of dependence and risk (Currall, 1990). Therefore, by trusting others people allow their fate to be determined by others, and their outcomes to be contingent on the others' behavior. The inherent risk means that it is possible to experience negative outcomes from the other person's behavior.

Second, specific to the hierarchical relationship between supervisors and subordinates, the uncertainty and vulnerability of subordinates to their supervisors is particularly relevant. According to Kramer's (1996) analysis, trust is critical for subordinates for two reasons. First, they depend on their supervisors for a variety of critical organizational resources, such as promotions, pay increases, space, coveted assignments, support staff, and other resources needed to get one's work done. Thus, for subordinates, trust in their supervisors matters because, over time, the outcomes they are likely to obtain from the organization are closely related to their supervisors. Secondly, subordinates also depend on supervisors for many psychological resources, such as positive reinforcement, empathy, and social support. As a result, trust matters as it is closely coupled with the interpersonal treatment subordinates will receive from their supervisors (e.g., see Bies & Moag, 1986; Tyler, 1993; Tyler & Bies, 1990; Tyler & Lind, 1992).

In summary, trust is coincident with uncertainty and vulnerability. Kipnis (1996) provided an accurate description of the affective reactions to uncertainty: "Trust concerns how



we feel about having to trust other people. My assumption is that having to trust other people is bothersome. Sometimes this bother is experienced as anxiety and sometimes as feelings of deference, fear, or anger. But whatever the label, the feelings are negative. (p 40)". As a result, people are affectively conditioned to be defensive when it comes to the issue of trust.

Specific to subordinates in their interactions with supervisors, defensiveness is rooted in the material and psychological uncertainty and vulnerability. Following this line of argument, from a social information-processing perspective, Kramer (1996) described the defensive subordinates as "vigilant and ruminative auditors" (p. 218)—"...a vigilant and fastidious bookkeeper who maintains a rather strict accounting of the various exchanges and transactions that constitute the history of relationship with another person" (p. 219). In this paper, subordinates are treated as social perceivers with varying degrees of defensiveness, who go through constructive cognitive processes by using coherent and useful categorical systems to make sense of their supervisors' behaviors. The cognitive process, over time, leads to an integratively complex schema to determine the actual trust level in supervisors.

Defensiveness is a culturally determined attribute. This is because defensiveness is closely related to people's value system, which is largely determined by the culture he or she grows up in. Culture reflects and passes down the collective belief from generation to generation (Hofstede, 1980; Maznevski, DiStefano, Gomez, Noorderhaven, & Wu, 1997). People sharing one culture tend to have similar beliefs on certain topics, such as how to approach the world and each other. The culture in which people spent their childhood and youth has the greatest influence on how people view the "normal" or "natural" ways to approach other people (Hofstede, 1980). Therefore, national culture is undoubtedly an important factor when it comes to defensiveness.

Several researchers (e.g., Adler, 1997; Kirkman & Shapiro, 1997) have recommended Kluckhohn and Strodtbeck's (1961) "cultural orientations" framework to investigate the impact of national culture on managerial issues. As discussed above, defensiveness mainly concerns how people project the trustworthiness of other people based on their judgement about human nature, and how important it is to protect one's own interests compared to others when there is uncertainty. Two of the dimensions in Kluckhohn and Strodtbeck's (1961) theory, orientation toward human nature and individualism, are chosen to examine the effect of cultural values on subordinates' defensiveness toward supervisors (Doney et al., 1998).

Orientation toward Human Nature. Although trust is usually conceptualized as rational calculations by agency theorists (Williamson, 1975, 1981, 1993), researchers like Kramer (1996) propose that it also carries with itself "an orientation toward society and toward others that has social meaning beyond rational calculations" (p. 5). In this stream of research, the "internalized orientation" (p. 6) traced back to psychological research on moral development (Rushton, 1980; Staub, 1978, 1979), and later developed into the notion of "moral duty or commitment" as reflected in trusting behaviors (Kramer & Goldman, 1995). This school of thought echoes the description of one important cultural value, orientation toward human nature, in Kluckhohn and Strodtbeck's (1961)'s framework.

Cultures address assumptions about the basic nature of humans. The primary dimension concerns whether humans are assumed to be basically good or evil. In cultures with a "good" orientation, individuals assume that even strangers are generally trustworthy, and that when people do bad things it is either an accident or because the environment has driven them to do so. In cultures with an "evil" orientation, individuals assume that good behavior is counter to human nature. It is accepted that people behave in a constructive way most of the time, but that we must

constantly be guarding ourselves against the temptation to be bad, and we should expect others to be unable to resist this temptation. Over time, this orientation toward human nature shapes the moral rules of a society, which is reflected in the level of defensiveness of people who live in the culture.

It is natural to be more defensive and alert to other people's behavior, if in the culture, an individual assumes that all others are endowed with an evil nature. On the contrary, when people generally believe that others are born with a good nature, the psychological barrier that has to be overcome in order to trust others is lowered. Thus in assessing subordinates' defensiveness toward their supervisors, orientation toward human nature comprises an essential dimension.

*Hypothesis 1. Subordinates' belief in good human nature is negatively associated with subordinates' defensiveness toward supervisors.*

Individualism. Another cultural orientation that is directly related to defensiveness is individualism. According to Kluckhohn and Strodtbeck, cultures (and individuals) vary in how they presume people should relate to each other. The individualism dimension focuses on one's self. People and cultures whose highest relationship priority is individualism assume that our most important responsibility in relationships should be to ourselves and our immediate family. If a person is primarily concerned with the interests of himself/herself, and the prevailing culture is such that everybody follows this philosophy, the only rational deduction is to be more defensive. This is because like everybody would do, the interests of oneself always comes as a priority to other people's interests. Specifically in a supervisor-subordinate dyad, the subordinate would place his or her own interests ahead of anybody else's, and logically, the subordinate would expect that the supervisor takes care of his/her interests before he/she takes care of the

subordinates' interests. Thus individualism is another important dimension in assessing subordinates' defensiveness toward their supervisors.

*Hypothesis 2. Subordinates' defensiveness toward supervisors is positively associated with his/her level of individualism.*

**Subordinates' Perceptions of Managerial Behavior.** Theoretical models of trust development (e.g., Deutsch, 1958; Erikson, 1968; Lindsfold, 1978; Pilisuk & Skolnick, 1968; Rotter, 1980) have frequently noted that trust in others is dependent on the cumulative interaction between interdependent parties. They further imply that subordinates as social perceivers use specific cognitive categories to track, partition and evaluate behaviors they observe from the supervisors (Mayer et al., 1995).

Numerous researchers such as Gabarro (1987), Kirkpatrick & Locke (1991), and Nanus (1989) proposed that perceptions of openness and honesty are key aspects of defining followers' trust in leaders. Openness is usually reflected by the two-way communication in the dyadic interactions between supervisors and subordinates. Honesty is a synonym for behavioral integrity. McGregor (1967, p. 164) argued that "Inconsistencies between words and action decrease trust". Other researchers such as Ouchi (1981, p. 101), Gabarro (1987, p. 104), Kirkpatrick & Locke (1991) and Swan et al. (1988) echoed the importance of behavioral consistency in building trust, although they used labels such as "consistency or credibility" or "dependability". Barber (1983) explicitly argued that among others, fiduciary responsibility (i.e., concern) was one important dimension in constructing trust. Tracing back to the instrumental perspective that individuals crave control over outcomes, Thibaut and Walker (1975) suggested that authorities who share control earn more trust.

Based on the review of the literature, and as summarized in Whitener et al., (1998, 2001), it is proposed that subordinates anchor their trust in supervisors in the following five categories: behavioral consistency, behavioral integrity, two-way communication, sharing/delegation of control, and demonstration of concern. The attribution and evaluation of supervisors' behaviors are filtered through these common human screens and lenses.

### **A Social Exchange Model of Subordinates' Trust in Supervisors**

Figure 1 presents the hypothesized theoretical model of managerial trust in supervisor-subordinate dyads. As argued in the trust literature and social exchange theory, trust is anchored in perception. Therefore, in this model, subordinates' trust in supervisors is a direct outcome of subordinates' perception of managerial behavior. According to the social information processing theory, the perception of behavioral outcomes is largely determined by the way the perceiver frames and evaluates the outcomes (Kahneman & Tversky, 1984; Thaler, 1985). Therefore, subordinates' defensiveness toward supervisors, the affective reaction to vulnerability and uncertainty inherent in trust, is hypothesized to attenuate their perceptions of managerial behaviors.

*Hypothesis 3. Subordinates' perceptions of managerial behaviors directly and positively influence managerial trust.*

*Hypothesis 4. Subordinates' defensiveness toward supervisors is negatively associated with their perceptions of managerial behaviors.*

As stated in the introduction, the purpose of the study is to propose and empirically test a model of managerial trust. As cultural factors are important components in the model, the author examines the robustness of the model in two countries. The sample in this study is taken from the United States and Mainland China.

## Method

### Sample

Survey data were collected from business people in the United States and Mainland China. For the US sample, of 500 surveys mailed to graduates of a mid-Atlantic undergraduate business program, 199 usable responses were returned for a response rate of 40%. For the Chinese sample, of 200 questionnaires distributed to the Executive MBA classes in a major research university of North China, 180 usable responses were returned for a response rate of 90%.<sup>1</sup>

The two samples are comparable on several key dimensions. The respondents worked in similar job capacities (as professionals or managers) for similar types of organizations (manufacturing, service, or consulting). The mean age range of both sample respondents is 26-30. On average respondents from both samples supervise 4 to 5 employees and have a similar job tenure of 4.5 years. In both samples, 92% of the respondents identified most strongly with the culture of their birth country (China or the US) rather than another country or subculture. Finally, most respondents were male (55% of American respondents and 65% of the Chinese respondents—differences that were not statistically significant).

The surveys were administered in English and Chinese. The survey was designed by a team of senior and junior researchers in English in 1998. A copy of the survey is provided as an appendix. Translation followed standard procedures (Brislin, Lonner, & Thorndike, 1973; Brislin, 1986): The survey was designed in English and translated into Chinese by a Ph.D. student (a native Chinese speaker) in a large US mid-western university. During the translation

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1. The high response rate in the Chinese sample is due to the high power distance. Generally speaking, students will fill out the questionnaires upon request of their professor.

process, the wording of some items was slightly adapted to achieve a meaning in Chinese that is closer to the original meaning in English. After completing the translation, the author (a Chinese native speaker) translated the survey back into English. Senior professors were then invited to review all items, refining them to assure comparability and clarity.

## **Variables and Measures**

**Subordinate Perceptions of Managerial Behavior.** This was a latent variable with five indicators: behavioral consistency, behavioral integrity, two-way communication, sharing/delegation of control, and demonstration of concern. Items were derived from Butler's (1991) Conditions of Trust Inventory and Driscoll's (1978) measure of participation in decision-making. Respondents used a 5-point scale to indicate the extent to which they agreed or disagreed that each statement described their immediate supervisor. Butler's scales tapped several sub-dimensions of managerial behaviors. The 3 highest loading items from each of his 4-item scales were chosen to represent these sub-dimensions. Butler's items assessing promise fulfillment and integrity measured behavioral integrity (6 items); his items reflecting consistency measured behavior consistency (3 items); his items measuring openness and receptivity tapped the dimension of two-way communication (6 items); and his items assessing loyalty and discretion measured demonstration of concern (6 items). In addition, five items were adapted from Driscoll (1978) to measure sharing and delegation of control. Examples include "My immediate supervisor/manager does not let me have input into decisions" and "When my immediate supervisor/manager is responsible for making a decision, he/she consults with me". Items were presented in random order in the questionnaire.

A principle components factor analysis of all 26 items with varimax rotation and eigenvalues set to 1 yielded 5 factors that closely replicated the expected factor structures. Therefore, the items for each dimension were averaged to represent each individual's score for that dimension. Coefficient alphas for dimensions fell in acceptable ranges, varying from 0.63 (for behavioral consistency) to 0.93 (for demonstration of concern and behavioral integrity)

**Subordinate's Defensiveness Toward The Supervisor.** This was an independent latent variable with three indicators—orientation toward human nature, vigilance and individualism. Orientation toward human nature was measured by six items from Maznevski et al.'s (1997) Cultural Perspectives Questionnaire (reverse scored such that a low score indicates an assumption that human nature is good). Vigilance was measured by the 10 items from the “L scale” of the 16 PF (Cattell, 1965). This scale measured the extent to which a person had a tendency to trust others or to be vigilant about others' motives and intentions. Sample items include: “There's usually a big difference between what people say they'll do and what they actually do” and “If people are frank and open, others will try to get the better of them.” Response alternatives included “true”, “?”, and “false” or “hardly ever”, “?”, or “often”, as appropriate. Responses are weighted and summed. A high score on the L scale indicated high vigilance. Coefficient alphas of 0.50 was obtained for the China sample and 0.73 for the US sample. Individualism was measured by six items from Maznevski et al.'s (1997) Cultural Perspectives Questionnaire. Coefficient alphas of 0.40 and 0.48 were obtained for the Chinese and American samples, respectively. As Maznevski et al. (1997) discuss, achieving strong reliability in operationalizing the deep-level assumptions and values associated with culture at the individual level analysis is difficult without including a prohibitive number of questions (Cronbach, 1990), and the reliability assessments reflect this dilemma. In their questionnaire



development, Maznevski et al. (1997) used confirmatory factor analysis with structural equation modeling and other construct validity procedures to demonstrate that the measures are valid. A principal components analysis was conducted for each of the two country samples of the 6 individualism items. In both the Chinese and the United States all items loaded clearly on the individualism scale.

Systematic response bias associated with culture is a constant source of methodological complication in comparative research. To diminish the variance associated with response bias, Leung & Bond (1989) and others (e.g., Maznevski et al., 1997; Peterson et al., 1995) recommend data subject to this type of bias be within-person standardized before conducting analyses relating cultural variables to each other and to other variables. Accordingly, within-person standardized scores for each person for the cultural scales were calculated and used in the analyses.<sup>1</sup>

**Subordinates' Trust in Supervisor.** This was a variable measured by McAllister's (1995) 5 items for affective trust-in-supervisor. Affective trust focuses on the emotional investment and bond between two individuals. Items, measured on a 5 point Likert-type scale, included "We have a sharing relationship. We can both freely share our ideas, feelings, and hopes," and "I would have to say that we have both made considerable emotional investments in our working relationship." Items were measured on a 5 point Likert-type scale. Coefficient alpha was .91 for the US sample and 0.80 for the Chinese sample. The scale score was derived by calculating the mean score for each respondent.

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<sup>1</sup> Within-person standardization involves calculating a mean and standard deviation for each person across all the items being standardized, regardless of scale. Then a new standard score is calculated for each variable (for each person), using the person's overall questionnaire mean and standard deviation as the basis of standardization. We

## Results

Table 1 presented the descriptive statistics for the measured variables for both the US and the Chinese sample. The hypothesized model of subordinates' trust in their supervisors was tested by a structural equation model (SEM) using EQS. The SEM approach seems particularly appropriate as this study tests a priori theoretical assumptions against empirical data. As Chin (1998) points out, SEM provides substantial flexibility to model relationships among multiple predictors and criterion variables to construct unobservable latent variables.

The data were analyzed using EQS 6.0 Beta version (Bentler & Wu, 2000), a package specifically developed to provide tools for SEM in the context of the Bentler-Weeks model (Bentler & Weeks, 1980). Input for the program consisted of a 11 X 11 correlation matrix of the model variables.

For the US sample, given the sample size of 199, the ratio of cases to variables is acceptable at about 22:1. The ratio of cases to estimated parameters is 11:1. Normality of the 9 measured variables was assessed through examination of histograms and scatter plots. None of the measured variables was significantly skewed or highly kurtotic. Calculation of standard skewness and kurtosis further verified normality, with no variable having a standard skewness greater than 3.42. In addition, the normalized Mardia's coefficient is 0.85, indicating multivariate normality. The determinant of the correlation matrix for the US sample is not zero, therefore the covariances are adequate and there are no special convergence problems.

For the Chinese sample, the ratio of cases to variables is 20:1, and the ratio of cases to estimated parameters is 10:1. Measured variables are normally distributed and the determinant of

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did not standardize other scales used in this research because, upon close examination, they did not seem to be subject to such response bias.

the correlation matrix is not zero either. Similarly, no convergence problem was found for the Chinese sample.

The hypothesized model was estimated in EQS by conventional maximum likelihood estimation method. The maximum likelihood method is applicable to normally distributed multivariate data. As no apparent deviation from normality was found for either sample, no other estimation methods were necessary in analyzing the current data sets.

The estimation of the originally hypothesized model yielded acceptable model fit indices and parameter estimation for both samples. Figure 2 presents the model diagram and results of the estimation for US sample, and Figure 3 presents the same information for the Chinese sample.

For the US sample, the Chi-square was 93.37 with a degree of freedom of 26,  $p < 0.00$ . Because a chi-square statistic is directly proportionate to sample size, fit indices are more appropriate to evaluate the fitness of the hypothesized model. Given the controversy in the literature over goodness-of-fit indexes, a variety of goodness-of-fit indexes were computed to evaluate the overall fit of the model (Bollen, 1989). The following goodness-of-fit indexes were reported: Bentler-Bonett Normed Fit Index (NFI)=0.90, Bentler-Bonett Non-normed Fit Index (NNFI)=0.90, Comparative Fit Index (CFI)=0.93, Bollen (IFI) Fit Index=0.93, LISREL GFI Fit Index=0.90, and LISREL AGFI Fit Index=0.83. The Root Mean-Square Residual (RMSR) =0.07, and the Standardized RMR=0.05. All these values suggest a good fit (Bentler & Bonett, 1980; Pedhazur & Schmelkin, 1991), which in turn indicates that the proposed model adequately explains the relationships between variables and factors inherent in the data. Indeed, the iterative process converged without problems in just 8 iterations.<sup>1</sup>

Standardized parameter estimates of the hypothesized model for the US sample are also reported in Figure 2. Overall the indicators loaded nicely on both the hypothesized factors, and all of the hypothesized path coefficients were significant (except for the two paths originally set as fixed as “banner indicators”, i.e., vigilance as a banner indicator for the factor “subordinates’ defensiveness toward supervisors”, and behavioral consistency as a banner indicator for the factor “subordinates perception of managerial behaviors”). The following section reports the factor structure and reviews the five hypotheses presented in the theory section.

The first latent variable, subordinates’ defensiveness toward supervisors, was hypothesized to have three indicators—vigilance, individualism and orientation toward human nature. The path between vigilance and subordinates’ defensiveness toward supervisors was fixed to 1. The standardized coefficient of orientation toward human nature is 0.44, significant at 0.05 level. This result supported hypothesis 1, which predicted that subordinates who assume others to be evil tend to have a higher defensiveness level, while those who assume that others have a good nature tend to have a lower defensiveness level. The path coefficient between individualism and subordinates’ defensiveness toward supervisors was reported to be 0.27, significant at 0.05 level. This supported hypothesis 2, which predicted that subordinates’ defensiveness toward supervisors is positively associated with his/her level of individualism.

The results also showed clear support for hypothesis 3 and 4. Hypothesis 3 predicted that subordinates’ perception of managerial behaviors directly and positively influence managerial trust. A path coefficient of 0.90 ( $p < 0.05$ ) provided unequivocal support for this hypothesis.

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1. The number of iteration is reported in EQS as a synopsis of the number of iterations required for a convergent solution and the mean absolute change in parameter estimates associated with each iteration. The best scenario is a situation where only a few iterations are needed to reach convergence; after the first two or three iterations, the change in parameter estimates stabilizes and remains minimal.

Hypothesis 4 predicted that subordinates' defensiveness toward supervisors is negatively associated with their perceptions of managerial behaviors. The path coefficient was reported to be -.24, significant at 0.05 level.

In summary, in the US sample, strong support was found for the hypothesized model, both at the factor structure level and the hypothesized relationships between variables.

Results from the Chinese sample exhibited almost identical patterns as that of the US sample, with all predicted loadings and coefficients significant in the predicted directions, and a satisfactory though lower fit of the model (ranging from 0.80 to 0.85). All findings for the Chinese sample were presented in Figure 3.

### **Two-group Analysis**

Although the independent test for the hypothesized models on both the US and the Chinese samples yielded acceptable fit indices, and all the predicted relationships received strong support from the results, we noticed that both the factor loadings and structural coefficients had different numerical values across the two samples. Therefore it was interesting to explore whether the differences were statistically significant across the two samples. A two-group analysis was conducted with all the hypothesized relationships constrained to be the same across samples. Results showed that the differences in both the factor loadings and regression coefficients were not statistically significant. The chi-square of the multi-group analysis is 207.6 with 56 degrees of freedom, significant at 0.00 level. The fit indices ranged from high .80 to .90 (Bentler-Bonett Normed Fit Index (NFI)=0.88, Bentler-Bonett Non-normed Fit Index (NNFI)=0.88, Comparative Fit Index (CFI)=0.91, Bollen (IFI) Fit Index=0.91, LISREL GFI Fit Index=0.89, and LISREL AGFI Fit Index=0.83. The Root Mean-Square Residual (RMSR) =0.08, and the Standardized RMR=0.07.

## **Discussion and Conclusion**

This study demonstrates how trust-related cognitions can be used to explain subordinates' perception of managerial behaviors, and eventually lead to trust in their supervisors. As the results indicate, individualism and belief about human nature, two important dimensions in national cultures, play an important role in forming subordinates' defensiveness toward supervisors. In turn, the defensiveness predicts subordinates' perceptions of managerial behaviors, which in turn predicts subordinates' trust in supervisors. The factor structure of subordinates' perceptions of managerial behavior, which comprises behavioral consistency, behavioral integrity, two-way communication, sharing/delegation of control and demonstration of concern, offers a guideline for managers to take the initiative to earn trust from their subordinates. The overall model streamlines a process by which subordinates depart from their personal beliefs about people and cultural indoctrination to interpret managers' behaviors to come to a conclusion about whether to trust their supervisors. From this study both researchers and managers can learn the key factors in the trust-building process in organizational settings.

Specifically, this study shows that supervisors have to face the reality that subordinates are conditioned to be defensive then it comes to trust issues. Therefore, it is important for supervisors to acknowledge the fact and earn trust from their subordinates by taking the initiative to help subordinates to overcome the psychological barrier. As the study demonstrates, at least five types of managerial behaviors, namely behavioral consistency, behavioral integrity, two-way communication, sharing/delegation of control and demonstration of concern, are used by subordinates to judge the trustworthiness of their supervisors. Therefore managers should pay close attention to these five dimensions to elicit trust from their subordinates.

One interesting finding of this study is that the model is supported by data from both USA and Mainland China. The fact that the trust-building process is almost identical in both settings vividly illustrates the point that human beings are essentially similar, especially when it comes to social relationships and social exchange. Differences in cultural values may complicate managerial issues in a lot of cases, but as suggested by this study, not in the trust-building mechanism between managers and subordinates.

Overall, this study builds on the current literature on trust by going further to test the cultural boundaries of the theory. A note worth taking here is that the samples from this study does not really represent the typical population of business people from either US or China. Therefore, caution needs to be used when trying to generalize the findings of this study.

## References

- Adler, N. J. 1997. *International dimensions of organizational behavior* (3<sup>rd</sup> ed.). Cincinnati, OH: South-Western.
- Aktouf, O. 1992. Management and theories of organizations in the 1990s: Toward a critical radical humanism? *Academy of Management Review*, 17(3), 407-431.
- Axelrod, R. 1984. *The evolution of cooperation*. New York: Basic Books.
- Barber, B. 1983. *The logic and limits of trust*. New Brunswick, NJ: Rutgers University Press.
- Barnard, C. I. 1938. *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Bentler, P.M., & Bonett, D. G. 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Bentler, P. M., & Weeks, D. G. 1980. Linear structural equations with latent variables. *Psychometrika*, 45 (3): 289-308.



- Bentler, P. M., & Wu, E. J. C. 2000. *EQS structural equations program manual*. Multivariate Software, Inc., Encino, CA.
- Bies, R. J., & Moag, J. 1986. Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations* (Vol. 1, pp. 43-55). Greenwich, CT: JAI.
- Blau, P. 1964. *Exchange and power in social life*. New York: John Wiley.
- Blumberg, P. 1989. *The predatory society: Deception in the American marketplace*. New York: Oxford University Press.
- Bianco, W. T. 1994. *Trust: Representatives and constituents*. Ann Arbor: University of Michigan Press.
- Bollen, K. A. 1989. *Structural equations with latent variables*. New York: Wiley.
- Brislin, R. W. 1986. The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field method in cross-cultural research* (pp. 137-164). Beverly Hills, CA: Sage.
- Brislin, R. W., Lonner, W. J., & Thorndike, R. M. 1973. *Cross-cultural research methods*. New York: Wiley.
- Brown, P. G. 1994. *Restoring the public trust*. Boston: Beacon.
- Butler, J. K., Jr. 1991. Towards understanding and measuring conditions of trust: Evolution of a conditions of trust inventory. *Journal of Management*, 17: 643-663.
- Cattell, R. B. 1965. *The scientific analysis of personality*. Baltimore, MD: Penguin.
- Chin, W. W. 1998. Issues and opinion on structural equation modeling. *MIS Quarterly*, 22 (1), VII-XVI.
- Christie, R., & Geis, F. 1970. *Studies in Machiavellianism*. San Diego: Academic Press.

- Conn, S. R., & Rieke, M. L. (Eds). 1994. *The 16PF fifth edition technical manual*.  
Champaign, IL: Institute for Personality and Ability Testing, Inc.
- Cronbach, L.J. 1990. Essentials of Psychological Testing (5<sup>th</sup> edition). New York: Harper  
Collins Publishing.
- Currall, S. C. 1990. *The role of interpersonal trust in work relationships*. Unpublished doctoral  
dissertation, Cornell University.
- Currall, S. C., & Judge, T. A. 1995. Measuring trust between organizational boundary role  
persons. *Organizational Behavior and Human Decision Processes*, 64: 151-170.
- Davidow, W. H., & Malone, M. S. 1992. *The virtual corporation*. New York: Harper Collins.
- Deutsch, M. 1958. Trust and suspicion. *Journal of Conflict Resolution*, 2, 265-279.
- Deutsch, M. 1962. Cooperation and trust: Some theoretical notes. In M. R. Jones (Ed.),  
*Nebraska Symposium on Motivation*: 275-317. Lincoln: University of Nebraska Press.
- Doney, P. M., Cannon, J. P., & Mullen, M. R. 1998. Understanding the influence of national  
culture on the development of trust. *Academy of Management Review*, 23: 601-620.
- Driscoll, J. W. 1978. Trust and participation in organizational decision making as predictors of  
satisfaction. *Academy of Management Journal*, 21: 44-56.
- Erickson, E. 1968. *Identity: Youth and crisis*. New York: W. W. Norton.
- Fox, A. 1974. *Beyond contract: Work power and trust relations*. London: Faber.
- Gabarro, J. 1987. *The dynamics of taking charge*. Boston: Harvard Business School Press.
- Garment, S. 1991. *Scandal: The culture of mistrust in American politics*. New York: Random  
House.
- Hill, L. A. 1992. *Becoming a manager*. Boston: Harvard Business School Press.

- Hofstede, G. H. 1980. *Culture's consequences: International differences in work-related values*. Beverly Hills: Sage.
- Hosmer, L. T. 1995. Trust: The connecting link between organizational theory and philosophical ethics. *Academy of Management Review*, 20: 379-403.
- Kahneman, D., & Tversky, A. 1984. Choices, values, and frames. *American Psychologist*, 39: 341-350.
- Kanter, R. M. 1977. *Men and women of the corporation*. New York: Basic Books.
- Kipnis, D. 1996. Trust and technology. In R. M. Kramer & T. R. Tyler (Ed.), *Trust in Organizations: Frontiers of Theory and Research*, pp. 39-50. Thousand Oaks, CA: Sage Publications.
- Kirkman, B. L., & Shapiro, D. L. 1997. The impact of cultural values on employee resistance to teams: Toward a model of globalized self-managing work team effectiveness. *Academy of Management Review*, 22: 730-757.
- Kirkpatrick, S., & Locke, E. 1991. Leadership: Do traits matter? *Academy of Management Executive*, 5(2), 48-60.
- Kluckhohn, F. R., & Strodtbeck, F. L. 1961. *Variations in value orientations*. Evanston, IL: Row, Peterson.
- Kramer, R. M. 1993. Cooperation and organizational identification. In K. Murnighan (Ed.), *Social psychology in organizations: Advances in theory and research* (pp. 244-268). Englewood Cliffs, NJ: Prentice Hall.
- Kramer, R. M., & Goldman, L. 1995. Helping the group or helping yourself? Social motives and group identity in resource dilemmas. In D. A. Schroeder (Ed.), *Social dilemmas*, New York: Praeger.

- Lindsfold, S. 1978. Trust development, the GRIT proposal, and the effects of conciliatory acts on conflict and cooperation. *Psychological Bulletin*, 85(4), 772-793.
- Luhmann, N. 1988. Familiarity, confidence, trust: Problems and alternatives. In D. Gambetta (Ed.), *Trust: Making and breaking cooperative relations* (pp. 94-107). Oxford, UK: Basil Blackwell.
- Mayer, R. C., Davis, J. H., and Schoorman, R. D. 1995. An integrative model of organizational trust. *Academy of Management Review*, 20: 709-734.
- Maznevski, M. L., DiStefano, J. J., Gomez, C. B., Noorderhaven, N. G., & Wu, P. 1997. *Variations in cultural orientations within and among five countries*. Paper presented at the Academy of International Business Annual Meeting, Monterrey, Mexico.
- McAllister, D. J. 1995. Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38: 24-59.
- McGregor, D. 1967. *The professional manager*. New York: McGraw-Hill.
- Miller, G. J. 1992. *Managerial dilemmas: The political economy of hierarchy*. Cambridge, UK: Cambridge University Press.
- Mishra, A. K. 1996. Organizational responses to crisis: The centrality of trust. In R. M. Kramer & T. R. Tyler (Ed.), *Trust in Organizations: Frontiers of Theory and Research*, pp. 261-287. Thousand Oaks, CA: Sage Publications.
- Nanus, B. 1989. *The leader's edge: The seven keys to leadership in a turbulent world*. Chicago: Contemporary Books.
- Ouchi, W. G. 1981. *Theory Z: How American business can meet the Japanese challenge*. Reading, MA: Addison-Wesley.

- Pedhazur, E. J. & Schmelkin, L. P. 1991. *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.
- Peters, T. 1987. *Thriving on chaos: Handbook for a management revolution*. New York: HarperCollins.
- Pilisuk, M., & Skolnick, P. 1968. Inducing trust: A test of the Osgood proposal. *Journal of Personality and Social Psychology*, 8: 121-133.
- Putnam, R. 1993. *Making democracy work*. Princeton, NJ: Princeton University Press.
- Rotter, J. B. 1967. A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35: 615-665.
- Rotter, J. B. 1971. *Generalized expectancies for interpersonal trust*. *American Psychologist*, 26, 443-452.
- Rotter, J. B. 1980. Interpersonal trust, trustworthiness, and gullibility. *American Psychologist*, 35: 1-7.
- Rushton, J. P. 1980. *Altruism, socialization, and society*. Englewood Cliffs, NJ: Prentice Hall.
- Shoda, Y., Mischel, W., & Wright, J. C. 1994. Intraindividual stability in the organization and patterning of behavior: Incorporating psychological situations into the idiographic analysis of personality. *Journal of Personality and Social Psychology*, 67(4), 674-687.
- Sitkin, S. B., & Roth, N. L. 1993. Explaining the limited effectiveness of legalistic “remedies” for trust/distrust. *Organizational Science*, 4: 367-392.
- Staub, E. 1978. *Positive social behavior and morality*. Vol. 1: Social and personal influences. San Diego: Academic Press.
- Staub, E. 1979. *Positive social behavior and morality*. Vol. 2: Socialization and development. San Diego: Academic Press.

- Strickland, L. 1958. Surveillance and trust. *Journal of Personality*, 26: 245-250.
- Swan, J., Trawick, II, Rink, D., & Roberts, J. 1988. Measuring dimensions of purchaser trust of industrial salespeople. *Journal of Personal Selling & Sales Management*, 8: 1-9.
- Thaler, R. 1985. Mental accounting and consumer choice. *Marketing Science*, 4: 199-214.
- Thibaut, J., & Walker, L. 1975. *Procedural Justice: A psychological analysis*. Hillsdale, NJ: Lawrence Erlbaum.
- Tyler, T. R. 1993. The social psychology of authority. In J. K. Murnighan (Ed.), *The winner's curse: Paradoxes and anomalies of economic life* (pp. 101-113). New York: Free Press.
- Tyler, T. R. & Bies, R. J. 1990. Beyond formal procedures: The interpersonal context of procedural justice. In J. S. Carroll (Ed.), *Applied social psychology and organizational settings* (pp. 119-132). Hillsdale, NJ: Lawrence Erlbaum.
- Tyler, T. R. & Kramer, R. M. 1996. Whither trust? In R. M. Kramer & T. R. Tyler (Ed.), *Trust in Organizations: Frontiers of Theory and Research*, pp. 1-15. Thousand Oaks, CA: Sage Publications.
- Tyler, T. R. & Lind, E. A. 1992. A relational model of authority in groups. In M. Snyder (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 115-192). New York: Academic Press.
- Whitener, E. M. 1997. The impact of human resource activities on employee trust. *Human Resource Management Review*, 4: 389-404.
- Whitener, E. M. Brodt, S. E., Korsgaard, M. A., and Werner, J. M. 1998. Managers as initiators of trust: An exchange relationship framework for understanding managerial trustworthy behavior. *Academy of Management Review*, 23: 513-530.

- Whitener, E. M., Maznevski, M., Hua, W., SÆBØ, S. R., & EKELUND, B. Z., 2001. Testing the cultural boundaries of a model of trust: Subordinate-manager relationships in China, Norway, and the United States. Manuscript submitted to Academy of Management Journal.
- Williamson, O. E. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press.
- Williamson, O. E. 1981. The economics of organization: The transaction cost approach. *American Journal of Sociology*, 87: 548-577.
- Williamson, O. E. 1993. Calculativeness, trust, and economic organization. *Journal of Law and Economics*, 34: 453-500.
- Zander, Lena. 1997. *The license to lead: An 18 country study of the relationship between employees' preferences regarding interpersonal leadership and national culture*. Stockholm: Institute of International Business, Stockholm School of Economics.
- Zucker, L. G. 1986. Production of trust: Institutional sources of economic structure, 1840-1920. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 8, pp. 53-111). Greenwich, CT: JAI.

**Table 1**  
**Means, Standard Deviations, and Correlations of Key Variables**  
**for the US and the Chinese Sample**

Variable	1	2	3	4	5	6	7	8	9
1. Vigilance <sup>a</sup>	-								
2. Behavioral consistency	-.18** -.02	-							
3. Behavioral integrity	-.27** -.26**	.69** .53**	-						
4. Two-way communication	-.15* -.27**	.54** .33**	.63** .71**	-					
5. Sharing/delegation of control	-.18** -.19**	.46** .32**	.54** .59**	.72** .75**	-				
6. Demonstration of concern	-.24** -.20**	.58** .40**	.76** .80**	.69** .65**	.57** .54**	-			
7. Subordinates' Trust in Supervisor	-.17* -.11	.57** .22**	.75** .57**	.80** .61**	.62** .54**	.77** .59**	-		
8. Individualism <sup>b</sup>	.17* .17*	-.05 -.03	-.14* -.20**	-.02 -.15	.00 -.22**	-.08 -.14	-.06 -.13	-	
9. Orientation Toward Human Nature <sup>a</sup>	.44** .25**	-.02 .05	-.11 -.26**	-.04 -.24**	-.01 -.07	-.06 -.22**	-.02 -.12	-.04 .10	-
Mean	9.05 13.11	3.43 3.24	3.81 3.17	3.64 3.09	3.62 3.12	3.82 3.29	3.46 3.00	.14 .00	2.62 3.55
Standard Deviation	4.30 2.96	.87 .79	.83 .83	.76 .73	.70 .73	.80 .80	.98 .84	.36 .35	.75 .70

*Note:*

1. Correlations and descriptives in each cell are in the following order: US (n=199), China (n=180). Top lines represent the US sample, and the bottom lines represent the Chinese sample.

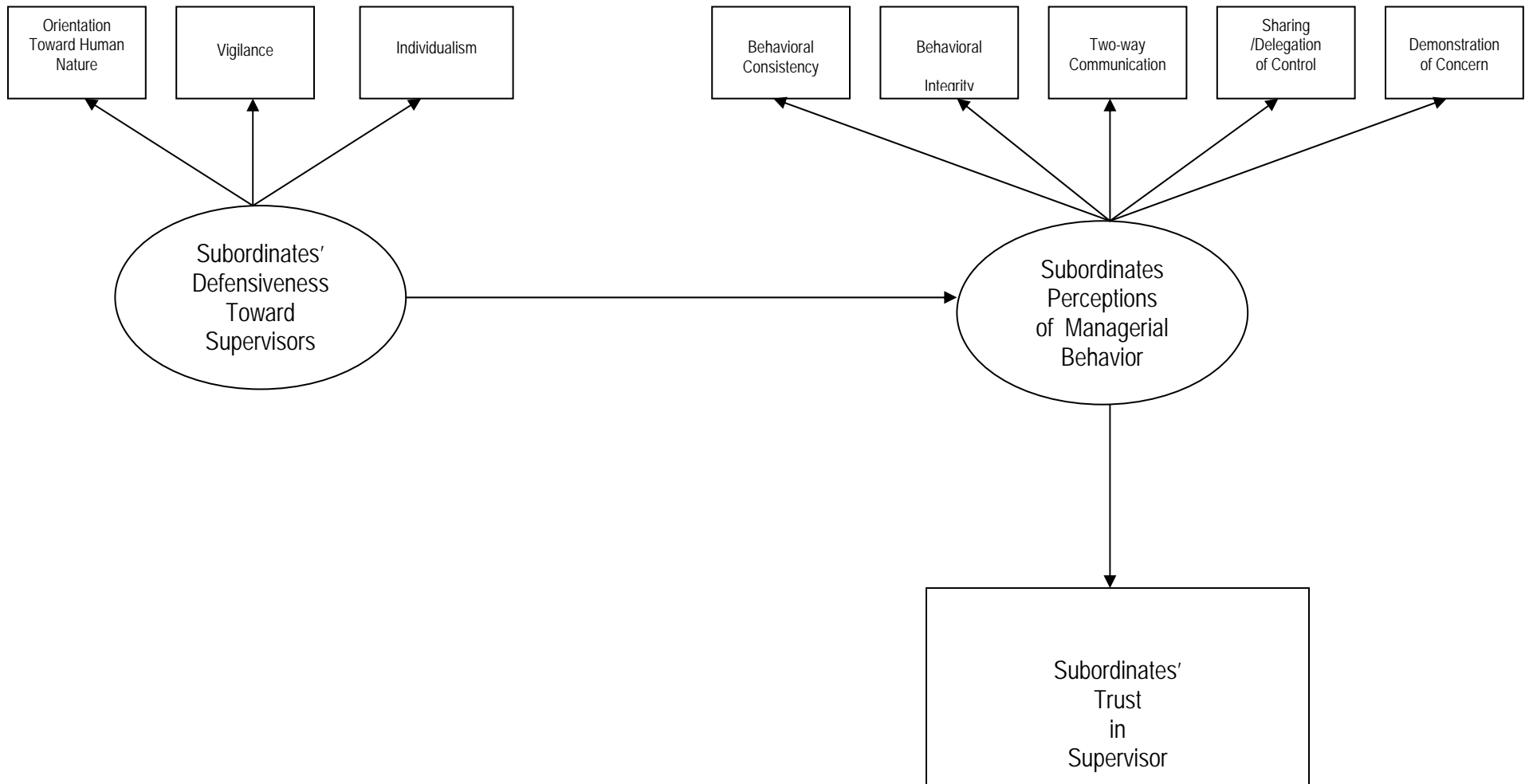
<sup>a</sup> Reverse scored.

<sup>b</sup> Scores standardized within person.

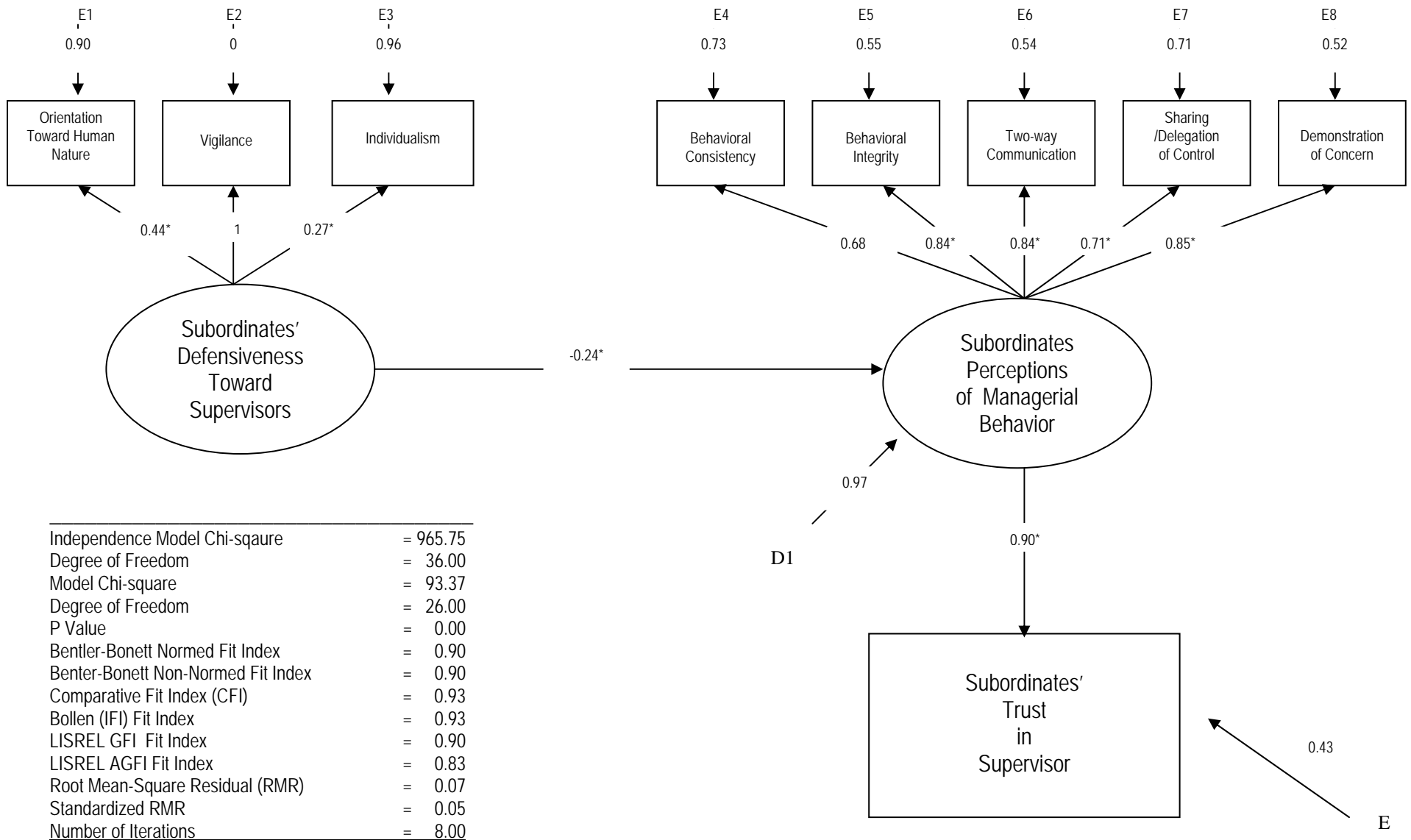
\*\*  $p < 0.01$ ; \*  $p < 0.05$



**Figure 1. Hypothesized Model of Subordinates' Trust in Supervisors**



**Figure 2. Standardized Results of the Estimated Model of Managerial Trust in Supervisor-subordinate Dyads—US Sample**



**Figure 3. Standardized Results of the Estimated Model of Managerial Trust in Supervisor-subordinate Dyads—Chinese Sample**

