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Abstract

Three dimensions of subordinate–supervisor relations (affective attachment, deference to supervisor, and personal-life inclusion) that had been found by Y. Chen, Friedman, Yu, Fang, and Lu to be characteristic of a *guanxi* relationship between subordinates and their supervisors in China were surveyed in Taiwan, Singapore, and six non-Chinese cultural contexts. The Affective Attachment and Deference subscales demonstrated full metric invariance whereas the Personal-Life Inclusion subscale was found to have partial metric invariance across all eight samples. Structural equation modeling revealed that the affective attachment dimension had a cross-nationally invariant positive relationship to affective organizational commitment and a negative relationship to turnover intention. The deference to the supervisor dimension had invariant positive relationships with both affective and normative organizational commitment. The personal-life inclusion dimension was unrelated to all outcomes. These results indicate the relevance of aspects of *guanxi* to superior–subordinate relations in non-Chinese cultures. Studies of indigenous concepts can contribute to a broader understanding of organizational behavior.

Keywords

guanxi, measurement invariance, organizational commitment, turnover intention, subordinate–supervisor relations

Introduction

Over the past several decades, numerous approaches have been explored in an attempt to develop a culture-general psychology. Researchers based primarily in the richer, more individualistic nations of the world have developed measures tapping variations in values, beliefs, personality,

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self-construals, and so forth, and it has been argued that these measures can explain global variations between nations in a broad variety of social and cognitive phenomena (Smith, Fischer, Vignoles, & Bond, 2013). Although the researchers who have developed these measures have sought to establish their cross-cultural validity, it remains likely that measures developed in alternative cultural contexts can capture neglected aspects of cultural variation (Kim, Yang, & Hwang, 2006; Sinha, 1997). Researchers working within this more indigenous tradition have studied for instance Chinese values (Chinese Culture Connection, 1987), Chinese personality (F. M. Cheung et al., 2001), paternalistic leadership in Turkey and China (Aycan, 2006; Farh & Cheng, 2000; Wu & Xu, 2012), the informal influence process known as *jeitinho* in Brazil (Ferreira, Fischer, Pilati, Porto, & Milfont, 2012), and the *guanxi* relationship in Chinese cultures (X. P. Chen & Chen, 2012; C. C. Chen, Chen, & Huang, 2013; Tsui & Farh, 1997). Among these, it is *guanxi* that has been studied most extensively and the present article forms part of a project that seeks to benefit from existing studies that have elucidated the nature and consequences of *guanxi*, as a basis for testing the extent to which *guanxi*-like relations and their consequences differ from other forms of particularistic ties that are said to characterize some non-Chinese cultural contexts.

There has been an unfortunate asymmetry in the ways in which measures developed in different national contexts are utilized cross-culturally. Measures developed in individualistic contexts are rather often used elsewhere without adequate testing for local validity (Schaffer & Riordan, 2003), whereas measures developed in other parts of the world are often considered to refer to indigenous aspects of culture and are rarely used outside the location in which they have been developed. As there are some aspects of behavior that are likely to be found universally and others that have greater significance locally, this asymmetry is undesirable. Measures originating for instance in the United States are just as likely to tap locally indigenous aspects of behavior as are "indigenous" measures developed in other locations. Measures developed outside the United States may tap aspects of behavior that are more strongly present than in the United States, but which could have predictive validity there also. Some instances of this kind have already been identified in the fields of personality (F. M. Cheung, Cheung, Leung, Ward, & Leong, 2003) and interpersonal relations (Kwan, Bond, & Singelis, 1997).

A desirable cross-cultural research strategy is to test the measurement equivalence/invariance (ME/I) of all measures in all relevant cultural locations, as a preliminary basis for determining what is or is not culturally distinctive (Vandenberg & Lance, 2000; van de Vijver & Leung, 1997). Several tests of ME/I are performed as a prerequisite to comparing cultural groups. The type of invariance that is required depends on the goals of the study (Steenkamp & Baumgartner, 1998). Configural invariance is necessary when the goal is to explore the basic structure of the construct across cultural groups. Configural invariance is supported if the specified model fits the data well and all factor loadings are significantly different from zero. Metric invariance is more stringent and tests for the existence of equal metrics or scale intervals across cultural groups. Metric invariance can be tested by constraining the loadings to be the same across the groups of interest. Establishment of metric invariance indicates that individuals from different cultures respond to items in the same way. Finally, researchers are often interested in comparing the means across cultural groups. Such comparisons can only be undertaken validly if the scalar invariance (equality of intercepts) of the items is established (Steenkamp & Baumgartner, 1998).

By examining the metric invariance of measures of *guanxi* in a variety of settings, we can determine the extent to which it has relevance to non-Chinese cultural systems. There is some ambiguity as to what criteria must be used to determine whether an aspect of social behavior can be considered as indigenous to a specific context (Sinha, 1997; Smith, 2012). Strictly speaking, the term *indigenous* refers to phenomena that develop locally, but it is conceivable that similar phenomena might arise locally in a variety of widely separated contexts. In practice, however, the term is frequently used in ways that also imply distinctiveness or uniqueness. If *guanxi* is wholly

distinctive to Chinese cultures, the scales that are found to measure validly its occurrence in Chinese contexts would be unlikely to evoke the same conceptual frames in non-Chinese cultures. In ME/I terms, the metric invariance (which, by definition subsumes configural invariance) of the scales would not be supported. If *guanxi* has elements in common with other aspects of interpersonal relations, at least partial metric invariance is to be expected in other cultural contexts, particularly those that have similarities with Chinese cultures.

If *guanxi* scales demonstrate metric invariance, indicating that items constituting the *guanxi* construct are similarly interpreted across cultures, the question of interest would be whether the cultural distinctiveness of *guanxi* is in its frequency of occurrence or extent of endorsement. In this case, the mean-level differences can be compared across cultural groups upon establishing scalar invariance. Finally, cultural differences may rest in the pattern of relationships, or predictive power of *guanxi* as observed in Chinese versus non-Chinese cultures. Such substantive hypotheses can be tested once the scales demonstrate metric invariance. In sum, by undertaking the required ME/I tests, we can establish the potential of the concept of *guanxi* to illuminate particular aspects of interpersonal relations in other parts of the world.

The Concept of Guanxi

Particularistic ties between members of relatively collectivistic cultures have been identified as distinctive not just within Chinese cultures but also in Arab societies, Turkey, India, southern Europe, and Russia (Smith, 2008). We have sparse information as to the extent to which these forms of ties are conceptually similar or empirically different from *guanxi*. Tsui and Farh (1997) provided an early definition of *guanxi* as “the existence of direct particularistic ties between two or more individuals” (p. 56). More recently, X. P. Chen and Chen (2004) amplified this definition, describing *guanxi* as “an informal, particularistic personal connection between two individuals who are bounded by an implicit psychological contract to follow the social norm of *guanxi* such as maintaining a long-term relationship, mutual commitment, loyalty, and obligation” (p. 306). As these authors noted in their more recent reviews (X. P. Chen & Chen, 2012; C. C. Chen et al., 2013), while this definition focuses upon *guanxi* as a type of person-to-person relationship, other researchers have used the term to characterize firm-to-firm linkages or to explore its linkages with corrupt practices. Even within the more delimited area of person-to-person *guanxi*, a distinction has frequently been made between instrumental or “backdoor” *guanxi*, which involves an instrumental exchange of favors across status levels, and mixed ties or “working” *guanxi*, which entails favor exchanges on the basis of continuing mutual maintenance of face (Bedford, 2011; Hwang & Han, 2010). However, the predominant focus of researchers has been upon working *guanxi*, in which expressive and instrumental concerns are mutually intertwined (X. P. Chen & Peng, 2008). Such linkages may exist between individuals outside of or within organizations. The focus of the present study is on *guanxi* as an aspect of superior–subordinate relations within business organizations. This aspect was selected because of the existence of a measure (discussed below) that has established validity within Chinese culture.

Superior–Subordinate Guanxi

Superior–subordinate relations within the Chinese cultural context have been most thoroughly conceptualized and studied in terms of paternalistic leadership (Farh & Cheng, 2000). These authors characterize paternalistic leaders in terms of benevolence, morality, and authoritarianism and have shown positive relations between each of these dimensions and enhanced subordinate response in a series of studies, even after controlling for the effects of Western-designed leadership measures. However, in more recent studies, authoritarian leadership has been linked

with positive outcomes only among more traditional employees and those who are more dependent on their leader for resources (Cheng, Chou, Wu, Huang, & Farh, 2004; Farh, Cheng, Chou, & Chu, 2006). Theorists of Chinese paternalistic leadership do not explicitly identify *guanxi* as an element in effective leadership, but the dimensions of paternalistic leadership that they have identified do encompass the personal commitment, loyalty, and obligation that define *guanxi* relations.

Within Chinese cultures, the presence of a *guanxi* relationship between a superior and a subordinate has been shown to predict preferential treatment of the subordinate (Law, Wong, Wong, & Wang, 2000), an outcome that is positively endorsed by those whom it benefits and negatively endorsed by those who lose out (C. C. Chen, Chen, & Xin, 2004; Y. Chen, Friedman, Yu, & Sun, 2011). *Guanxi* relations are associated with high organization commitment (M. F. Y. Cheung, Wu, Chan, & Wong, 2009), occur more strongly where the subordinate has political skills (Wei, Liu, Chen, & Wu, 2010) and where the supervisor is not abusive (Liu & Wang, 2013). However, these various studies have differed as to whether a *guanxi* relationship is best measured in terms of the presence or absence of categorical attributes or as a continuous variable that can be assessed by way of rating scales. More recently, Y. Chen, Friedman, Yu, Fang, and Lu (2009) asked Chinese MBA students to generate lists of the qualities that characterize a *guanxi* relationship between a superior and a subordinate. These items were then used to develop rating scale measures assessing three components of a superior–subordinate *guanxi* relationship: affective attachment to the supervisor, personal-life inclusion, and deference to the supervisor. Subordinate ratings of these three dimensions were found to predict high subordinate ratings for affective commitment and procedural justice as well as low turnover intention among Chinese employees.

Guanxi in Non-Chinese Cultures

The literature briefly reviewed above treats *guanxi* relations as indigenous to Chinese cultures. Few studies have been reported that examine *guanxi*-type relations in non-Chinese cultural contexts. Chua, Morris, and Ingram (2009) asked managers in China and the United States to rate the extent to which they trusted their contacts on various criteria. Affect-based trust was defined in terms of sharing one's personal problems as well as one's hopes and dreams. Cognition-based trust was defined in terms of confidence in one's contact's knowledge and ability to complete assignments. It was found that affect- and cognition-based trust were more closely correlated with each other among Chinese respondents, and Chinese networks of contacts were also more closely interconnected than were U.S. ones. Sue-Chan and Dasborough (2006) compared the willingness of Australians and Hong Kong Chinese to recommend a friend for a job interview and for appointment to a job, even when the friend was less competent than other candidates. Among business managers, the Hong Kong respondents were more willing than Australians to favor their friend, but among business students the Australians were more willing than Hong Kongers to favor their friend. Sue-Chan and Dasborough interpreted these results in terms of *shoujen guanxi* and of the Australian concept of mateship. Both this study and that by Chua et al. (2009) did thus find some differences between Chinese and non-Chinese respondents, but in neither of them were the actual measures used directly derived from Chinese definitions of *guanxi* nor did they address superior–subordinate relations. M. F. Y. Cheung, Wu, and Wong (2013) asked Japanese subordinates to describe relations with their superiors, using the same three survey items employed to tap *guanxi* in their previous study in China (M. F. Y. Cheung et al., 2009). The Japanese results paralleled those obtained in China.

Although there have been few studies that tested for the presence of *guanxi*-like relations in non-Chinese cultures, types of informal influence have been proposed in a wide variety of other cultural groups, including Arab cultures, Brazil, Southern Europe, Russia, Turkey, and South

Africa (Aycan, 2006; Smith, 2012). In two recent cross-national comparisons of broadly defined informal influence processes, brief scenarios describing influence based on *guanxi* were constructed through pilot testing with Chinese respondents. In the first study, respondents were students (Smith, Huang, Harb, & Torres, 2012), and in the second study, respondents were business managers (Smith, Torres, et al., 2012). In both studies, equivalent respondents from other nations participated in a similar way in developing scenarios that they rated as representative of influence processes, which are thought to be indigenous to their own cultural contexts (for instance, *wasta* in Arab cultures, *jeitinho* in Brazil). The origins of the scenarios prepared in this way were first concealed and the total set of scenarios was then presented to new respondents, who were asked to evaluate them on a series of rating scales. Thus, Chinese respondents were asked to rate a set of scenarios only a few of which were actually Chinese in origin as to how well they represented *guanxi*, how typical such episodes were and how positively or negatively they evaluated them.

The Chinese students (who were from Shanghai) did rate the scenarios of Chinese origin as significantly more representative of *guanxi* than they rated the non-Chinese scenarios. They also rated them as more typical of what occurs locally than did students in United Kingdom and in Brazil. However, students in Lebanon rated the *guanxi* scenarios as even more locally typical than the Chinese did. Furthermore, the Chinese managers (who were from Singapore) rated the *guanxi* scenarios as less typical than did Brazilian and Russian managers.

Thus, these studies do provide evidence of *guanxi*-like relations in non-Chinese cultures, particularly those that are also characterized by high collectivism and power distance (Hofstede, 2001), but most of the scenarios employed did not directly describe superior–subordinate relations. It is also possible that the brief scenarios that were employed in these studies did not adequately capture essential aspects of *guanxi*. Further studies are required that more precisely represent *guanxi* relationships and the different types of *guanxi*. The most detailed characterization currently available is that provided by Y. Chen et al. (2009), and it provides the basis for the current study.

Development of Hypotheses

Y. Chen et al. (2009) identified three related attributes that characterize a *guanxi* relationship between organizational subordinates and their supervisors, namely strong affective attachment, inclusion of one's personal life within the relationship, and deference to the supervisor. These attributes were summarized through the subordinate's response to 12 survey items. Y. Chen et al. theorized that these attributes collectively define the nature of a *guanxi* relationship between superiors and subordinates.

Workplace relationships in all cultural contexts are likely to include both instrumental and expressive elements. In particular, research from several collectivist cultures suggests that workways, that is, the signature pattern of workplace beliefs, mental models, and practices about what is true, good, and efficient within the domain of work, are characterized by a much greater emphasis on relational, affective components (Sanchez-Burks & Lee, 2007). Together with the evidence on informal influence processes reviewed above, it is reasonable to expect that respondents from cultures of high collectivism and high power distance will interpret and respond to *guanxi* items in a similar way. What is more pertinent to our quest, therefore, is the evidence from cultural contexts that are notably different from the Chinese context. To this end, we draw on the widely applied leader–member exchange (LMX) theory (Graen & Uhl-Bien, 1995) developed in the United States, which is in effect a close counterpart of the notion of *guanxi*, with its focus on separate dyadic relationships between leaders and each of their followers. We also refer to the literature on commitment to the supervisor (e.g., Becker, 2009), which is another well-established conceptualization of the superior–subordinate bond in the

U.S. context. To the extent that we identify similarities in the conceptualization and operationalization of LMX, supervisor commitment and *guanxi*, it will be possible to make arguments favoring universalism.

Among Y. Chen et al.'s (2009) dimensions, affective attachment refers to an emotional connection, understanding, and willingness to care for one another in any circumstance. This dimension bears strong resemblance to the affect dimension of the multidimensional subordinate LMX scale (Liden & Maslyn, 1998). Although Y. Chen et al. noted that their conceptualization reflects a communal bond as opposed to LMX, which they argue is restricted to work-related exchanges, Liden and Maslyn (1998) defined and operationalized affect as "the mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values" (p. 50). Likewise, affective commitment to the supervisor has been conceptualized and validated as affective attachment to and identification with the supervisor, with items showing notable similarity to those of Y. Chen et al. (Becker & Kernan, 2003). Therefore, we argue that this component of *guanxi* manifests a generalizable notion of superior-subordinate relationships.

Deference to supervisor refers to the degree of obedience and devotion a subordinate has toward his or her supervisor. This dimension of *guanxi* is conceptually parallel to the loyalty dimension of LMX, which is defined as "the expression of public support for the goals and the personal character of the other member of the LMX dyad" (p. 50) and is represented in the multidimensional scale of supervisor LMX (Greguras & Ford, 2006). Although Y. Chen et al.'s (2009) operationalization of this dimension is different from the loyalty dimension with its explicit emphasis on subordinate sacrifice, the conceptualization and operationalization of normative commitment to the supervisor reflects the notion of sacrifice (e.g., Clugston, Howell, & Dorfman, 2000). As such, this component of *guanxi* also seems to have broader relevance across a wide variety of cultural contexts.

Y. Chen et al.'s (2009) third dimension, personal-life inclusion is the most distinctive and has received prior attention principally from researchers into paternalistic leadership in China (Wu & Xu, 2012) and more widely (Aycan, 2006). Personal-life inclusion refers to the degree to which subordinates and supervisors are included in each other's private or family lives. This dimension is not simply about after-hours socialization; it captures a subordinate's sense of obligation to his or her supervisor beyond the boundaries of the office or workday. Although this dimension does have a counterpart labeled "contribution" in the multidimensional subordinate LMX scale (Liden & Maslyn, 1998) and is defined as "the extent to which the subordinate member of the dyad handles responsibility and completes tasks that extend beyond the job description and/or employment contract" (p. 50), the actual operationalization of the scale is limited to work-related exchanges. Nor does the normative commitment to supervisor scale imply a spillover to the personal-life domain.

The cultural difference in the operationalization as to what constitutes "extra-role" behavior in a work relationship is distinctive. For instance, the indigenous elements of the Chinese organizational citizenship scale contain references to altruism that extends to the personal-life domain (Farh, Zhong, & Organ, 2004). Indeed, the permeability of the professional versus the personal boundary represents a fundamental cultural assumption, which was formulated in terms of the dimension of specific versus diffuse cultures by Hampden-Turner and Trompenaars (1993). In specific cultures, such as the United States, the United Kingdom, and the Netherlands, social interactions are characterized by a separation of professional and personal domains, whereas in diffuse cultures like China, South Korea, and Turkey, professional and personal agendas are interpenetrated. This difference is reflected in the appropriateness and desirability as well as the nature and extent of multiplex relationships (i.e., relationships where instrumental and affective concerns overlap) in the workplace (Gelfand, Leslie, & Fehr, 2008), and is tied to fundamental notions of professionalism and fairness (e.g., Sanchez-Burks, 2005). Therefore, we anticipate

that respondents from different cultures will not use a common frame of reference when responding to the items comprising the Personal-Life Inclusion scale.

To summarize, we propose the following hypotheses:

Hypothesis 1a: The Affective Attachment and Deference subscales of *guanxi* will demonstrate metric invariance across a wide range of nations.

Hypothesis 1b: The Personal-Life Inclusion subscale of *guanxi* will fail to demonstrate metric invariance across a wide range of nations.

If Y. Chen et al.'s (2009) *guanxi* scales do demonstrate full or partial metric invariance, the natural question that follows is whether they relate to other variables in similar ways when described by the subordinates of supervisors in non-Chinese cultures. Studies of leadership in which 60 or more nations have been sampled indicate substantial similarity in subordinates' views on what constitutes effective leadership by their supervisors (e.g., House, Hanges, Javidan, Dorfman, & Gupta, 2004) and in the way that supervisors report handling work events (Smith, Peterson, & Schwartz, 2002). However, in both of these projects, local differences in leader actions perceived as effective were also found (Dorfman, Hanges, & Brodbeck, 2004; Smith, Peterson, & Thomason, 2011). The extent to which these local variations outweigh universal effects remains to be clarified.

Y. Chen et al. (2009) reported that their scales predicted the dependent measures of high affective organizational commitment, high perceived justice, and low turnover intention. Although it was preferable so far as possible to use the dependent measures employed by these authors, in the present study, the measure of perceived justice was replaced by a measure of normative organizational commitment. Although perceived justice and commitment are likely to be closely inter-related, the concept of normative commitment more closely approximates the interpersonal focus of a *guanxi*-based relationship.

A recent meta-analysis conducted largely with U.S. samples has revealed significant correlations between LMX and affective and normative organizational commitment as well as turnover intentions (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). However, these authors noted that the insufficient number of cross-cultural studies from contexts different from the United States precluded testing the moderator role of national culture. Although not focusing on supervisor commitment, research has shown the implications of affective commitment to be more generalizable across cultures whereas normative commitment appears to be a stronger predictor of outcomes in collectivist nations than in individualist nations (Wasti, 2008). Based on the available evidence, we offer the hypotheses below. In consideration of the possibility that partial metric invariance may be obtained, we also refer to personal-life inclusion in our hypotheses.

Hypothesis 2a: The association between affective attachment and outcomes will not differ across nations.

Hypothesis 2b: Deference and personal-life inclusion will be more strongly associated with outcomes (a) in Chinese nations than in non-Chinese nations and (b) in nations characterized by higher power distance and collectivism.

Asian cultures are characterized by high endorsement of collectivism and power distance (Hofstede, 2001). In such contexts, establishing a highly personal connection is a necessary precondition to working with others (Hampden-Turner & Trompenaars, 1993), and the prevalent leadership style is paternalism (Aycan, 2008). Recent research by Smith and his colleagues on informal influence processes (Smith, Huang, et al., 2012; Smith, Torres, et al., 2012) also indicates greater prevalence or endorsement of particularistic relationships in collectivistic cultures. Therefore, our final hypothesis is as follows:

Hypothesis 3: All three dimensions of *guanxi* will have greater levels of endorsement in (a) in Chinese nations than in non-Chinese nations and (b) in nations characterized by higher power distance and collectivism.

Method

Participants

Respondents were employed managers from a broad range of organizations in eight nations. The sample included two Chinese cultures, five in which informal influence processes have been described (Saudi, Russia, Turkey, India, Brazil) and one in which they have not (United Kingdom). Forms of convenience sampling were employed in each nation. The data were collected by locally based authors of this article and by assistants working under their supervision, in the ways that were judged appropriate to each local cultural context. In Brazil, 168 responses were obtained from middle-level managers who were former MBA students who had been contacted by email (47% response). In India, managers in 15 different organizations were approached personally: 156 responses were obtained (69%). In Saudi Arabia, MBA and other types of students approached relatives and friends who are managers: 114 responses were received (57%). In Russia, post-graduate students visited privately owned enterprises. Most Russian responses were collected by interview, but some were submitted by email; 102 Russians responded (66%). In Singapore, respondents in business dress were approached as they left a subway station in the central business district: 107 responses were obtained (70%). The same procedure as in Singapore was employed in Taiwan: 128 responses were received (80%). In Turkey, MBA and Executive MBA alumni of a private university in Istanbul were sent a link to a web survey; the alumni as well as faculty members were also requested to forward the link to friends and acquaintances in managerial positions: 97 responses were received. In the United Kingdom, managers were approached while attending training programs: 109 responses were obtained. All participants were nationals of the location in which they responded. After data collection was complete, a check was made to ensure that all respondents were employed as managers.

Measures

The 12 items developed by Y. Chen et al. (2009) to describe the supervisor–subordinate relationship were used in a slightly modified form. The item “During holidays my supervisor and I would call each other or visit each other” was turned into two items, one referring to calls and the other to home visits. This was done to cover the possibility that home visits might be infrequent in some nations. In the present data analysis, the average of these two responses was used as a single item, to enhance comparability with the method used by Y. Chen et al. Response categories were from 1 (strongly disagree) to 6 (strongly agree), as used by Y. Chen et al. Respondents were asked to complete the 13 items 3 times, once to describe the person in the organization who most helped them to get things done, once to describe the supervisor, and once to describe a subordinate who helped them to get things done. Only the items referring to the supervisor are analyzed in the present article.

The five items that were used to measure affective organizational commitment were taken from Lee, Allen, Meyer, and Rhee (2001), but with none of the items reversed. Cronbach’s alpha within each nation’s sample ranged from .76 to .94. A four-item measure comprising three normative commitment items and one continuance commitment item were also taken from Lee et al. (2001). These two scales are in line with Meyer, Becker, and van Dick’s (2006) recent arguments regarding the existence of two basic forms of commitment: value-based (affective) versus exchange-based, where the latter in effect reflects the combination of continuance and normative

Table 1. Details of Samples.

	<i>n</i>	<i>M</i> age	% male	<i>M</i> education level	<i>M</i> job tenure level	<i>M</i> acquiescence
Brazil	168	31.2	64.7	3.63	2.74	4.29
India	156	25.9	50.0	3.52	2.32	4.37
Russia	114	30.7	50.0	3.07	2.44	4.04
Saudi	102	30.5	94.5	3.05	2.74	4.53
Singapore	107	29.4	51.9	2.94	2.41	4.01
Taiwan	128	33.3	63.1	3.33	3.00	4.10
Turkey	97	32.7	60.0	3.27	3.30	4.63
United Kingdom	109	24.3	42.3	2.43	1.85	4.42

Note. Education levels (2 = high school; 3 = university; 4 = master's); job tenure years (1 = less than 2; 2 = 2-5; 3 = 6-8; 4 = 9-12; 5 = 13-18; 6 = 18+).

commitment in the form of indebted obligation. Cronbach's alpha within each nation's sample for these four items ranged from .73 to .86. The turnover intention measure comprised the same two items from Camman, Fichman, Jenkins, and Klesh (1979) that were used by Y. Chen et al. (2009). Correlations between the two items ranged from .55 to .84, with an average value of .70.

Respondents also completed the 21-item version of Schwartz et al.'s (2001) Portrait Values Questionnaire (PVQ) to provide data as to the values relevant to collectivism and power distance of each national sample. Respondents were provided with brief descriptions of persons exemplifying different value types and asked to rate how similar they are to each type of person, using 6-point scales, ranging from *very much like me* to *not like me at all*. These items yield two pairs of polar opposite value types, Openness to Change versus Conservation and Self-Enhancement versus Self-Transcendence. The first of each of these pairs of value types is subtracted from the second to yield an index of values that is free of acquiescent response style (Schwartz, 2004). Schwartz has not provided detail of how to compute nation-level scores from this measure. However, Fischer (2012) has shown that the PVQ21 dimension of conservation minus openness to change has isometric properties across levels, and that at the nation level the dimension of self-enhancement versus self-transcendence becomes more closely aligned with openness to change versus conservation. These values approximate the dimension of individualism–collectivism as defined by Hofstede (2001) and others. The PVQ21 does not yield a direct measure of power distance values, but Hofstede found this dimension to be strongly correlated with individualism–collectivism.

Respondents also provided details of age, gender, education, and organization tenure, coded in the same way as by Y. Chen et al (2009). Details of the samples are shown in Table 1. ANOVAs of the means shown in the table indicated that the two Chinese samples differed significantly from the six non-Chinese samples, in that they were slightly older ($p < .01$) and had fewer years of full-time education ($p < .001$). However, they did not differ in terms of gender balance or in years of work experience.

The survey was administered in English in United Kingdom, India, and Singapore. Translations into Arabic, Mandarin Chinese, Portuguese, Russian, and Turkish were independently back-translated (Brislin, Lonner, & Thorndike, 1973), with subsequent amendment where necessary. All data were collected in 2011.

Results

Table 2 shows data characterizing the samples. The scores provided by Hofstede (2001) characterize United Kingdom as substantially more individualistic and lower on power distance than

Table 2. Schwartz and Hofstede Values by Nation.

	Conservation minus openness to change	Individualism (Hofstede)	Power distance (Hofstede)
Brazil	-0.54	38	69
India	-0.15	48	77
Russia	-0.22	39	93
Saudi	0.18	38	80
Singapore	-0.08	20	74
Taiwan	0.02	17	58
Turkey	0.03	37	66
United Kingdom	-0.28	89	35

the other seven nations in the present study. Likewise, Schwartz (2004) found United Kingdom to score high on autonomy values, whereas the other seven nations score higher on embeddedness. The table also shows characteristics of the eight samples as indicated by the mean scores for Schwartz values provided by the present respondents. The data for openness to change versus conservation provide the preferable basis for summarizing nation-level values (Fischer, 2012). Within the mean scores shown, it would be expected that respondents from collectivist nations would favor conservation over openness to change. The samples from Taiwan and Singapore are among those showing this profile, while United Kingdom shows the converse profile. However, the Chinese profiles are not distinctive, with Turks and Saudis also endorsing conservation a little more strongly. Thus, the present samples do vary in ways that enable the hypotheses to be tested.

Hypothesis Tests

To test Hypotheses 1a and 1b, we evaluated the configural and metric invariance of the three *guanxi* subscales using multi-group confirmatory factor analysis (MGCFA). Overall model fit was assessed using Bentler's (1990) comparative fit index (CFI) and Steiger's (1990) root mean square error of approximation (RMSEA). Values of .90 or above for the CFI and values of .08 or lower for the RMSEA are usually taken as evidence of adequate fit (Vandenberg & Lance, 2000). The chi-square was disregarded owing to the statistic's well-known sensitivity to sample size (in this case, $N = 981$). Indeed, this statistic is considered unsuitable for cross-cultural survey research, which typically uses very large samples (G. W. Cheung & Rensvold, 2000; Welkenhuysen-Gybels, Billiet, & Cambré, 2003). To compare the two models (unconstrained for configural invariance and constrained for metric invariance), we examined the change in CFI as recommended by Cheung and Rensvold (2002), who reported that a CFI change greater than .01 represents a significant difference between nested models. Thus, a decrease of greater than .01 in the CFI would imply that the proposed relations differ significantly across countries. Results of MGCFA for the *guanxi* scales are given in Table 3.

For the Affective Attachment subscale, the overall model fit was very good (CFI > .99, RMSEA < .05), which confirms configural invariance. When factor loadings were constrained to be equal across the eight nations, the CFI deteriorated by .004, suggesting full metric invariance for this scale. For the Deference to Supervisor subscale, the overall model fit was acceptable (CFI > .90, RMSEA < .08) confirming configural invariance. When factor loadings were constrained to be equal across the eight nations, the CFI deteriorated by .003, again supporting full metric invariance for this scale. Therefore, Hypothesis 1a was supported.

For the Personal-Life Inclusion scale, the overall model fit was good (CFI > .95, RMSEA < .06), indicating configural invariance. When factor loadings were constrained to be equal across

Table 3. Fit Indices for Measurement Models (*Guanxi* Scales).

	TLI	CFI	Δ CFI	RMSEA
Affective attachment				
Unconstrained model	.981	.994		.023
Model with all factor loadings constrained	.987	.990	.004	.019
Personal-life inclusion				
Unconstrained model	.922	.974		.050
Model with all factor loadings constrained	.932	.947	.027	.047
Personal-life inclusion after freeing items 2 and 12				
Unconstrained model	.922	.974		.050
Model with factor loadings of items 9 and 17 constrained	.941	.972	.002	.044
Deference				
Unconstrained model	.792	.931		.071
Model with all factor loadings constrained	.914	.934	.003	.046

Note. TLI = Tucker Lewis index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

Table 4. Unstandardized Regression Weights for Invariant Items Across Eight Nations.

Affective attachment to supervisor	
My supervisor and I always share thoughts, opinions, and feelings toward work and life	1.000
I feel easy and comfortable when I communicate with my supervisor	1.034
I would feel sorry and upset if my supervisor decided to work for another organization	0.966
If my supervisor has problems with his or her personal life, I will do my best to help him or her out	0.860
Personal-life inclusion	
During holidays, my supervisor and I call/visit each other	1.000
After office hours, I have social activities together with my supervisor such as having dinner or entertainment together, which goes beyond work duties	0.956
Deference to supervisor	
I am willing to obey my supervisor unconditionally	1.000
While I disagree with my supervisor, I would still support his or her decisions	0.785
I am willing to give up my goals to fulfill my supervisor's goals	1.329
I am willing to sacrifice my interests to satisfy my supervisor's interests	1.348

the groups, the deterioration in CFI was significant (Δ CFI = .027). Therefore, supporting Hypothesis 1b, we were unable to demonstrate full metric invariance for this subscale. We examined critical ratios for differences between parameters to identify which factor loadings were significantly different in most of the groups. By freeing the items, "My supervisor asks me to help him or her with some family errands" and "I am familiar with the family members of my supervisor and have personal contact with these members," we were able to obtain an acceptable CFI difference (Δ CFI = .002). Therefore, we achieved partial metric invariance for this subscale across the eight nations. Table 4 shows unstandardized regression weights for the items, which are invariant across eight nations.

To proceed to testing Hypotheses 2a and 2b, the configural invariance for affective and normative organizational commitment and turnover intention was first established (CFI = .952, RMSEA = .025). The CFI difference test used to assess full metric invariance across groups for these scales showed Δ CFI = .017, which is slightly above the recommended value of .01. By

Table 5. Fit Indices for Structural Model.

	χ^2	df	$\Delta\chi^2$	Δdf	CFI	ΔCFI	RMSEA
Unconstrained model	2,671.682	1,576			.905		.027
Model with partially constrained factor loadings	2,842.81	1,660	171.128***	84	.897	.008	.027
Structural weights constrained	2,946.383	1,723	103.573***	63	.894	.003	.027

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation.
 *** $p < .001$.

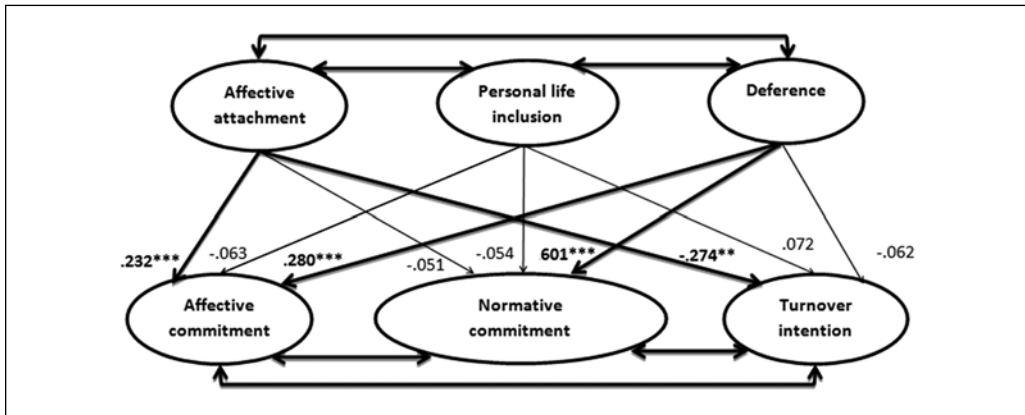


Figure 1. Unstandardized regression coefficients for overall structural equation model.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

freeing two loadings in the Affective Commitment scale and one loading in the Normative Commitment scale, we obtained partial metric invariance with $\Delta CFI = .009$.

Metric invariance of at least two items is required to compare relationships between constructs (Steenkamp & Baumgartner, 1998). Therefore, we were able to test Hypotheses 2a and 2b regarding the invariance of the relationships between the *guanxi* dimensions and the dependent variables of interest across the eight samples. We employed structural equation modeling by placing an equality constraint on the proposed relationships. We tested the model with partial metric invariance, and the results are shown in Table 5.

The structural equation model with partially constrained factor loadings is acceptable ($\Delta CFI = .008$). The model with all paths from *guanxi* dimensions to affective and normative organizational commitment and turnover intention constrained to be equal across all eight samples also has acceptable fit ($\Delta CFI = .003$). These results, although confirming Hypothesis 2a, disconfirm Hypothesis 2b: The strength of the relationships between *guanxi* dimensions and outcomes do not significantly vary across these eight nations.

Figure 1 presents the unstandardized regression coefficients for all variables. Of the *guanxi* dimensions, both affective attachment and deference to the supervisor were linked with affective organizational commitment. High affective attachment to the supervisor was also associated with low turnover intention. Only deference to the supervisor was associated with normative commitment: Higher levels of deference predicted higher levels of normative commitment to the organization. Interestingly, personal-life inclusion has no association with any of the outcome variables.

Given that the invariant set of personal-life inclusion consists of a sufficient number of items (i.e., at least two; Steenkamp & Baumgartner, 1998), we next made a test of partial scalar invariance. In testing for partial scalar invariance, the intercepts of those items that are not metrically invariant are left unconstrained across countries, while the intercepts of the other items are held invariant (Steenkamp & Baumgartner, 1998). Establishment of scalar invariance is a necessary condition for conducting mean comparisons across countries. In the first step, we constrained the intercepts of all the items for which metric invariance was established. Changes in fit statistics indicated that the intercepts associated with at least some items of these scales were non-invariant. Therefore, in the second step, we tested for partial scalar invariance by freeing intercepts with higher difference across groups (based on the modification indices) one at a time, until only two intercepts were left constrained. However, the CFI difference test showed that partial scalar invariance could not be established for any of the scales. It is therefore not possible to test the differences in mean scale scores between nations that were specified in Hypothesis 3.

Discussion

This study has revealed that the structure of supervisor–subordinate relations previously identified as distinctively Chinese can be largely retrieved in samples from a broad range of nations. It also shows a comparable pattern of relatedness to the three chosen outcome variables. Affective attachment and deference to the supervisor were each associated with two of the three outcome measures, affective organizational commitment, normative organizational commitment, and low turnover intention. It is unsurprising that affective attachment to the supervisor proves universally correlated with affective organizational commitment and with low turnover intention. The link between deference to the supervisor and affective commitment appears less obvious but becomes more plausible if one postulates that those who are more deferent are likely to become more affectively as well as normatively committed.

The results for personal-life inclusion require closer scrutiny, because this attribute appears to have higher potential to encapsulate culturally distinctive aspects of *guanxi* relations. Although the four items defining personal-life inclusion did demonstrate configural invariance, two of them reflecting very high levels of personalized hierarchical and/or professional relationships failed to demonstrate metric invariance, indicating that respondents from different cultural contexts did not interpret these items similarly. These were two items that concerned inclusion not just in the supervisor's personal life but also in that of his or her family. The present results do not enable us to know in which samples inclusion in family was particularly strong.

It was also notable that personal-life inclusion was not associated with any positive outcome. We should note that consistent with Y. Chen et al.'s (2009) study, the only outcome measures employed were measures of organizational outcomes. Personal-life inclusion may yield positive personal-life outcomes. Although these considerations may seem to speak to the existence of a *guanxi* dimension that is distinctive in extent of content or desirability, it is important to recall that Y. Chen et al. (2009) found this *guanxi* dimension to have a negative relationship with procedural justice and a positive relationship with turnover intention. Indeed, Y. Chen and colleagues (2009) concluded that “this aspect of *guanxi* may be experienced as a burden by employees, after parcelling out the beneficial effects of affective attachment and deference to supervisor” (p. 393). This suggests that subordinates, irrespective of cultural background, experience some ambivalence about having *guanxi*-type relations with one's supervisor. It may be that *guanxi* relations with one's peers either in China or elsewhere would lack this ambivalence. It is also possible that the proposed cultural difference regarding the relationship between personal-life inclusion and various outcomes may manifest itself in peer relations.

Limitations

This study has been able to show partial metric and full relational invariance of the *guanxi* scale developed by Y. Chen et al. (2009). However, given that Asian cultures are characterized by a stronger propensity for holistic rather than analytic cognition (Nisbett, Peng, Choi, & Norenzayan, 2000), it is possible that by testing for the measurement invariance of each of Y. Chen et al.'s subscales separately, we could have discarded what might prove to be the essential particularistic element linking work and non-work relations within the concept of superior–subordinate *guanxi*. Indeed, Chen et al. did find their subscales to be positively correlated with one another. Westerners' separation of personal and professional issues would suggest that this effect could be weaker in more individualistic cultures. We therefore tested, ex post, whether the relationship between the subscales is consistent across samples, by constraining factor covariances to be equal. Our analyses demonstrated an acceptably small deterioration in CFI (.010) and no deterioration at all in RMSEA, suggesting that there is no significant difference in the consistency with which these scales are related across the eight nations.

Because we could not show scalar invariance, it was not possible to test for differences in the frequency with which *guanxi*-type relations are found in different settings. One way to interpret the present results is to suggest that the pattern of subordinate–supervisor relations summarized as *guanxi* that is relatively frequent in Chinese cultures may occur with lower frequency in other cultures but that where it does occur it is associated with a set of organizational correlates that are similar to those found in Chinese cultures. In any event, a robust test of scalar invariance would require more precisely matched samples than the present convenience samples (Robert, Lee, & Chan, 2006).

Indeed, it is possible that the differing ways in which the data were collected in different nations could have affected the results that were obtained. However, sample diversity would be expected to favor results that differed between nations rather than the convergent results that were obtained. Given the focus of the study, the difference between the two Chinese samples and the six non-Chinese samples is of particular importance. The fact that the Chinese samples were older and less educated might have led them to show stronger endorsement of *guanxi*, thereby accentuating the contrast in findings between the Chinese and non-Chinese, rather than reducing it. To discount the present convergent findings, it would be necessary to postulate that endorsement of *guanxi* attributes is substantially absent from both the Singaporean and the Taiwanese data. It is true that the present Singaporean government seeks to discourage reliance on *guanxi*, but no contrast emerged between the results from Singapore and Taiwan.

The samples were also cross-sectional, so that there is no certainty as to the directionality of any causal relationships. It is equally plausible that low turnover intention and high organization commitment could enhance subordinate–supervisor relations, laying the ground for the growth of *guanxi* or other familistic-types of work relationships, rather than the reverse causal direction.

Conclusion

It has not been the intention of the authors of this article to undermine the case for studies of indigenous concepts such as *guanxi*. On the contrary, we regard indigenous studies as providing a healthy correction to over-reliance on the results of North American investigations, which some regard as themselves being indigenous to that region. There is a strong likelihood that indigenous studies will draw attention to phenomena that are especially salient in some particular part of the world and are overlooked in settings where they are less salient. Examples already exist whereby it has been found that studies conducted in China can enrich the understanding of Western cultures (F. M. Cheung et al., 2003; Kwan et al., 1997). The contrast

between phenomena understood to be universal and those that are believed to be indigenous to a distinctive context is too sharply drawn (S. X. Chen, 2010). By testing just how specific or general is the distribution of a given phenomenon, we strengthen the field as a whole.

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