

Leader–Member Exchange (LMX) and Culture: A Meta-Analysis of Correlates of LMX Across 23 Countries

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This study extends leader–member exchange (LMX) research by meta-analyzing the role of national culture in moderating relationships between LMX and its correlates. Results based on 282 independent samples ($N = 68,587$) from 23 countries and controlling for extreme response style differences indicate that (a) relationships of LMX with organizational citizenship behavior, justice perceptions, job satisfaction, turnover intentions, and leader trust are stronger in horizontal-individualistic (e.g., Western) contexts than in vertical-collectivistic (e.g., Asian) contexts; and (b) national culture does not affect relationships of LMX with task performance, organizational commitment, and transformational leadership. These findings highlight that although members are universally sensitive to how their leaders treat them, members' responses in Asian contexts may also be influenced by collective interests and role-based obligations.

Keywords: leadership, meta-analysis, national culture

A central tenet of leader–member exchange (LMX) theory is that leaders do not treat each subordinate the same and that LMX quality can range from low to high (Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997). Social exchange theory is generally used to explain the positive effects of high LMX. P. M. Blau (1964) defined social exchange as involving unspecified obligations created by received favors. As leaders initiate social exchanges by bestowing favorable treatment upon certain members (Graen & Uhl-Bien, 1995), members in turn feel obliged to work harder to benefit the leader as a means of reciprocation (Liden et al., 1997). Thus, a key tenet of LMX theory is that members' work-related attitudes and behaviors depend on how their leaders treat them. Earlier meta-analyses had focused on outcomes of LMX and supported a positive relationship between LMX and performance (Gerstner & Day, 1997), citizenship behavior (Ilies, Nahrgang, & Morgeson, 2007), and attitudes such as job satisfaction, affective and normative commitment, and turnover intentions (Dulebohn, Bommer, Liden, Brouer, & Ferris,

2011). Dulebohn et al. (2011) also provided support for various antecedents of LMX including transformational leadership and leader trust.

To date, the majority of these studies have been based on Western contexts of individualism and low power distance (House, Hanges, Javidan, Dorfman, & Gupta, 2004; Triandis, 2004). However, as Anand, Hu, Liden, and Vidyarthi (2011) have observed, LMX situated in Asia and other parts of the world may operate differently in more collectivistic and higher power distance cultures. For example, LMX is significantly associated with organizational citizenship behavior (OCB) in the United States ($r = .32$; Uhl-Bien & Maslyn, 2003) but not in China ($r = -.06$; Loi & Ngo, 2009). Similarly, whereas LMX is strongly associated with job satisfaction ($r = .69$; Pillai, Scandura, & Williams, 1999) and reduced turnover intentions ($r = -.55$; Francis, 2010) in the United States, LMX is more weakly related to job satisfaction ($r = .21$) in China (Yi, 2002) and is unrelated to turnover intentions ($r = -.02$) in India (Mehta, 2009). Similarly, Dulebohn et al.'s (2011) meta-analysis found that leader trust was more weakly related to LMX in more collectivistic and higher power distance cultures. Findings such as these prompted Anand et al. (2011) and Dulebohn et al. to call for further research on how culture affects antecedents and outcomes of LMX. We respond to their call by systematically examining the role of national culture in moderating relationships between LMX and its correlates.

Below, we develop our research hypotheses and report our meta-analysis comprising 282 independent samples ($N = 68,587$) from 23 countries that examined relationships of LMX with (a) the outcomes of task performance, OCB, justice perceptions, job satisfaction, commitment, and turnover intentions; and (b) the antecedents of transformational leadership and leader trust.

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Theory and Hypotheses

Configurational Approach to National Culture

Hofstede (2001, p. 9) defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another.” There are two approaches to theorizing about the effects of national culture. The conventional approach uses individual cultural value dimensions as predictors. A more novel approach uses configurations of cultural values (Triandis, 1995; Tsui et al., 2007). The configurational approach is especially appropriate to studying culture at the national level of analysis because societal cultural values tend to co-occur. For example, Triandis and colleagues (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Triandis, 1995; Triandis & Gelfand, 1998) discovered national culture configurations of horizontal individualism and vertical collectivism because societies that are higher in collectivism are also likely to be higher in power distance, whereas those that are lower in collectivism are also likely to be lower in power distance.

The horizontal individualism/vertical collectivism configurations proposed by Triandis and colleagues thus distinguish national cultures based on configurations of two cultural values (Singelis et al., 1995; Triandis, 1995; Triandis & Gelfand, 1998). The first cultural value is individualism–collectivism (independent vs. interdependent self), and the second cultural value is power distance (equal status between people vs. emphasizing respect for authorities). Specifically, people in horizontal-individualistic cultures are more likely to regard themselves as independent of and equal in status with others. By contrast, those in vertical-collectivistic cultures are more likely to describe themselves as interdependent with others and hold greater respect for authority. Societies in the West are likely to fit into the horizontal-individualistic configuration, whereas societies in Asia tend to fit into the vertical-collectivistic configuration.

Taras, Kirkman, and Steel (2010) found that individualism–collectivism and power distance were the strongest predictors of a range of outcomes at the societal level. These two values are also dominantly associated with cross-cultural leadership (Dorfman & Howell, 1998; Ng, Koh, Ang, Kennedy, & Chan, 2011), and LMX in particular (Anand et al., 2011). Yet, because national cultural values such as individualism–collectivism and power distance are strongly correlated ($r = .67$; Hofstede, 2001), they cannot be studied together without multicollinearity concerns (Fiss, 2007; Meyer, Tsui, & Hinings, 1993).

Hence, we focus on societal configurations of individualism–collectivism and power distance when examining the moderating role of national culture on relationships between LMX and its correlates. Although Triandis and colleagues suggest four cultural configurations, out of the 558 LMX studies identified in our literature search, only five studies came from horizontal-collectivistic or vertical-individualistic societies. Therefore, we consider the joint effects of individualism–collectivism and power distance by contrasting the strength of the relationship between LMX and its correlates in only horizontal-individualistic and vertical-collectivistic cultures.

The Moderating Effect of National Culture on Relationships Between LMX and Outcomes

Individualism–collectivism describes how an individual sees her- or himself in relation to the collective, whereas power distance

describes the extent to which individuals accept social stratification and unequal distributions of power in society (Hofstede, 2001). Because of their individualistic orientations, people in horizontal-individualistic cultures are more likely to view self as independent of others, to emphasize personal goals, and to base their social behaviors more on personal attitudes and on how others treat them (Singelis et al., 1995). Furthermore, because of their lower power distance orientation, people in horizontal-individualistic cultures are more likely to view themselves as equal with others (Shavitt, Lalwani, Zhang, & Torelli, 2006). Thus, personal relationships and liking are more likely to influence how an individual reacts to people in authority (Dickson, Den Hartog, & Mitchelson, 2003).

By contrast, vertical-collectivistic cultures view the self as interdependent with others, emphasize aligning goals with collective interests, and stress perceived duties and obligations in social behavior (Triandis, 1995). Furthermore, individuals in vertical-collectivistic cultures tend to emphasize greater respect for authority due to their higher power distance orientation (Shavitt et al., 2006). Consequently, people in vertical-collectivistic cultures respond to authority figures based on not only personal relationships or liking but also role-based obligations (Dickson et al., 2003). In sum, there is a stronger deference to and respect for authority associated with vertical collectivism that provides a basis for predicting weaker effects of LMX in these cultures.

The horizontal individualism/vertical collectivism distinction has direct implications for how strongly LMX relates to various outcomes. A fundamental assumption of LMX theory in explaining the positive effects of LMX is that members’ responses depend on how their leaders treat them (Liden et al., 1997). In other words, LMX theory describes members’ attitudes and behavior as a contingent response to leader treatment, which may vary among members. Because personal relationships with leaders and how these benefit members’ personal goals matter to members in horizontal-individualistic cultures (Triandis & Gelfand, 1998), they are particularly likely to base their attitudes and behaviors on how their leaders treat them (Farh, Hackett, & Liang, 2007). Thus, we expect strong relationships between LMX and outcomes in nations with horizontal-individualistic cultures.

Of greater interest in our study is how the relationships between LMX and outcomes are influenced by vertical-collectivistic orientations. We argue that relationships between LMX and outcomes are stronger in horizontal-individualistic than in vertical-collectivistic cultures. We expect this because even though members in both cultures are sensitive to leader treatment, members’ responses in vertical-collectivistic cultures are more likely to be influenced by collective interests and role-based loyalty. In vertical-collectivistic cultures, people emphasize pursuing interests of the collective and respect for authorities (Shavitt et al., 2006). This has two major implications for how strongly LMX relates to members’ work behaviors and attitudes.

First, as van Knippenberg and Hogg (2003) noted, “leaders not only lead groups of people, *but are also themselves members of these groups*” (p. 244; emphasis in original). Because of their interdependent view of the self, members in vertical-collectivistic cultures are more likely than members in horizontal-individualistic cultures to see their leaders’ interests as representing the interests of the collective (M. Chen & Miller, 2011). More importantly, vertical-collectivistic cultures emphasize aligning goals with col-

lective interests even when they are in conflict with personal goals (Triandis, 1995). As a consequence, members in vertical-collectivistic cultures are more likely than members in horizontal-individualistic cultures to work hard for their leader even when they are not receiving favors from the leader in return (Y. Chen, Friedman, Yu, Fang, & Lu, 2009).

Second, the tendency to give unquestioning respect for authority in vertical-collectivistic cultures is likely to affect how members might respond to their leaders. As Y. Chen et al. (2009) noted, "Subordinates are expected to show unreserved loyalty and obedience toward their superiors" (p. 380). Because of their generally stronger respect for authority, members in vertical-collectivistic cultures are less likely to base their attitudes and behaviors solely on leader treatment. Instead members' attitudes and behaviors, in response to how leaders treat them, are also influenced by role-based loyalty (Jiang & Cheng, 2008) and deference to leaders (Wasti & Can, 2008). Consequently, changes in how well a leader treats members should have less of an impact on members' work behaviors and attitudes in vertical-collectivistic compared with horizontal-individualistic cultures.

Hypotheses 1: The positive associations between LMX and (a) task performance, (b) OCB, (c) distributive justice, (d) procedural justice, (e) interactional justice, (f) job satisfaction, (g) affective commitment, and (h) normative commitment and the negative association between LMX and (i) turnover intentions are stronger in samples from horizontal-individualistic countries than they are in samples from vertical-collectivistic countries.

Moderating Effect of National Culture on Relationships Between Antecedents and LMX

Leaders determine the quality of LMX relationships to a greater extent than members (Dienesch & Liden, 1986; Graen & Scandura, 1987). In higher quality relationships, leaders offer benefits for the member, including consideration of members' needs, assistance with problems at work, emotional support, and formal and informal rewards (Gerstner & Day, 1997). Previous studies have examined transformational leadership (e.g., Pillai et al., 1999), leaders' trust in members (e.g., Gómez & Rosen, 2001), and other leader, member, or interpersonal relationship characteristics (see Dulebohn et al., 2011) as antecedents of LMX quality. Because our study was limited by the available cross-cultural samples, we could only examine transformational leadership and leader trust.

Based on the norm of reciprocity (Gouldner, 1960), LMX theory suggests that positive evaluations of LMX quality engender positive work behaviors and attitudes by members (Liden et al., 1997). Similarly, we expect this norm to affect relationships between antecedents and LMX. In this case, we hypothesize that beneficial behaviors by the leader give rise to positive evaluations of LMX from their members. Leaders who use their power to help members solve problems at work, support members' actions, and consider members' needs evoke positive evaluations of LMX quality in members (Scandura & Graen, 1984). Such leader treatment is similar to individualized consideration, which is described in studies of transformational leadership. Individualized consideration refers to the degree to which leaders support members and attend to their needs (Bass, 1985). Leaders who provide higher support

and attention to members' needs evoke more positive LMX perceptions in those members through processes of personal identification (Wang, Law, Hackett, Wang, & Chen, 2005). As Deluga (1992) noted, "Transformational leaders may foster the formation of high quality relationships and a sense of a common fate with individual subordinates" (p. 245).

Trust refers to a person's willingness to be vulnerable to another party whose behavior is not under his or her control (Zand, 1972). As Liden and Graen (1980) noted, the extent to which leaders provide preferential treatment to members, depends on the extent to which leaders trust members. That is, leaders treat members favorably based on the "extent to which they can be trusted (especially when not being watched by the supervisor)" (Liden & Graen, 1980, p. 451). When leaders display trust in a follower, they are signaling that a high-quality relationship exists (Brower, Schoorman, & Tan, 2000). Thus, leader trust plays a crucial role in the development of higher quality LMX relationships because trust engenders expectations about mutual concern—or a sense of common fate—with individual members (Bauer & Green, 1996).

We suggest that, taken together, transformational leadership and leader trust are positively related to LMX because associated leader behaviors that benefit members evoke positive LMX evaluations under norms of reciprocity. Although empirical evidence in horizontal-individualistic cultures supports this notion, research in vertical-collectivistic societies has found weaker associations between transformational leadership and leader trust with LMX. For example, Pillai et al. (1999) found that transformational leadership is more strongly related to LMX in Australia ($r = .69$) than in Saudi Arabia and Jordan ($r = .24$). Similarly, leader trust was more strongly related to LMX in the United States ($r = .69$; Hansen, 2010) than in China ($r = .32$; Wat & Shaffer, 2005).

As with our earlier arguments, we propose that relationships of transformational leadership and leader trust with LMX are weaker in vertical-collectivistic than in horizontal-individualistic cultures. We expect this attenuation because members' perceptions of LMX in vertical-collectivistic cultures are not only influenced by how their leaders treat them, but also by interdependent self-views and role-based obligations. In vertical-collectivistic nations, members evaluate exchange relationships with their leaders based on not only how those exchange relationships meet their personal needs (Hui, Lee, & Rousseau, 2004), but also mutually prescribed roles and responsibilities (Y. Chen et al., 2009; Vodosek, 2009). When relationships are constrained by role-based obligations for both the subordinate and supervisor, as is the case in vertical-collectivistic societies, then such leader behavior is likely viewed as less important in determining the quality of the relationship between the leader and the follower. By contrast, in horizontal-individualistic cultures where particularistic relationships with the leader are perceived as more influential in the treatment of individual subordinates, displays of transformational leadership and leader trust provide critical information about the quality of the relationship and associated treatment. Thus, changes in transformational leadership or leader trust are more strongly related to changes in members' perceptions of favorable treatment and LMX in horizontal-individualistic than in vertical-collectivistic cultures.

Hypothesis 2: The positive associations of (a) transformational leadership and (b) leader trust with LMX are stronger in

samples from horizontal-individualistic countries than they are in samples from vertical-collectivistic countries.

Method

We conducted a systematic search of the LMX literature, using several methods. First, we conducted a keyword search in the ABI/Inform, PsycINFO, ProQuest Dissertation, and Google Scholar databases using broad keywords such as *leader-member exchange*, *LMX*, and *vertical dyad linkage*. Second, we complemented this search with a backward citation search in which we conducted a manual review of articles identified by Erdogan and Liden (2002); Gerstner and Day (1998); Ilies et al. (2007); Liden and Maslyn (1998); and Liden et al. (1997). Third, we used a forward citation search of the prominent LMX measures by Scandura and Graen (1984) as well as Liden and Maslyn (1998). We also searched for LMX articles from the bibliographies of the articles identified in the first three searches. Finally, we searched for in-press articles in leading management journals and contacted authors who actively conduct research in this area for unpublished articles.

This search resulted in an initial pool of 558 LMX studies from 1975 to 2011. Next, we excluded studies that did not report sample sizes along with adequate effect size measures or examined effects of LMX quality only at the group level. Our final database included a total of 253 studies conducted in 23 countries. These studies reported a total of 282 distinct samples and 602 correlations between member-rated LMX and antecedent and outcome correlates with a total sample size of 68,587 (see Appendix A).

Three raters independently coded each study in terms of sample size, effect size, variances, and reliabilities of LMX and its correlates, country of study, and type of LMX correlate. The average intercoder percentage of agreement across the study variables was 95%. For any disagreements, the three coders reached consensus through discussion following the approach used by Podsakoff, Bommer, Podsakoff, and MacKenzie (2006).

Test of Hypotheses

We classified studies into horizontal-individualistic or vertical-collectivistic cultural configurations based on the country in which data were collected. Ideally, we could use cultural values directly assessed in LMX studies to classify individual studies. Unfortunately, studies do not report these data regularly. Thus, we used the median split of Hofstede's (2001) country-level scores of collectivism and power distance to determine which configuration best applied to each society. Taras et al.'s (2010) findings suggest that country-level scores have lower predictive power than cultural values assessed in specific study samples. Hence, using country-level scores presents a more conservative test of the potential effects of culture.

We then conducted separate meta-analyses for horizontal-individualistic and vertical-collectivistic configurations. We used Hunter and Schmidt's (2004) meta-analytic methods to estimate the population correlations between LMX and its correlates in both cultural configurations. We corrected each primary correlation for attenuation due to unreliability in both the predictor and the criterion. When reliabilities for LMX or its correlates were not reported in the original studies, we used the population estimates

of internal consistency based on reliability generalization procedures to correct the primary correlations (Rodriguez & Maeda, 2006). To test our moderation hypotheses, we followed procedures advocated by Aguinis, Sturman, and Pierce (2008) that compare estimated true correlations between studies in horizontal-individualistic and vertical-collectivistic cultural configurations.

Test of Extreme Response Style Differences

Van de Vijver and Leung (1997) suggested that differences in relationship strength across cultures could be due to cultural differences in extreme response style instead of substantive cultural differences. Extreme response style refers to the tendency to use the extreme categories of rating scales (Cheung & Rensvold, 2000). Empirical research shows that Western cultures are more likely to use extreme categories of rating scales, whereas Asian cultures are more likely to use middle categories of rating scales (Harzing, 2006; T. Johnson, Kulesa, Cho, & Shavitt, 2005). The greater use of middle categories in Asian cultures lowers construct variances in Asian compared with Western cultures (Little, 2000). If vertical-collectivistic cultures show lower variances in LMX or its correlates, then range restrictions may attenuate correlations in vertical-collectivistic compared with horizontal-individualistic cultures (Hunter, Schmidt, & Le, 2006).

We address this potential confound in two steps. First, Little (2000) suggests that extreme response style differences are present when construct variances vary systematically across cultures. Thus, we tested for differences in all construct variances across both cultural configurations following random-effects regression procedures described by Lipsey and Wilson (2000). Second, for constructs that showed significantly different variances, we corrected individual relationships between LMX and these constructs in vertical-collectivistic societies using range restriction corrections suggested by Hunter et al. (2006). We estimated the range restriction ratio (u_r) as the ratio between the study-specific construct variance and the average construct variance estimated for horizontal-individualistic studies. By applying appropriate correction procedures, our study offers a unique opportunity to examine the degree to which range restrictions account for observed differences in the relationship strengths across cultures. Hence, this article advances a methodological improvement over previous meta-analyses that have not considered range restriction as an alternative explanation when comparing relationships across cultures.

Results

Test of Hypotheses

Table 1 shows the results of our test of Hypothesis 1. We hypothesized in Hypothesis 1 that members in horizontal-individualistic countries would show a stronger association between LMX and a range of outcomes than members in vertical-collectivistic countries. In terms of behavioral outcomes, the results demonstrate that the relationship between LMX and OCB is stronger in horizontal-individualistic ($\rho_{HI} = .35$) than in vertical-collectivistic ($\rho_{VC} = .28$) cultures ($t = 2.36, p < .01$). However, the relationship between LMX and task performance is not different in horizontal-individualistic ($\rho_{HI} = .30$) and vertical-

Table 1
Results of Moderator Analysis of National Culture on Relationships Between Leader–Member Exchange (LMX) and Outcome Correlates

LMX correlate	<i>N</i>	<i>k</i>	<i>k_c</i>	<i>r</i>	ρ	<i>SD_ρ</i>	80% CV	95% CI	<i>t</i>
Task performance									
Horizontal individualism	23,024	99	3	.29	.30	.11	[0.16, 0.45]	[0.27, 0.33]	
Vertical collectivism	4,541	17	7	.26	.29	.11	[0.16, 0.43]	[0.23, 0.36]	0.32
Organizational citizenship behavior									
Horizontal individualism	11,950	62	2	.30	.35	.12	[0.20, 0.50]	[0.31, 0.38]	
Vertical collectivism	5,565	22	9	.25	.28	.11	[0.13, 0.42]	[0.21, 0.34]	2.36**
Distributive justice									
Horizontal individualism	4,885	22	2	.46	.51	.19	[0.27, 0.76]	[0.44, 0.59]	
Vertical collectivism	2,351	12	7	.30	.36	.13	[0.19, 0.53]	[0.28, 0.44]	2.77**
Procedural justice									
Horizontal individualism	4,651	21	2	.55	.63	.19	[0.39, 0.87]	[0.55, 0.71]	
Vertical collectivism	2,793	12	7	.42	.50	.10	[0.38, 0.63]	[0.44, 0.57]	2.58**
Interactional justice									
Horizontal individualism	4,264	14	1	.65	.79	.14	[0.61, 0.97]	[0.72, 0.86]	
Vertical collectivism	1,321	6	4	.54	.62	.23	[0.33, 0.91]	[0.41, 0.83]	1.72*
Job satisfaction									
Horizontal individualism	17,473	78	7	.46	.55	.15	[0.35, 0.74]	[0.51, 0.58]	
Vertical collectivism	4,608	19	7	.42	.45	.11	[0.31, 0.59]	[0.39, 0.51]	3.09**
Affective commitment									
Horizontal individualism	16,675	70	5	.42	.48	.10	[0.35, 0.61]	[0.45, 0.51]	
Vertical collectivism	6,706	22	11	.44	.52	.12	[0.36, 0.68]	[0.46, 0.58]	1.44
Normative commitment									
Horizontal individualism	1,575	8	1	.27	.29	.10	[0.17, 0.42]	[0.19, 0.39]	
Vertical collectivism	1,075	5	5	.44	.47	.24	[0.16, 0.78]	[0.22, 0.72]	1.59
Turnover intentions									
Horizontal individualism	13,583	46	3	-.33	-.40	.09	[-0.52, -0.28]	[-0.44, -0.36]	
Vertical collectivism	3,028	12	4	-.20	-.25	.15	[-0.44, -0.06]	[-0.35, -0.15]	3.25**

Note. *N* = combined sample size; *k* = number of correlations; *k_c* = number of countries; *r* = mean uncorrected correlation; ρ = estimated true score correlation corrected for measurement error; CV = credibility interval; CI = confidence interval; *t* = *t*-test statistic for differences in true correlations between countries with configurations of horizontal individualism and vertical collectivism.

* *p* < .05. ** *p* < .01.

collectivistic ($\rho_{VC} = .29$) cultures (*t* = .32, *ns*). Therefore, Hypothesis 1(b) is supported, whereas Hypothesis 1(a) is not.

Regarding justice outcomes, results show that relationships between LMX and distributive justice ($\rho_{HI} = .51$ vs. $\rho_{VC} = .36$; *t* = 2.77, *p* < .01), procedural justice ($\rho_{HI} = .63$ vs. $\rho_{VC} = .50$; *t* = 2.58, *p* < .01), and interactional justice ($\rho_{HI} = .79$ vs. $\rho_{VC} = .62$; *t* = 1.72, *p* < .05) are significantly stronger in horizontal-individualistic compared with vertical-collectivistic countries. Therefore, Hypotheses 1(c), 1(d), and 1(e) are supported.

Finally, for attitudinal outcomes, results show that relationships of LMX with job satisfaction ($\rho_{HI} = .55$ vs. $\rho_{VC} = .45$; *t* = 3.09, *p* < .01) and turnover intentions ($\rho_{HI} = -.40$ vs. $\rho_{VC} = -.25$; *t* = 3.25, *p* < .01) are significantly stronger in horizontal-individualistic than in vertical-collectivistic countries. However, results do not support our hypotheses for organizational commitment. The relationships between LMX and affective ($\rho_{HI} = .48$ vs. $\rho_{VC} = .52$; *t* = 1.44, *ns*) and normative ($\rho_{HI} = .29$ vs. $\rho_{VC} = .47$; *t* = 1.59, *ns*) organizational commitment¹ are not different in horizontal-individualistic and vertical-collectivistic cultures. Therefore, Hypotheses 1(f) and 1(i) are supported, whereas Hypotheses 1(g) and 1(h) are not.

We hypothesized in Hypothesis 2 that members in horizontal-individualistic countries would show a stronger positive association of transformational leadership and leader trust with LMX than members in vertical-collectivistic countries. Results (in Table 2) indicate that the relationship between leader trust and LMX is

stronger in horizontal-individualistic ($\rho_{HI} = .72$) than in vertical-collectivistic ($\rho_{VC} = .52$) countries (*t* = 1.74, *p* < .05). Yet, there is no difference in the relationship strength between transformational leadership and LMX in horizontal-individualistic ($\rho_{HI} = .74$) and vertical-collectivistic ($\rho_{VC} = .69$) countries (*t* = .74, *ns*). Therefore, Hypothesis 2(b) is supported, whereas Hypothesis 2(a) is not.

Test for Extreme Response Style Differences Across Cultural Configurations

Table 3 presents the meta-analytic variances for LMX and its correlates for the two cultural configurations. It also reports the *Q_R* statistic (Hedges & Olkin, 1985) that tests for differences in variances across the two cultural configurations. As noted, extreme response style differences are present only when variances differ significantly across the two cultural configurations. Table 3 shows that four out of 12 constructs (procedural justice: $\sigma_{HI}^2 = 1.11$ vs. $\sigma_{VC}^2 = 0.75$; *Q_R* = 8.40, *p* < .01; turnover intentions: $\sigma_{HI}^2 = 2.01$ vs. $\sigma_{VC}^2 = 1.48$, *Q_R* = 5.94, *p* < .05; transformational leadership: $\sigma_{HI}^2 = 0.83$ vs. $\sigma_{VC}^2 = 0.45$, *Q_R* = 25.36, *p* < .01; and leader trust:

¹ We also explored relationships between LMX and continuance commitment. However, results show that LMX is unrelated to continuance commitment in both horizontal-individualistic (*k* = 6, $\rho_{HI} = -.02$, *ns*) and vertical-collectivistic (*k* = 4, $\rho_{VC} = .13$, *ns*) cultural configurations.

Table 2

Results of Moderator Analysis of National Culture on Relationships Between Leader–Member Exchange (LMX) and Antecedent Correlates

LMX correlate	<i>N</i>	<i>k</i>	<i>k_c</i>	<i>r</i>	ρ	<i>SD_ρ</i>	80% CV	95% CI	<i>t</i>
Transformational leadership									
Horizontal individualism	4,561	18	3	.65	.74	.19	[0.50, 0.98]	[0.64, 0.84]	
Vertical collectivism	2,247	9	7	.55	.69	.18	[0.46, 0.92]	[0.50, 0.88]	0.74
Leader trust									
Horizontal individualism	4,084	15	2	.55	.72	.27	[0.37, 1.07]	[0.58, 0.85]	
Vertical collectivism	551	3	2	.42	.52	.15	[0.34, 0.71]	[0.30, 0.75]	1.74*

Note. *N* = combined sample size; *k* = number of correlations; *k_c* = number of countries; *r* = mean uncorrected correlation; ρ = estimated true score correlation corrected for measurement error; CV = credibility interval; CI = confidence interval; *t* = *t*-test statistic for differences in true correlations between countries with configurations of horizontal individualism and vertical collectivism.

* *p* < .05.

$\sigma_{HI}^2 = 0.77$ vs. $\sigma_{VC}^2 = 1.50$, $Q_R = 8.78$, $p < .01$) have significantly different variances in horizontal-individualistic than in vertical-collectivistic cultures. Thus, extreme responding appears to affect only procedural justice, turnover intentions, transformational leadership, and leader trust. Table 4 compares relationships between LMX and these constructs in horizontal-individualistic and vertical-collectivistic cultures after correcting for range restrictions in studies from vertical-collectivistic cultures.

Overall, we find that correcting for range restrictions does not alter the pattern of findings regarding the relationship strength between LMX and these correlates across the two cultural configurations. Results show that corrected relationships between LMX and procedural justice ($\rho_{HI} = .63$ vs. $\rho_{VC} = .54$; $t = 1.73$, $p < .05$), turnover intentions ($\rho_{HI} = -.40$ vs. $\rho_{VC} = -.26$; $t = 2.97$, $p < .01$), and leader trust ($\rho_{HI} = .72$ vs. $\rho_{VC} = .25$; $t = 3.89$, $p < .01$) are significantly stronger in horizontal-individualistic than in vertical-collectivistic cultures, whereas this is not the case for transformational leadership ($\rho_{HI} = .72$ vs. $\rho_{VC} = .84$; $t = 1.62$, *ns*). This pattern of results is consistent with our uncorrected findings.

Discussion

Our study examines a long-standing concern that theories developed in one cultural context may not be equally applicable in other cultural contexts (Gelfand et al., 2007). More specifically, we offer timely insights into the boundary conditions of LMX theory by examining the moderating impact of national culture on relationships within the nomological network of LMX.

Seven of the 11 LMX correlates show patterns that are consistent with our arguments. Although members in both cultural configurations are sensitive to how leaders treat them, members' responses in vertical-collectivistic cultures may also be influenced by collective interests and role-based loyalty. The attenuated relationships between LMX and OCB, distributive justice, procedural justice, interactional justice, job satisfaction, turnover intentions, and leader trust suggest that culture matters when considering antecedents and outcomes of LMX. Hence, our findings support Anand et al.'s (2011) assertion that individualism-collectivism and power distance have implications for the development and outcomes of LMX.

However, we also observed three intriguing and counterintuitive findings that corroborate with Hui et al.'s (2004) conclusion that the way in which cultural values affect the leader–member relationship is very complex. First, we found that the relationship

between LMX and task performance was not different in horizontal-individualistic and vertical-collectivistic cultures. This finding suggests that members in both cultural configurations appear to require the necessary work-related information and resources afforded by higher quality LMX to perform well.

Second, the relationships between LMX and affective and normative commitment were not different in horizontal-individualistic and vertical-collectivistic cultures. One explanation for these findings is that followers from both horizontal-individualistic and vertical-collectivistic cultures perceive their leaders to be acting as agents of their organizations, and thus the emotional attachment and sense of obligation to the organization reflected in affective and normative commitment respectively appear to be inspired by the quality of the relationship with the leader in both cultural settings. A recent study by Eisenberger et al. (2010) supports this argument. They designed a study that tested relationships between LMX and organizational commitment in both horizontal-individualistic (United States) and vertical-collectivistic (Portugal) cultures. Eisenberger et al. observed that in both cultures, "employees generalize their exchange relationship from their supervisor to the organization because they view the supervisor as representing the organization" (p. 1086). Hence, regardless of whether the members were from a horizontal-individualistic or vertical-collectivistic culture, any assessment made by members of the quality of relationship with the leader would be likely to have similar halo or spillover effects on their attitudes toward the organization (i.e., organizational commitment).

Finally, the relationship between transformational leadership and LMX was not different in horizontal-individualistic and vertical-collectivistic cultures. We had argued that in general, members in vertical-collectivistic societies evaluate relationships with their leaders based on both how the relationship meets their personal needs and formal roles. Yet, this distinction may not be important in relation to transformational leadership given that the cultural profiles did not display differential effects linking this type of leadership with LMX. Perhaps because of their charismatic appeal and ability to inspire and motivate followers (Judge & Piccolo, 2004), transformational leaders are more effective than purely transactional leaders across cultures in getting members to value them at a personal level as reflected in LMX. That is, our results suggest that instead of seeing leaders merely as formal authorities carrying out their duties, as we predicted for followers

Table 3
Results of Moderator Analysis of National Culture on Construct Variances

Variable	N	k	Variance			
			σ^2	SE σ^2	95% CI	Q_R
Leader-member exchange						
Horizontal individualism	47,131	193	0.83	0.02	[0.79, 0.87]	
Vertical collectivism	15,703	58	0.79	0.04	[0.72, 0.86]	.88
Outcome correlates						
Task performance						
Horizontal individualism	19,997	86	0.76	0.03	[0.70, 0.83]	
Vertical collectivism	2,577	12	0.63	0.08	[0.47, 0.80]	1.98
Organizational citizenship behavior						
Horizontal individualism	11,356	58	0.75	0.04	[0.68, 0.82]	
Vertical collectivism	5,179	21	0.76	0.06	[0.64, 0.87]	.00
Distributive justice						
Horizontal individualism	4,885	22	1.26	0.09	[1.08, 1.44]	
Vertical collectivism	2,351	12	1.17	0.12	[0.93, 1.41]	.36
Procedural justice						
Horizontal individualism	4,651	21	1.11	0.08	[0.96, 1.27]	
Vertical collectivism	2,793	12	0.75	0.10	[0.56, 0.94]	8.40**
Interactional justice						
Horizontal individualism	3,745	14	1.07	0.11	[0.86, 1.29]	
Vertical collectivism	1,266	5	1.10	0.16	[0.79, 1.42]	.02
Job satisfaction						
Horizontal individualism	15,135	64	0.85	0.04	[0.77, 0.93]	
Vertical collectivism	4,371	18	0.80	0.08	[0.64, 0.96]	.46
Affective commitment						
Horizontal individualism	15,392	61	0.90	0.04	[0.81, 0.98]	
Vertical collectivism	6,522	21	0.82	0.07	[0.69, 0.96]	.79
Normative commitment						
Horizontal individualism	1,412	7	1.14	0.14	[0.87, 1.42]	
Vertical collectivism	1,075	5	0.85	0.16	[0.54, 1.16]	1.92
Turnover intentions						
Horizontal individualism	12,767	42	2.01	0.10	[1.82, 2.20]	
Vertical collectivism	2,607	10	1.48	0.19	[1.11, 1.86]	5.94*
Antecedent correlates						
Transformational leadership						
Horizontal individualism	4,561	18	0.83	0.04	[0.74, 0.92]	
Vertical collectivism	2,247	9	0.45	0.06	[0.34, 0.57]	25.36**
Leader trust						
Horizontal individualism	4,084	15	0.77	0.09	[0.58, 0.95]	
Vertical collectivism	551	3	1.50	0.23	[1.05, 1.95]	8.78**

Note. N = combined sample size; k = number of variances; σ^2 = estimated true variance; CI = confidence interval; Q_R = Q statistic (Hedges & Olkin, 1985) for quantitative (regression) model with variance as dependent variable and national culture (0 = horizontal individualism; 1 = vertical collectivism) as independent variable.

* $p < .05$. ** $p < .01$.

in vertical-collectivistic nations, transformational leaders may bring forth an aspiration on the part of followers to exert efforts to form high-quality relationships. Research from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) project supports this argument by suggesting that members from all cultures value transformational leaders (Javidan, Dorfman, de Luque, & House, 2006). If that is the case, then transformational leaders in vertical-collectivistic societies may inspire personal liking through emphasizing the common fate of the leader and followers so that formal roles and associated obligations become less important. Thus, these leaders affect LMX quality as strongly as leaders in horizontal-individualistic societies.

Taken together, our results provide important empirical evidence that sheds some light on the cultural assumptions, and hence cultural boundaries, of LMX. At the same time, the present study

suggests that culture's impact on LMX is more complex than previously assumed and warrants deeper consideration by organizational scholars. In particular, our discussion of unexpected findings above highlights the need to better understand how culture affects the mediating processes linking LMX to its various antecedent and outcome correlates.

Theoretical Implications and Future Research Directions

Findings of this study have several implications for future research on LMX in a global work environment. First, our current findings demonstrate that cultural configurations of horizontal individualism and vertical collectivism moderate relationships within the nomological network of LMX. Future research should

Table 4

Results of Moderator Analysis of National Culture on Relationships Between Leader–Member Exchange (LMX) and Correlates With Range Restriction Correction

LMX correlate	<i>N</i>	<i>k</i>	<i>k_c</i>	<i>r</i>	ρ	<i>SD_{ρ}</i>	<i>t</i>
Procedural justice							
Horizontal individualism	4,651	21	2	.55	.63	.19	
Vertical collectivism	2,793	12	7	.42	.54	.11	1.73*
Turnover intentions							
Horizontal individualism	13,583	46	3	–.33	–.40	.09	
Vertical collectivism	3,028	12	4	–.20	–.26	.15	2.97**
Transformational leadership							
Horizontal individualism	4,561	18	3	.65	.72	.17	
Vertical collectivism	2,247	9	7	.55	.84	.18	1.62
Leader trust							
Horizontal individualism	4,084	15	2	.55	.72	.27	
Vertical collectivism	551	3	2	.42	.25	.17	3.89**

Note. *N* = combined sample size; *k* = number of correlations; *k_c* = number of countries; *r* = mean uncorrected correlation; ρ = estimated true score correlation corrected for measurement error and range restriction; *t* = *t*-test statistic for differences in true correlations between countries with configurations of horizontal individualism and vertical collectivism.

* *p* < .05. ** *p* < .01.

therefore include subordinates' cultural values of horizontal individualism and vertical collectivism in the design to see whether effects at the individual level are similar to what we found at the national level.

Second, our current findings on moderating effects involving national culture highlight the possible cultural boundaries of exchange processes between leaders and subordinates. Echoing recent recommendations by Shore, Coyle-Shapiro, Chen, and Tetrick (2009) for research to examine content and processes of social exchanges across cultures, we urge future studies to compare LMX cross-culturally, in terms of content. For instance, future research could examine the degree to which LMX involve primarily work or nonwork exchanges of social and economic benefits. Law et al. (2000) suggested that whereas in the United States LMX are primarily work related, in China they involve mainly nonwork exchanges of social and economic benefits. Our pattern of results along with suggestions by these researchers suggests a need for more nuanced approaches to understanding the influence of culture on LMX.

Third, future research could assess the reciprocity process (e.g., Uhl-Bien & Maslyn, 2003; J. B. Wu et al., 2006) across cultures to better understand the underlying mechanisms by which culture affects LMX. Drawing on Sahlins's (1972) reciprocity typology, J. B. Wu et al. (2006) distinguished balanced reciprocity and generalized reciprocity. The focus on mutual benefit in balanced reciprocity suggests that this reciprocity process may be more prevalent in individualistic cultures where people emphasize the pursuit of mutual interest of both parties to the exchange. The focus on other-interest in generalized reciprocity, where there is beneficial treatment provided with no expectation of a return, suggests that this reciprocity process may be more prevalent in collectivistic cultures where people emphasize the pursuit of collective interests. Having a more in-depth understanding of the underlying mechanisms of exchange can in turn offer more precise insights on how to assist leaders in developing constructive exchange relationships with culturally diverse subordinates, thus ensuring their effectiveness.

Strengths and Limitations

A methodological strength of our study is our examination of response style differences and associated range restrictions across cultures. Range restrictions across cultures can be due to methodological artifacts such as less extreme responding (Harzing, 2006; T. Johnson et al., 2005) or to substantial cultural differences such as tightness–looseness norms that reduce variability in behavior (Gelfand, Nishii, & Raver, 2006; Gelfand et al., 2011). We suggested procedures that allow meta-analysts to detect range restrictions across cultures or moderator categories in general. By applying appropriate correction procedures, our study offers a unique opportunity to examine the degree to which range restrictions account for observed differences in the relationship strengths across cultures. Hence, this article provides a methodological improvement over previous meta-analyses that have not considered range restriction as an alternative explanation when comparing relationships across cultures.

One limitation of our study is that we included a smaller set of LMX correlates than prior meta-analyses. This was due to the relatively small number of cross-cultural, non-U.S., studies available. Thus, future research should continue to examine other LMX correlates cross-culturally. Another limitation to our meta-analysis is an inability to examine construct equivalence for the variables in our study across the two cultures. According to van de Vijver and Leung (1997), meaningful cross-cultural comparisons require support for construct equivalence across cultures. Common empirical approaches to testing construct equivalence (e.g., Vandenberg & Lance, 2000) require estimates of the covariances between items. Unfortunately, this information is usually not available in primary studies. As a consequence, change in construct meaning across cultures is an alternative explanation for our findings. Future research should ascertain whether our findings can be replicated in carefully controlled designs that ensure construct equivalence.

Practical Implications

For leaders operating in a global context, our findings have valuable implications for when establishing personal relationships

with members is particularly important to achieve positive outcomes for their organizations. Consistent with previous LMX research, our results suggest that establishing high-quality LMX relationships leads to many positive outcomes in horizontal-individualistic cultures (Gerstner & Day, 1997; Ilies et al., 1997). By contrast, leaders in vertical-collectivistic cultures may be less able to achieve these outcomes through LMX and may be better served by also relying on role-based loyalty (Jiang & Cheng, 2008) and deference (Wasti & Can, 2008) from subordinates.

Our findings therefore underscore the importance for global leaders to adapt their approaches to building relationships with multicultural subordinates in order to be effective. Leaders from horizontal-individualistic cultures may not always need to put as much emphasis on developing personalized exchange relationships when interacting with vertical-collectivistic subordinates. Rather, they can also draw on their role-based authority. Leaders from vertical-collectivistic cultures on the other hand should be aware that they may need to make a greater effort to develop personalized exchange relationships when interacting with horizontal-individualistic subordinates instead of relying primarily on their role-based authority.

As a result, careful selection, grooming, and development of leaders who can operate effectively in our globalized environment is a pressing need for contemporary organizations (Avolio, Walumbwa, & Weber, 2009). Notably, the competencies that make leaders effective in domestic settings may differ for leaders in cross-border settings (Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011). Avolio et al. (2009) suggested that leaders with high cultural intelligence (CQ)—the capability to function and manage effectively in culturally diverse settings (Ang et al., 2007; Earley & Ang, 2003)—are better able to manage culturally diverse expectations of their followers. Thus, when leaders work extensively in international or cross-border settings, organizations should emphasize development of cross-cultural capabilities, such as CQ.

Conclusion

We meta-analyzed relationships between LMX and commonly studied correlates to examine the role of national culture in LMX research. Results based on 282 independent samples ($N = 68,587$) from 23 countries indicate that national culture moderates relationships between LMX and commonly studied correlates. Specifically, relationships of LMX with OCB, justice perceptions, job satisfaction, turnover intentions, and leader trust are stronger in horizontal-individualistic than in vertical-collectivistic cultures even after controlling for response style differences. These findings support our hypothesis that although members in both cultures are sensitive to how leaders treat them, members' responses in vertical-collectivistic cultures are also more likely to be influenced by collective interests and role-based loyalty. Yet, results also show that national culture does not influence relationships of LMX with task performance, organizational commitment, and transformational leadership. Taken together, our results provide timely insights to the cultural assumptions of LMX theory and suggest the criticality of further research exploring the role of culture on leader-member relations.

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Appendix

Summary of Studies Included in the Current Meta-Analysis and Coding for Moderators

Study	N	Moderator coding		LMX/correlate			
		Country	HI/VC	Variable	r	α	Var
Anand et al. (2010)	246	India	VC	LMX		.90	1.08
Anand et al. (2010)	246	India	VC	OCB	.18	.62	1.00
Anderson & Williams (1996)	465	United States	HI	LMX		.90	0.56
Anderson & Williams (1996)	465	United States	HI	OCB	.36	.94	0.71
Andrews & Kacmar (2001)	418	United States	HI	LMX		.90	0.98
Andrews & Kacmar (2001)	418	United States	HI	DJ	.26	.93	1.10
Andrews & Kacmar (2001)	418	United States	HI	PJ	.30	.82	0.58
Aryee & Chen (2006)	237	China	VC	LMX		.82	
Aryee & Chen (2006)	237	China	VC	TP	.31	.83	
Aryee & Chen (2006)	237	China	VC	JS	.50	.89	
Aryee & Chen (2006)	237	China	VC	TI	-.35	.91	
Ballinger et al. (2010)	496	United States	HI	LMX		.95	0.79
Ballinger et al. (2010)	496	United States	HI	TI	-.43	.89	1.61
Barbuto & Wheeler (2006)	388	United States	HI	LMX		.89	0.48
Barbuto & Wheeler (2006)	388	United States	HI	TL	.38	.89	0.42
Basu (1991)	289	United States	HI	LMX		.89	0.71
Basu (1991)	289	United States	HI	TP	.22	.85	0.17
Basu (1991)	289	United States	HI	AC	.35	.83	0.49
Basu (1991)	289	United States	HI	TL	.70	.93	0.64
Basu & Green (1995)	225	United States	HI	LMX		.89	0.71
Basu & Green (1995)	225	United States	HI	OCB	.22	.93	0.50
Basu & Green (1995)	225	United States	HI	AC	.35	.89	0.49
Basu & Green (1995)	225	United States	HI	TL	.70	.93	0.64
Bauer et al. (2006)	67	United States	HI	LMX		.90	0.59
Bauer et al. (2006)	67	United States	HI	TP	.33	.91	0.55
Bauer et al. (2006)	67	United States	HI	TI	-.02	.87	0.76
Bauer & Green (1996)	311	United States	HI	LMX		.94	1.51
Bauer & Green (1996)	311	United States	HI	TP	.57	.95	1.59
Bernerth (2005)	195	United States	HI	LMX		.90	1.19
Bernerth (2005)	195	United States	HI	TP	.16	.93	0.79
Bernerth (2005)	195	United States	HI	OCB	.14	.92	0.27
Bernerth (2005)	195	United States	HI	JS	.43	.88	1.30
Bernerth (2005)	195	United States	HI	AC	.46	.89	1.66
Bernerth (2005)	195	United States	HI	TI	-.29	.87	2.56
Bettencourt (2004), Sample 1	630	United States	HI	LMX		.89	2.02
Bettencourt (2004), Sample 1	630	United States	HI	AC	.44	.89	1.32
Bettencourt (2004), Sample 1	630	United States	HI	TL	.88	.93	2.25
Bettencourt (2004), Sample 2	183	United States	HI	LMX		.89	2.02
Bettencourt (2004), Sample 2	183	United States	HI	OCB	.25	.92	0.45
Bhal (2006)	306	India	VC	LMX		.91	0.53
Bhal (2006)	306	India	VC	OCB	.17	.63	0.25
Bhal (2006)	306	India	VC	DJ	.16	.78	0.88

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Bhal (2006)	306	India	VC	PJ	.41	.78	0.44
Bhal (2006)	306	India	VC	IJ	.38	.80	0.34
Bhal & Ansari (2007)	295	India	VC	LMX		.90	0.61
Bhal & Ansari (2007)	295	India	VC	DJ	.10	.77	0.88
Bhal & Ansari (2007)	295	India	VC	PJ	.32	.77	0.42
Bhal & Ansari (2007)	295	India	VC	JS	.22	.86	0.76
Bhal & Ansari (2007)	295	India	VC	AC	.21	.75	0.30
Bhal et al. (2009)	306	India	VC	LMX		.88 ^a	0.61
Bhal et al. (2009)	306	India	VC	OCB	.16	.63	0.25
G. Blau (1988)	69	United States	HI	LMX		.87	0.64
G. Blau (1988)	69	United States	HI	TP	.30	.74	0.69
G. Blau (1988)	69	United States	HI	AC	.33	.89	0.45
Botero (2005), Sample 1	123	United States	HI	LMX		.95	1.39
Botero (2005), Sample 1	123	United States	HI	OCB	.49	.90	1.35
Botero (2005), Sample 1	123	United States	HI	JS	.43	.91	1.99
Botero (2005), Sample 2	147	Colombia	VC	LMX		.93	1.28
Botero (2005), Sample 2	147	Colombia	VC	OCB	.39	.85	1.46
Botero (2005), Sample 2	147	Colombia	VC	JS	.31	.80	1.30
Boulanger (2008)	168	United States	HI	LMX		.91	2.26
Boulanger (2008)	168	United States	HI	TP	.14	.93	0.52
Boulanger (2008)	168	United States	HI	LT	.54	.92	0.29
Bowman (2010)	128	United States	HI	LMX		.93	0.96
Bowman (2010)	128	United States	HI	TI	-.29	.91	2.92
Brandes et al. (2004)	129	United States	HI	LMX		.93	1.51
Brandes et al. (2004)	129	United States	HI	TP	.38	.93	0.94
Brandes et al. (2004)	129	United States	HI	OCB	.39	.93	1.17
Brouer (2007)	79	United States	HI	LMX		.79	0.40
Brouer (2007)	79	United States	HI	OCB	.37	.82	0.14
Brouer (2007)	79	United States	HI	AC	.42	.91	0.45
Brouer (2007)	79	United States	HI	LT	.80	.91	0.37
Brunetto et al. (2010)	1,064	Australia	HI	LMX		.93	0.64
Brunetto et al. (2010)	1,064	Australia	HI	AC	.42	.87	1.00
Butler (2010)	397	United States	HI	LMX		.93	1.14
Butler (2010)	397	United States	HI	JS	.50	.76	0.64
Butler (2010)	397	United States	HI	AC	.49	.93	1.23
Butler (2010)	397	United States	HI	TI	-.46	.86	0.96
Carter (2010)	49	United States	HI	LMX		.90 ^a	0.83
Carter (2010)	49	United States	HI	OCB	.08	.88	0.77
Castleberry & Tanner (1989)	45	United States	HI	LMX		.88	
Castleberry & Tanner (1989)	45	United States	HI	AC	.44	.86 ^a	
Chan (2004)	147	United States	HI	LMX		.87	1.00
Chan (2004)	147	United States	HI	AC	.50	.68	3.17
Chan (2004)	147	United States	HI	NC	.17	.63	3.20
Chan (2004)	147	United States	HI	JS	.45	.89	1.25
Chang (2005)	428	United States	HI	LMX		.91	
Chang (2005)	428	United States	HI	TI	-.36	.89	1.42
Y. Chen et al. (2009)	209	China	VC	LMX		.95	0.88
Y. Chen et al. (2009)	209	China	VC	AC	.51	.89	0.86
Y. Chen et al. (2009)	209	China	VC	TI	-.06	.89	1.44
Z. Chen et al. (2007)	238	China	VC	LMX		.81	0.24
Z. Chen et al. (2007)	238	China	VC	TP	.23	.86	1.04
Z. X. Chen et al. (2008)	273	China	VC	LMX		.75	0.52
Z. X. Chen et al. (2008)	273	China	VC	TP	.25	.96	
Z. X. Chen et al. (2008)	273	China	VC	OCB	.21	.88	1.25
Z. X. Chen et al. (2008)	273	China	VC	AC	.20	.74	0.94
Chi & Lo (2003)	104	Taiwan	VC	LMX		.92	0.86
Chi & Lo (2003)	104	Taiwan	VC	DJ	.15	.70	0.56
Chi & Lo (2003)	104	Taiwan	VC	PJ	.38	.86	0.29
Chuang & Shen (2008)	184	Taiwan	VC	LMX		.84	
Chuang & Shen (2008)	184	Taiwan	VC	AC	.29	.85	

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Chuang & Shen (2008)	184	Taiwan	VC	TI	-.32	.85	
Clemens et al. (2009)	188	United States	HI	LMX		.95	0.98
Clemens et al. (2009)	188	United States	HI	JS	.74	.83	0.23
Clemens et al. (2009)	188	United States	HI	TI	-.41	.89	3.69
Cogliser et al. (2009)	285	United States	HI	LMX		.92	0.67
Cogliser et al. (2009)	285	United States	HI	TP	.35	.94	1.12
Cogliser et al. (2009)	285	United States	HI	JS	.60	.91	0.34
Cogliser et al. (2009)	285	United States	HI	AC	.37	.90	0.56
Collins & George (2010)	1,024	United States	HI	LMX		.89	0.69
Collins & George (2010)	1,024	United States	HI	JS	.71	.93	0.42
Collins & George (2010)	1,024	United States	HI	TI	-.44	.76	0.83
Connell (2005)	131	United States	HI	LMX		.90	0.58
Connell (2005)	131	United States	HI	OCB	.27	.88	1.19
Connell (2005)	131	United States	HI	TL	.77	.90	0.98
DeConinck (2009)	419	United States	HI	LMX		.95	1.27
DeConinck (2009)	419	United States	HI	AC	.44	.87	0.28
DeConinck (2009)	419	United States	HI	TI	-.34	.30	0.57
DeConinck (2011)	365	United States	HI	LMX		.93	0.57
DeConinck (2011)	365	United States	HI	TP	.40	.76	0.93
DeConinck (2011)	365	United States	HI	AC	.55	.87	0.61
DeConinck (2011)	365	United States	HI	TI	-.37	.82	2.56
Deluga (1992)	145	United States	HI	LMX		.92	0.58
Deluga (1992)	145	United States	HI	TL	.84	.97	0.85
Deluga (1998)	123	United States	HI	LMX		.88	1.32
Deluga (1998)	123	United States	HI	TP	.25	.94	0.98
Deluga (1998)	123	United States	HI	OCB	.28	.93	0.58
Deluga & Perry (1994)	152	United States	HI	LMX		.91	0.23
Deluga & Perry (1994)	152	United States	HI	TP	.35	.89	0.71
DelVecchio (1998)	155	United States	HI	LMX		.85	1.27
DelVecchio (1998)	155	United States	HI	TP	.07	.81	
Dolden (2001)	98	United States	HI	LMX		.94	1.49
Dolden (2001)	98	United States	HI	AC	.55	.88	2.13
Dolden (2001)	98	United States	HI	NC	.51	.83	1.39
Dolden (2001)	98	United States	HI	CC	-.20	.83	1.61
Dolden (2001)	98	United States	HI	JS	.66	.93	0.42
Dolden (2001)	98	United States	HI	TI	-.48	.94	2.82
Duarte et al. (1993)	367	United States	HI	LMX		.82	1.43
Duarte et al. (1993)	367	United States	HI	TP	.23	.89 ^a	1.99
Duarte et al. (1994)	261	United States	HI	LMX		.82	0.47
Duarte et al. (1994)	261	United States	HI	TP	.23	.82	2.53
Dunegan (2003)	193	United States	HI	LMX		.92	0.80
Dunegan (2003)	193	United States	HI	JS	.46	.79	1.17
Dunegan (2003)	193	United States	HI	AC	.53	.86	1.02
Dunegan (2003)	193	United States	HI	TI	-.35	.84	3.24
Dunegan et al. (1992)	152	United States	HI	LMX		.79	0.54
Dunegan et al. (1992)	152	United States	HI	TP	.38	.95	1.01
Dunegan et al. (2002)	146	United States	HI	LMX		.79	0.54
Dunegan et al. (2002)	146	United States	HI	TP	.36	.95	1.05
Eisenberger et al. (2010), Sample 1	251	United States	HI	LMX		.87	0.96
Eisenberger et al. (2010), Sample 1	251	United States	HI	TP	.23	.92	1.46
Eisenberger et al. (2010), Sample 1	251	United States	HI	OCB	.19	.94	1.66
Eisenberger et al. (2010), Sample 1	251	United States	HI	AC	.33	.87	1.82
Eisenberger et al. (2010), Sample 2	346	Portugal	VC	LMX		.84	0.81
Eisenberger et al. (2010), Sample 2	346	Portugal	VC	TP	.28	.81	0.96
Eisenberger et al. (2010), Sample 2	346	Portugal	VC	OCB	.35	.91	1.04
Eisenberger et al. (2010), Sample 2	346	Portugal	VC	AC	.56	.83	1.54
Elicker et al. (2006)	188	United States	HI	LMX		.88	0.42

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate				
		Country	HI/ VC	Variable	r	α	Var	
Elicker et al. (2006)	188	United States	HI	TP	.26	.71	0.08	
Elicker et al. (2006)	188	United States	HI	DJ	.45	.95	0.83	
Elicker et al. (2006)	188	United States	HI	PJ	.50	.95	1.74	
Elicker et al. (2006)	188	United States	HI	IJ	.51	.89	1.06	
Epitropaki & Martin (1999)	73	England	HI	LMX		.92		
Epitropaki & Martin (1999)	73	England	HI	JS	.71	.90		
Epitropaki & Martin (1999)	73	England	HI	AC	.39	.76		
Epitropaki & Martin (2005)	439	England	HI	LMX		.91	0.77	
Epitropaki & Martin (2005)	439	England	HI	JS	.60	.75	1.28	
Epitropaki & Martin (2005)	439	England	HI	AC	.33	.84	1.39	
Erdogan (2002), Sample 1	261	United States	HI	LMX		.90	1.14	
Erdogan (2002), Sample 1	261	United States	HI	DJ	.40	.60	1.66	
Erdogan (2002), Sample 1	261	United States	HI	PJ	.64	.89	1.85	
Erdogan (2002), Sample 1	261	United States	HI	IJ	.74	.96	1.69	
Erdogan (2002), Sample 2	181	United States	HI	LMX		.94	1.59	
Erdogan (2002), Sample 2	181	United States	HI	TP	.40	.92	0.81	
Erdogan (2002), Sample 2	181	United States	HI	OCB	.45	.91	1.64	
Erdogan (2002), Sample 2	181	United States	HI	DJ	.57	.96	1.61	
Erdogan (2002), Sample 2	181	United States	HI	PJ	.53	.92	1.51	
Erdogan (2002), Sample 2	181	United States	HI	IJ	.80	.84	1.85	
Erdogan (2002), Sample 2	181	United States	HI	JS	.34	.61	1.44	
Erdogan (2002), Sample 2	181	United States	HI	TI	-.49	.95	2.50	
Erdogan & Bauer (2010)	276	Turkey	VC	LMX		.93	1.66	
Erdogan & Bauer (2010)	276	Turkey	VC	OCB	.28	.88	0.96	
Erdogan & Bauer (2010)	276	Turkey	VC	DJ	.47	.84	1.96	
Erdogan & Bauer (2010)	276	Turkey	VC	PJ	.66	.84	1.49	
Erdogan & Bauer (2010)	276	Turkey	VC	AC	.40	.88	1.35	
Erdogan & Bauer (2010)	276	Turkey	VC	JS	.37	.81	0.79	
Erdogan & Enders (2007)	248	United States	HI	LMX		.95	1.59	
Erdogan & Enders (2007)	248	United States	HI	TP	.14	.92	0.79	
Erdogan & Enders (2007)	248	United States	HI	JS	.43	.89	2.31	
Erdogan et al. (2004)	520	Turkey	VC	LMX		.94	1.59	
Erdogan et al. (2004)	520	Turkey	VC	JS	.29	.83	1.64	
Erdogan & Liden (2006)	100	Turkey	VC	LMX		.92	1.46	
Erdogan & Liden (2006)	100	Turkey	VC	DJ	.32	.94	2.04	
Erdogan & Liden (2006)	100	Turkey	VC	IJ	.76	.90	1.82	
Erdogan et al. (2006)	263	Turkey	VC	LMX		.94	1.49	
Erdogan et al. (2006)	263	Turkey	VC	DJ	.45	.87	2.66	
Erdogan et al. (2006)	263	Turkey	VC	IJ	.77	.95	1.82	
Erwing & Lee (2009)	183	United States	HI	LMX		.89	0.76	
Erwing & Lee (2009)	183	United States	HI	TL	.77	.88	0.70	
Fernandez & Vecchio (1997)	332	United States	HI	LMX		.93	0.74	
Fernandez & Vecchio (1997)	332	United States	HI	TP	.26	.92	0.69	
Foosiri (2002)	242	Thailand	VC	LMX		.83	0.61	
Foosiri (2002)	242	Thailand	VC	AC	.20	.86 ^a	0.23	
Foosiri (2002)	242	Thailand	VC	NC	.11	.81 ^a	0.40	
Foosiri (2002)	242	Thailand	VC	CC	-.08	.72 ^a	0.31	
Francis (2010)	158	United States	HI	LMX		.90 ^a		
Francis (2010)	158	United States	HI	TI	-.55	.86 ^a		
Gaa (2010)	78	United States	HI	LMX		.85		
Gaa (2010)	78	United States	HI	OCB	.42	.90		
Gandolfo (2006)	186	United States	HI	LMX		.92	1.31	
Gandolfo (2006)	186	United States	HI	TP	.26	.90	0.26	
Gandolfo (2006)	186	United States	HI	AC	.53	.87	0.66	
Ghosh (2009)	166	United States	HI	LMX		.92	0.85	
Ghosh (2009)	166	United States	HI	OCB	.07	.66	0.79	
Ghosh (2009)	166	United States	HI	AC	.23	.83	0.94	
Ghosh (2009)	166	United States	HI	JS	.18	.74	0.45	
Ghosh (2009)	166	United States	HI	TI	-.12	.68	0.71	

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Glibkowski (2009)	158	United States	HI	LMX		.86	0.71
Glibkowski (2009)	158	United States	HI	OCB	.20	.72	0.35
Goertzen (2003)	94	United States	HI	LMX		.94	1.37
Goertzen (2003)	94	United States	HI	LT	.15	.76	0.22
Golden (2006)	294	United States	HI	LMX		.86	0.58
Golden (2006)	294	United States	HI	JS	.36	.88	1.21
Gómez & Rosen (2001)	128	United States	HI	LMX		.90	0.61
Gómez & Rosen (2001)	128	United States	HI	LT	.47	.93	0.37
Graen et al. (1973), Sample 1	202	United States	HI	LMX		.90 ^a	
Graen et al. (1973), Sample 1	202	United States	HI	TP	.40	.79	
Graen et al. (1973), Sample 1	202	United States	HI	JS	.58	.80	
Graen et al. (1973), Sample 2	340	United States	HI	LMX		.90 ^a	
Graen et al. (1973), Sample 2	340	United States	HI	TP	.43	.79	
Graen et al. (1973), Sample 2	340	United States	HI	JS	.47	.80	
Green et al. (1996)	208	United States	HI	LMX		.89	0.62
Green et al. (1996)	208	United States	HI	AC	.45	.91	0.83
Green et al. (1983)	104	United States	HI	LMX		.84	
Green et al. (1983)	104	United States	HI	TP	-.04	.96	
Green et al. (1983)	104	United States	HI	JS	.53	.78	
Green et al. (1983)	104	United States	HI	AC	.43	.86	
Greenwood (2000)	78	United States	HI	LMX		.93	0.76
Greenwood (2000)	78	United States	HI	TP	.16	.89	0.81
Greenwood (2000)	78	United States	HI	OCB	.35	.61	1.99
Greguras & Ford (2006)	422	United States	HI	LMX		.90	0.36
Greguras & Ford (2006)	422	United States	HI	TP	.19	.68	0.58
Greguras & Ford (2006)	422	United States	HI	OCB	.22	.94	0.71
Greguras & Ford (2006)	422	United States	HI	AC	.53	.83	0.64
Grosvenor (2005)	318	Canada	HI	LMX		.91	0.67
Grosvenor (2005)	318	Canada	HI	TL	.84	.91	0.56
Grosvenor (2005)	318	Canada	HI	LT	.70	.67	0.56
Gupta & Krishnan (2004)	102	India	VC	LMX		.78	0.53
Gupta & Krishnan (2004)	102	India	VC	TL	.02	.78	0.07
Gutknecht (2004), Sample 1	130	Switzerland	HI	LMX		.91	
Gutknecht (2004), Sample 1	130	Switzerland	HI	JS	.56	.78	
Gutknecht (2004), Sample 1	130	Switzerland	HI	TI	-.41	.78	
Gutknecht (2004), Sample 2	483	Switzerland	HI	LMX		.93	
Gutknecht (2004), Sample 2	483	Switzerland	HI	JS	.42	.76	
Gutknecht (2004), Sample 2	483	Switzerland	HI	TI	-.34	.79	
Hansen (2010), Sample 1	201	United States	HI	LMX		.89	1.30
Hansen (2010), Sample 1	201	United States	HI	AC	.68	.91	0.74
Hansen (2010), Sample 1	201	United States	HI	LT	.69	.81	0.55
Hansen (2010), Sample 2	58	United States	HI	LMX		.83	1.10
Hansen (2010), Sample 2	58	United States	HI	TP	.24	.85	0.18
Hansen (2010), Sample 2	58	United States	HI	OCB	.06	.84	0.27
Harris (2004), Sample 1	466	United States	HI	LMX		.93	0.72
Harris (2004), Sample 1	466	United States	HI	JS	.39	.71	0.38
Harris (2004), Sample 2	418	United States	HI	LMX		.90	0.98
Harris (2004), Sample 2	418	United States	HI	JS	.43	.68	0.61
Harris et al. (2007)	136	United States	HI	LMX		.89	1.19
Harris et al. (2007)	136	United States	HI	JS	.23	.88	1.17
Harris & Kacmar (2006), Sample 1	120	United States	HI	LMX		.89	0.67
Harris & Kacmar (2006), Sample 1	120	United States	HI	JS	.15	.88	0.83
Harris & Kacmar (2006), Sample 2	418	United States	HI	LMX		.90	0.98
Harris & Kacmar (2006), Sample 2	418	United States	HI	JS	.42	.68	0.98
Harris & Kacmar (2005)	1,255	United States	HI	LMX		.93	0.98
Harris & Kacmar (2005)	1,255	United States	HI	TP	.15	.81	0.24
Harris et al. (2005), Sample 1	402	United States	HI	LMX		.90	0.96
Harris et al. (2005), Sample 1	402	United States	HI	JS	.42	.73	0.61
Harris et al. (2005), Sample 1	402	United States	HI	TI	-.39	.85	2.28
Harris et al. (2005), Sample 2	183	United States	HI	LMX		.88	1.99

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Harris et al. (2005), Sample 2	183	United States	HI	JS	.55	.73	0.61
Harris et al. (2005), Sample 2	183	United States	HI	TI	-.25	.86 ^a	4.20
Harris et al. (2009), Sample 1	244	United States	HI	LMX		.94	0.77
Harris et al. (2009), Sample 1	244	United States	HI	JS	.40	.89	0.55
Harris et al. (2009), Sample 1	244	United States	HI	TI	-.28	.92	1.56
Harris et al. (2009), Sample 2	158	United States	HI	LMX		.92	0.38
Harris et al. (2009), Sample 2	158	United States	HI	TP	.15	.71	0.37
Harris et al. (2009), Sample 2	158	United States	HI	OCB	.12	.81	0.56
Heck et al. (2005)	312	United States	HI	LMX		.90	0.60
Heck et al. (2005)	312	United States	HI	DJ	.66	.94	0.98
Heck et al. (2005)	312	United States	HI	PJ	.81	.88	0.50
Heck et al. (2005)	312	United States	HI	AC	.61	.80	0.52
Heck et al. (2005)	312	United States	HI	JS	.64	.80	0.50
Henderson (2009)	245	United States	HI	LMX		.94	1.25
Henderson (2009)	245	United States	HI	AC	.24	.92	1.14
Henderson (2009)	245	United States	HI	JS	.30	.81	0.98
Henderson et al. (2008)	278	United States	HI	LMX		.89	2.07
Henderson et al. (2008)	278	United States	HI	TP	.29	.90	1.72
Hepperlen (2002)	196	United States	HI	LMX		.94	1.83
Hepperlen (2002)	196	United States	HI	TP	.23	.92	0.81
Hepperlen (2002)	196	United States	HI	OCB	.22	.93	1.21
Hepperlen (2002)	196	United States	HI	JS	.36	.89	0.37
Hepperlen (2002)	196	United States	HI	TI	-.29	.86	3.61
Hochwarter (2003)	131	United States	HI	LMX		.90 ^a	0.64
Hochwarter (2003)	131	United States	HI	JS	.33	.74	0.71
Hochwarter (2003)	131	United States	HI	AC	.53	.74	0.52
Hofmann et al. (2003)	127	United States	HI	LMX		.94	0.72
Hofmann et al. (2003)	127	United States	HI	OCB	.40	.96	0.72
Holcomb (2009)	163	United States	HI	LMX		.90	
Holcomb (2009)	163	United States	HI	AC	.35	.89	
Holcomb (2009)	163	United States	HI	NC	.37	.85	
Holcomb (2009)	163	United States	HI	CC	.06	.77	
Hoover (2009), Sample 1	230	United States	HI	LMX		.90	0.69
Hoover (2009), Sample 1	230	United States	HI	JS	.45	.90	1.06
Hoover (2009), Sample 1	230	United States	HI	AC	.39	.86	0.50
Hoover (2009), Sample 2	100	United States	HI	LMX		.90	0.69
Hoover (2009), Sample 2	100	United States	HI	TP	.06	.91	0.59
Hoover (2009), Sample 2	100	United States	HI	OCB	.16	.75	0.59
Howell & Hall-Merenda (1999)	317	Canada	HI	LMX		.80	0.45
Howell & Hall-Merenda (1999)	317	Canada	HI	TP	.24	.89 ^a	0.18
Howell & Hall-Merenda (1999)	317	Canada	HI	TL	.53	.89	0.59
Hrivnak (2009)	114	United States	HI	LMX		.88	0.44
Hrivnak (2009)	114	United States	HI	TP	.20	.95	0.61
Hrivnak (2009)	114	United States	HI	OCB	.19	.92	0.96
Hrivnak (2009)	114	United States	HI	JS	.48	.92	1.72
Hsiung & Tsai (2009)	184	Taiwan	VC	LMX		.84	0.31
Hsiung & Tsai (2009)	184	Taiwan	VC	TP	.29	.96	0.67
Hu et al. (2010)	215	India	VC	LMX		.91	1.06
Hu et al. (2010)	215	India	VC	OCB	.19	.82	0.88
Hui et al. (1999)	386	China	VC	LMX		.73	
Hui et al. (1999)	386	China	VC	TP	.11	.75	
Hui et al. (1999)	386	China	VC	OCB	.21	.86 ^a	
Hui et al. (2004)	605	China	VC	LMX		.86	1.00
Hui et al. (2004)	605	China	VC	OCB	.20	.85	0.28
Hui et al. (2004)	605	China	VC	PJ	.50	.92	1.64
Hui et al. (2004)	605	China	VC	AC	.53	.92	1.25
Hutchison et al. (1998)	91	United States	HI	LMX		.92	0.86
Hutchison et al. (1998)	91	United States	HI	AC	.54	.93	0.86
Ishak & Alam (2009)	300	Malaysia	VC	LMX		.94	1.30
Ishak & Alam (2009)	300	Malaysia	VC	TP	.17	.90	0.71

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Ishak & Alam (2009)	300	Malaysia	VC	OCB	.18	.74	1.03
Iyengar (2007)	105	United States	HI	LMX		.83	
Iyengar (2007)	105	United States	HI	JS	.54	.83	
Janssen & Van Yperen (2004)	170	Netherlands	HI	LMX		.93	0.79
Janssen & Van Yperen (2004)	170	Netherlands	HI	TP	.34	.85	0.77
Janssen & Van Yperen (2004)	170	Netherlands	HI	JS	.37	.88	1.23
Jenkins (2010)	160	United States	HI	LMX		.94	0.94
Jenkins (2010)	160	United States	HI	OCB	.37	.66	0.81
Jenkins (2010)	160	United States	HI	TL	.63	.97	1.06
Jiao (2007)	170	China	VC	LMX		.91	0.52
Jiao (2007)	170	China	VC	OCB	.33	.94	0.22
J. O. Johnson (2009), Sample 1	32	United States	HI	LMX		.90 ^a	
J. O. Johnson (2009), Sample 1	32	United States	HI	JS	.68	.84 ^a	
J. O. Johnson (2009), Sample 2	184	United States	HI	LMX		.94	1.17
J. O. Johnson (2009), Sample 2	184	United States	HI	JS	.68	.92	0.61
J. Johnson et al. (2009)	245	United States	HI	LMX		.95	
J. Johnson et al. (2009)	245	United States	HI	TP	.32	.89	0.24
J. Johnson et al. (2009)	245	United States	HI	OCB	.36	.56	0.38
Jones et al. (1993)	113	United States	HI	LMX		.90	0.64
Jones et al. (1993)	113	United States	HI	JS	.47	.67	1.00
Jones et al. (1993)	113	United States	HI	AC	.50	.85	0.49
Jones et al. (1993)	113	United States	HI	TI	-.21	.86 ^a	1.69
Joo (2010)	516	South Korea	VC	LMX		.87	0.37
Joo (2010)	516	South Korea	VC	AC	.52	.86	0.53
Joo (2010)	516	South Korea	VC	TI	-.32	.87	0.88
Judge & Ferris (1993)	81	United States	HI	LMX		.83	0.72
Judge & Ferris (1993)	81	United States	HI	TP	.27	.67	0.45
Kacmar et al. (1999)	196	United States	HI	LMX		.92	1.04
Kacmar et al. (1999)	196	United States	HI	DJ	.45	.94	0.81
Kacmar et al. (1999)	196	United States	HI	JS	.36	.87	0.50
Kacmar et al. (1999)	196	United States	HI	AC	.41	.87	0.41
Kacmar et al. (1999)	196	United States	HI	TI	-.30	.86	0.96
Kacmar et al. (2003), Sample 1	188	United States	HI	LMX		.87	2.25
Kacmar et al. (2003), Sample 1	188	United States	HI	TP	.22	.91	0.81
Kacmar et al. (2003), Sample 2	153	United States	HI	LMX		.83	1.93
Kacmar et al. (2003), Sample 2	153	United States	HI	TP	.32	.91	1.00
Kamdar & Van Dyne (2007)	230	United States	HI	LMX		.91	1.61
Kamdar & Van Dyne (2007)	230	United States	HI	TP	.39	.91	1.96
Kamdar & Van Dyne (2007)	230	United States	HI	OCB	.42	.89	1.80
Kang (2004)	296	South Korea	VC	LMX		.85	0.29
Kang (2004)	296	South Korea	VC	DJ	.46	.84	0.42
Kang (2004)	296	South Korea	VC	PJ	.38	.87	0.42
Kang (2004)	296	South Korea	VC	IJ	.70	.90	0.62
Karriker & Williams (2009)	217	United States	HI	LMX		.90	0.59
Karriker & Williams (2009)	217	United States	HI	OCB	.34	.68	0.40
Karriker & Williams (2009)	217	United States	HI	DJ	.49	.68	0.97
Karriker & Williams (2009)	217	United States	HI	PJ	.58	.68	0.80
Karriker & Williams (2009)	217	United States	HI	IJ	.59	.92	0.59
Karriker & Williams (2009)	217	United States	HI	AC	.48	.93	0.72
Keller & Dansereau (1995)	92	United States	HI	LMX		.69	0.26
Keller & Dansereau (1995)	92	United States	HI	TP	.33	.92	0.61
Keller & Dansereau (1995)	92	United States	HI	IJ	.65	.93	0.77
Keller & Dansereau (2001)	138	United States	HI	LMX		.80	
Keller & Dansereau (2001)	138	United States	HI	TP	.27	.89	
Kent & Chelladurai (2001)	75	United States	HI	LMX		.91	0.52
Kent & Chelladurai (2001)	75	United States	HI	AC	.29	.80	0.71
Kent & Chelladurai (2001)	75	United States	HI	NC	.33	.82	0.96
B. Kim et al. (2010), Sample 1	88	South Korea	VC	LMX		.83	0.64
B. Kim et al. (2010), Sample 1	88	South Korea	VC	TI	-.25	.87	1.66
B. Kim et al. (2010), Sample 2	232	South Korea	VC	LMX		.83	0.71

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
B. Kim et al. (2010), Sample 2	232	South Korea	VC	TI	.07	.87	1.61
S. K. Kim (2006)	238	United States	HI	LMX		.97	3.86
S. K. Kim (2006)	238	United States	HI	OCB	.86	.96	3.31
Kinicki & Vecchio (1994)	138	United States	HI	LMX		.89	0.44
Kinicki & Vecchio (1994)	138	United States	HI	AC	.31	.91	0.52
Klein & Kim (1998)	59	United States	HI	LMX		.91	0.61
Klein & Kim (1998)	59	United States	HI	TP	.28	.83	
Ko (2005)	990	South Korea	VC	LMX		.93	0.29
Ko (2005)	990	South Korea	VC	TL	.67	.92	0.13
Kraimer et al. (2011)	198	United States	HI	LMX		.94	1.32
Kraimer et al. (2011)	198	United States	HI	TP	.38	.82	0.48
Kraimer et al. (2011)	198	United States	HI	AC	.29	.86	1.23
Kraimer et al. (2011)	198	United States	HI	JS	.46	.84	1.30
Kraimer & Wayne (2004)	230	United States	HI	LMX		.93	0.90
Kraimer & Wayne (2004)	230	United States	HI	TP	.21	.86	0.61
Kraimer & Wayne (2004)	230	United States	HI	OCB	.22	.84	0.74
Kraimer & Wayne (2004)	230	United States	HI	AC	.22	.89	0.98
Kraus (1999)	134	United States	HI	LMX		.89	0.72
Kraus (1999)	134	United States	HI	JS	.46	.88	0.76
Kraus (2002)	12	United States	HI	LMX		.90	0.61
Kraus (2002)	12	United States	HI	TP	.26	.99	0.96
Kraus (2002)	12	United States	HI	OCB	.27	.96	1.30
Krishnan (2004)	281	India	VC	LMX		.77	0.35
Krishnan (2004)	281	India	VC	TL	.62	.88	0.52
Krishnan (2005)	100	United States	HI	LMX		.89	0.49
Krishnan (2005)	100	United States	HI	TI	-.50	.85	1.49
Krishnan (2005)	100	United States	HI	TL	.08	.98	0.81
T. Lam (2003)	417	China	VC	LMX		.88	0.49
T. Lam (2003)	417	China	VC	JS	.49	.84 ^a	2.99
T. Lam (2003)	417	China	VC	AC	.52	.86	0.59
T. Lam (2003)	417	China	VC	TI	-.32	.84	5.11
W. Lam et al. (2007)	240	China	VC	LMX		.81	0.24
W. Lam et al. (2007)	240	China	VC	TP	.54	.87 ^a	
Law & Wong (1999)	224	China	VC	LMX		.86	0.52
Law & Wong (1999)	224	China	VC	JS	.37	.88	0.72
Law & Wong (1999)	224	China	VC	TI	-.27	.81	1.00
Law et al. (2000)	189	China	VC	LMX		.87	1.59
Law et al. (2000)	189	China	VC	TP	.37	.91	1.20
H. R. Lee (2000)	250	United States	HI	LMX		.93	2.15
H. R. Lee (2000)	250	United States	HI	DJ	.86	.96	3.13
H. R. Lee (2000)	250	United States	HI	PJ	.90	.98	2.56
H. R. Lee (2000)	250	United States	HI	JS	.81	.95	1.90
H. R. Lee (2000)	250	United States	HI	AC	.56	.96	2.28
H. R. Lee (2000)	250	United States	HI	TI	-.39	.90	3.76
H. R. Lee et al. (2010)	250	United States	HI	LMX		.91	2.15
H. R. Lee et al. (2010)	250	United States	HI	DJ	.86	.96	3.14
H. R. Lee et al. (2010)	250	United States	HI	PJ	.90	.96	2.58
H. R. Lee et al. (2010)	250	United States	HI	TI	-.39	.91	3.77
J. Lee (2001)	280	United States	HI	LMX		.88	0.62
J. Lee (2001)	280	United States	HI	DJ	.29	.80	1.46
J. Lee (2001)	280	United States	HI	PJ	.68	.95	1.46
J. Lee (2005)	201	Singapore	VC	LMX		.90	2.02
J. Lee (2005)	201	Singapore	VC	AC	.61	.89	1.17
J. Lee (2005)	201	Singapore	VC	NC	.52	.85	1.42
J. Lee (2005)	201	Singapore	VC	TL	.68	.93	0.50
M. Lee & Son (1999)	137	South Korea	VC	LMX		.92	1.23
M. Lee & Son (1999)	137	South Korea	VC	TP	.24	.93	0.21
Li et al. (2010)	200	China	VC	LMX		.85	0.83
Li et al. (2010)	200	China	VC	OCB	.26	.90	0.35
Li et al. (2010)	200	China	VC	PJ	.35	.76	0.41

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Li et al. (2010)	200	China	VC	JS	.51	.83	1.30
H. Liao et al. (2010)	828	China	VC	LMX		.89	1.14
H. Liao et al. (2010)	828	China	VC	TP	.25	.87 ^a	
S.-H. Liao et al. (2009)	303	Taiwan	VC	LMX		.86	0.30
S.-H. Liao et al. (2009)	303	Taiwan	VC	AC	.45	.84	0.41
S.-H. Liao et al. (2009)	303	Taiwan	VC	NC	.29	.66	0.48
S.-H. Liao et al. (2009)	303	Taiwan	VC	CC	.14	.69	0.56
S.-H. Liao et al. (2009)	303	Taiwan	VC	JS	.46	.72	0.54
Liden et al. (2006)	834	United States	HI	LMX		.96	1.35
Liden et al. (2006)	834	United States	HI	TP	.23	.92	
Liden et al. (2000)	337	United States	HI	LMX		.96	1.30
Liden et al. (2000)	337	United States	HI	TP	.12	.90	1.17
Liden et al. (2000)	337	United States	HI	JS	.30	.81	0.36
Liden et al. (2000)	337	United States	HI	AC	.36	.90	1.17
Liden et al. (1993)	166	United States	HI	LMX		.80	0.93
Liden et al. (1993)	166	United States	HI	TP	.24	.93	1.04
Lindsay (2008)	418	United States	HI	LMX		.88	0.53
Lindsay (2008)	418	United States	HI	OCB	.33	.92	0.67
Lindsay (2008)	418	United States	HI	AC	.20	.86	0.66
Lindsay (2008)	418	United States	HI	NC	.17	.82	0.59
Lindsay (2008)	418	United States	HI	CC	.08	.69	0.56
Lindsay (2008)	418	United States	HI	JS	.25	.87	0.38
Lindsay (2008)	418	United States	HI	TI	-.18	.71	0.66
Lippstreu (2010)	263	United States	HI	LMX		.90	0.50
Lippstreu (2010)	263	United States	HI	TL	.71	.94	0.42
Lo et al. (2010)	156	Malaysia	VC	LMX		.88	1.10
Lo et al. (2010)	156	Malaysia	VC	AC	.63	.93	1.51
Lo et al. (2010)	156	Malaysia	VC	NC	.79	.90	1.00
Lo et al. (2010)	156	Malaysia	VC	CC	.36	.67	1.02
Lo et al. (2010)	156	Malaysia	VC	TL	.80	.84	1.14
Loi & Ngo (2009)	239	China	VC	LMX		.87	0.96
Loi & Ngo (2009)	239	China	VC	TP	.01	.78	0.46
Loi & Ngo (2009)	239	China	VC	OCB	-.06	.82	0.62
Loi et al. (2009)	239	China	VC	LMX		.87	0.96
Loi et al. (2009)	239	China	VC	AC	.57	.84	0.98
Loi et al. (2009)	239	China	VC	TI	-.31	.90	1.90
Major et al. (1995)	248	United States	HI	LMX		.83	0.28
Major et al. (1995)	248	United States	HI	JS	.48	.90	0.29
Major et al. (1995)	248	United States	HI	AC	.48	.87	0.56
Major et al. (1995)	248	United States	HI	TI	-.25	.90	1.72
Manogran et al. (1994)	282	United States	HI	LMX		.91	0.50
Manogran et al. (1994)	282	United States	HI	OCB	.17	.93	1.12
Manogran et al. (1994)	282	United States	HI	DJ	.48	.89	1.02
Manogran et al. (1994)	282	United States	HI	PJ	.28	.81	0.79
Manogran et al. (1994)	282	United States	HI	IJ	.76	.91	1.06
Manogran et al. (1994)	282	United States	HI	JS	.61	.91	0.45
Manogran et al. (1994)	282	United States	HI	AC	.33	.91	1.66
Markham et al. (2010)	82	United States	HI	LMX		.91	1.30
Markham et al. (2010)	82	United States	HI	TP	.11	.92	0.74
Martin (1999)	522	United States	HI	LMX		.95	1.93
Martin (1999)	522	United States	HI	LT	.26	.72	0.67
Maslyn & Fedor (1998)	513	United States	HI	LMX		.92	0.59
Maslyn & Fedor (1998)	513	United States	HI	OCB	.24	.73	0.46
Maslyn & Fedor (1998)	513	United States	HI	AC	.42	.89	2.46
Maslyn & Fedor (1998)	513	United States	HI	TI	-.52	.87	4.49
Masterson et al. (2000)	651	United States	HI	LMX		.89	0.74
Masterson et al. (2000)	651	United States	HI	TP	.16	.89 ^a	0.61
Masterson et al. (2000)	651	United States	HI	OCB	.27	.78	0.24
Masterson et al. (2000)	651	United States	HI	IJ	.67	.94	

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Masterson et al. (2000)	651	United States	HI	JS	.48	.84 ^a	0.72
Masterson et al. (2000)	651	United States	HI	AC	.37	.74	0.64
Masterson et al. (2000)	651	United States	HI	TI	-.24	.77	0.98
Mehta (2009)	330	India	VC	LMX		.89	0.18
Mehta (2009)	330	India	VC	AC	.24	.87	0.81
Mehta (2009)	330	India	VC	TI	-.02	.89	1.04
Mendez (1999)	200	United States	HI	LMX		.93	0.74
Mendez (1999)	200	United States	HI	TI	-.09	.74	3.96
Morrow et al. (2005)	207	United States	HI	LMX		.94	0.76
Morrow et al. (2005)	207	United States	HI	AC	.46	.74	0.96
S. E. Murphy & Ensher (1999)	54	United States	HI	LMX		.91	0.60
S. E. Murphy & Ensher (1999)	54	United States	HI	TP	.37	.93	0.54
S. E. Murphy & Ensher (1999)	54	United States	HI	JS	.37	.80	0.41
S. M. Murphy (1997)	156	United States	HI	LMX		.88	0.74
S. M. Murphy (1997)	156	United States	HI	TP	.16	.88	0.88
S. M. Murphy (1997)	156	United States	HI	OCB	.47	.89	0.86
S. M. Murphy (1997)	156	United States	HI	DJ	.31	.94	2.04
S. M. Murphy (1997)	156	United States	HI	PJ	.51	.86	1.64
S. M. Murphy (1997)	156	United States	HI	IJ	.57	.96	1.80
S. M. Murphy et al. (2003)	124	United States	HI	LMX		.86	0.81
S. M. Murphy et al. (2003)	124	United States	HI	DJ	.37	.93	0.81
S. M. Murphy et al. (2003)	124	United States	HI	IJ	.64	.96	1.66
Nahrgang et al. (2009)	330	United States	HI	LMX		.92	0.30
Nahrgang et al. (2009)	330	United States	HI	TP	.29	.93	
Nathan et al. (1991)	292	United States	HI	LMX		.92	1.69
Nathan et al. (1991)	292	United States	HI	TP	.18	.89 ^a	1.54
Nathan et al. (1991)	292	United States	HI	JS	.21	.84 ^a	1.66
Novak (1984)	296	United States	HI	LMX		.86	0.73
Novak (1984)	296	United States	HI	LT	.78	.96	0.77
Nystrom (1990)	171	United States	HI	LMX		.79	0.36
Nystrom (1990)	171	United States	HI	AC	.49	.90	1.21
O'Donnell (2009), Sample 1	248	United States	HI	LMX		.87	0.56
O'Donnell (2009), Sample 1	248	United States	HI	TL	.62	.89	1.33
O'Donnell (2009), Sample 2	271	United States	HI	LMX		.95	1.74
O'Donnell (2009), Sample 2	271	United States	HI	TL	.67	.94	1.38
O'Driscoll & Beehr (1994)	136	New Zealand	HI	LMX		.94	0.67
O'Driscoll & Beehr (1994)	136	New Zealand	HI	JS	.43	.86	0.61
O'Driscoll & Beehr (1994)	136	New Zealand	HI	TI	-.34	.93	2.28
Paglis & Green (2002)	127	United States	HI	LMX		.92	0.90
Paglis & Green (2002)	127	United States	HI	TP	.08	.92	0.59
Paglis & Green (2002)	127	United States	HI	OCB	.21	.87	0.62
Palacios (2010)	99	United States	HI	LMX		.93	1.34
Palacios (2010)	99	United States	HI	JS	.25	.88	0.59
Pelled & Xin (2000), Sample 1	90	United States	HI	LMX		.89	0.56
Pelled & Xin (2000), Sample 1	90	United States	HI	TP	.13	.88	0.41
Pelled & Xin (2000), Sample 1	90	United States	HI	LT	.49	.78	2.37
Pelled & Xin (2000), Sample 2	195	Mexico	VC	LMX		.78	0.56
Pelled & Xin (2000), Sample 2	195	Mexico	VC	TP	.22	.74	0.49
Pelled & Xin (2000), Sample 2	195	Mexico	VC	LT	.42	.61	1.88
Pellegrini & Scandura (2006)	172	Turkey	VC	LMX		.90	1.05
Pellegrini & Scandura (2006)	172	Turkey	VC	JS	.39	.86	0.86
Pellegrini et al. (2010)	215	United States	HI	LMX		.93	1.59
Pellegrini et al. (2010)	207	India	VC	LMX		.94	1.69
Pellegrini et al. (2010)	207	India	VC	AC	.44	.70	0.23
Pellegrini et al. (2010)	215	United States	HI	AC	.48	.83	0.67
Pellegrini et al. (2010)	207	India	VC	JS	.53	.92	0.28
Pellegrini et al. (2010)	215	United States	HI	JS	.59	.87	0.40
Perizade & Sulaiman (2005)	613	Indonesia	VC	LMX		.87	0.89
Perizade & Sulaiman (2005)	613	Indonesia	VC	AC	.43	.89	1.10

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Phillips & Bedeian (1994)	84	United States	HI	LMX		.87	0.40
Phillips & Bedeian (1994)	84	United States	HI	TP	.26	.91	1.46
Piccolo & Colquitt (2006)	283	United States	HI	LMX		.93	0.88
Piccolo & Colquitt (2006)	283	United States	HI	TP	.31	.93	0.32
Piccolo & Colquitt (2006)	283	United States	HI	OCB	.38	.94	0.41
Piccolo & Colquitt (2006)	283	United States	HI	TL	.70	.96	0.76
Pierce (2001), Sample 1	177	United States	HI	LMX		.95	
Pierce (2001), Sample 1	177	United States	HI	OCB	.36	.80	
Pierce (2001), Sample 2	298	United States	HI	LMX		.98	
Pierce (2001), Sample 2	298	United States	HI	OCB	.31	.91	
Pillai et al. (1999), Sample 1	80	India	VC	LMX		.81	0.32
Pillai et al. (1999), Sample 1	80	India	VC	DJ	.26	.81	0.55
Pillai et al. (1999), Sample 1	80	India	VC	PJ	.40	.76	0.46
Pillai et al. (1999), Sample 1	80	India	VC	JS	.58	.85	0.27
Pillai et al. (1999), Sample 1	80	India	VC	TL	.59	.92	0.55
Pillai et al. (1999), Sample 2	190	Saudi Arabia/Jordan	VC	LMX		.84	0.45
Pillai et al. (1999), Sample 2	190	Saudi Arabia/Jordan	VC	DJ	.32	.72	0.59
Pillai et al. (1999), Sample 2	190	Saudi Arabia/Jordan	VC	PJ	.41	.76	0.50
Pillai et al. (1999), Sample 2	190	Saudi Arabia/Jordan	VC	JS	.43	.79	0.21
Pillai et al. (1999), Sample 2	190	Saudi Arabia/Jordan	VC	TL	.24	.87	0.69
Pillai et al. (1999), Sample 3	85	Colombia	VC	LMX		.86	0.44
Pillai et al. (1999), Sample 3	85	Colombia	VC	DJ	.40	.78	0.58
Pillai et al. (1999), Sample 3	85	Colombia	VC	PJ	.57	.89	0.74
Pillai et al. (1999), Sample 3	85	Colombia	VC	JS	.51	.80	0.26
Pillai et al. (1999), Sample 3	85	Colombia	VC	TL	.59	.78	0.66
Pillai et al. (1999), Sample 4	240	United States	HI	LMX		.89	0.50
Pillai et al. (1999), Sample 4	240	United States	HI	DJ	.29	.83	0.62
Pillai et al. (1999), Sample 4	240	United States	HI	PJ	.64	.88	0.76
Pillai et al. (1999), Sample 4	240	United States	HI	JS	.69	.87	0.48
Pillai et al. (1999), Sample 4	240	United States	HI	TL	.75	.94	0.88
Pillai et al. (1999), Sample 5	160	Australia	HI	LMX		.90	0.50
Pillai et al. (1999), Sample 5	160	Australia	HI	DJ	.38	.85	0.59
Pillai et al. (1999), Sample 5	160	Australia	HI	PJ	.64	.88	0.69
Pillai et al. (1999), Sample 5	160	Australia	HI	JS	.50	.77	0.45
Pillai et al. (1999), Sample 5	160	Australia	HI	TL	.69	.89	0.94
Polly (2002)	348	United States	HI	LMX		.92	0.49
Polly (2002)	348	United States	HI	AC	.35	.82	0.52
Rahn (2010)	210	United States	HI	LMX		.91	0.32
Rahn (2010)	210	United States	HI	AC	.49	.64	0.53
Rahn (2010)	210	United States	HI	TI	-.45	.92	1.44
Rahn (2010)	210	United States	HI	TL	.35	.95	0.61
Ren (2007), Sample 1	173	China	VC	LMX		.82	1.14
Ren (2007), Sample 1	173	China	VC	DJ	.29	.95	2.16
Ren (2007), Sample 1	173	China	VC	PJ	.43	.88	1.49
Ren (2007), Sample 1	173	China	VC	IJ	.49	.82	1.10
Ren (2007), Sample 1	173	China	VC	AC	.48	.72	0.94
Ren (2007), Sample 1	173	China	VC	NC	.49	.78	1.08
Ren (2007), Sample 1	173	China	VC	CC	.05	.79	0.86
Ren (2007), Sample 1	173	China	VC	JS	.47	.73	1.00
Ren (2007), Sample 1	173	China	VC	LT	.53	.63	0.45
Ren (2007), Sample 2	263	United States	HI	LMX		.89	0.52
Ren (2007), Sample 2	263	United States	HI	DJ	.24	.95	0.76
Ren (2007), Sample 2	263	United States	HI	PJ	.42	.85	0.35
Ren (2007), Sample 2	263	United States	HI	IJ	.62	.90	0.64
Ren (2007), Sample 2	263	United States	HI	AC	.47	.83	1.28
Ren (2007), Sample 2	263	United States	HI	NC	.33	.85	1.32
Ren (2007), Sample 2	263	United States	HI	CC	.04	.88	1.14
Ren (2007), Sample 2	263	United States	HI	JS	.42	.89	1.25

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Ren (2007), Sample 2	263	United States	HI	LT	.63	.79	0.28
Richins (2003)	330	United States	HI	LMX		.86	1.46
Richins (2003)	330	United States	HI	TP	.42	.89	0.81
Richins (2003)	330	United States	HI	OCB	.43	.93	1.12
Richins (2003)	330	United States	HI	AC	.46	.76	1.59
Richins (2003)	330	United States	HI	JS	.39	.83	1.96
Richins (2003)	330	United States	HI	TI	-.36	.81	2.31
Roch & Shanock (2006)	272	United States	HI	LMX		.88	0.58
Roch & Shanock (2006)	272	United States	HI	DJ	.42	.97	1.04
Roch & Shanock (2006)	272	United States	HI	PJ	.50	.89	0.61
Roch & Shanock (2006)	272	United States	HI	IJ	.78	.83	0.67
Sanchez (2002)	106	United States	HI	LMX		.88	0.44
Sanchez (2002)	106	United States	HI	TP	.43	.94	0.56
Sanchez (2002)	106	United States	HI	OCB	.34	.88	0.53
Sanchez (2002)	106	United States	HI	DJ	.36	.93	0.64
Sanchez (2002)	106	United States	HI	PJ	.30	.89	0.50
Sanchez (2002)	106	United States	HI	JS	.62	.80	0.66
Sanchez (2002)	106	United States	HI	AC	.41	.85	0.56
Sanchez (2002)	106	United States	HI	TI	-.36	.81	1.12
Sanchez (2002)	106	United States	HI	LT	.41	.91	0.58
Scandura et al. (1986)	58	United States	HI	LMX		.86	0.53
Scandura et al. (1986)	58	United States	HI	TP	.36	.88	0.41
Scandura & Pellegrini (2008)	228	United States	HI	LMX		.89	0.50
Scandura & Pellegrini (2008)	228	United States	HI	LT	.29	.91	0.90
Scandura & Schriesheim (1994)	183	United States	HI	LMX		.86	0.44
Scandura & Schriesheim (1994)	183	United States	HI	TP	.27	.93	0.88
Schaninger (2002)	210	United States	HI	LMX		.93	1.06
Schaninger (2002)	210	United States	HI	TP	.10	.90	0.56
Schaninger (2002)	210	United States	HI	OCB	.18	.89	0.74
Schaninger (2002)	210	United States	HI	JS	.44	.79	1.77
Schaninger (2002)	210	United States	HI	TI	-.37	.85	2.46
Schriesheim et al. (2000)	150	United States	HI	LMX		.86	0.64
Schriesheim et al. (2000)	150	United States	HI	TP	.23	.77	0.66
Schriesheim et al. (2000)	150	United States	HI	AC	.75	.85	0.37
Schriesheim et al. (1998)	106	United States	HI	LMX		.82	0.33
Schriesheim et al. (1998)	106	United States	HI	TP	.39	.84	0.27
Schriesheim et al. (1992), Sample 1	281	United States	HI	LMX		.81	0.35
Schriesheim et al. (1992), Sample 1	281	United States	HI	AC	.43	.91	
Schriesheim et al. (1992), Sample 1	281	United States	HI	JS	.63	.86	
Schriesheim et al. (1992), Sample 2	115	United States	HI	LMX		.80	0.43
Schriesheim et al. (1992), Sample 2	115	United States	HI	TP	.40	.80	
Schriesheim et al. (1992), Sample 2	115	United States	HI	JS	.43	.91	
Schyns et al. (2005), Sample 2	252	Germany	HI	LMX		.84	
Schyns et al. (2005), Sample 2	252	Germany	HI	AC	.63	.92	
Schyns et al. (2005), Sample 4	141	Germany	HI	LMX		.89	
Schyns et al. (2005), Sample 4	141	Germany	HI	AC	.44	.77	
Scott & Bruce (1994)	172	United States	HI	LMX		.90	0.44
Scott & Bruce (1994)	172	United States	HI	OCB	.17	.89	0.71
Seers (1989)	154	United States	HI	LMX		.92	0.86
Seers (1989)	154	United States	HI	TP	.48	.89 ^a	
Seers (1989)	154	United States	HI	JS	.37	.84 ^a	
Seers & Graen (1984)	101	United States	HI	LMX		.89	0.40
Seers & Graen (1984)	101	United States	HI	JS	.56	.85	
Sekiguchi et al. (2008)	125	United States	HI	LMX		.95	2.25
Sekiguchi et al. (2008)	125	United States	HI	TP	.44	.90	1.19
Sekiguchi et al. (2008)	125	United States	HI	OCB	.42	.83	1.17
Settoon et al. (1996)	102	United States	HI	LMX		.96	1.14
Settoon et al. (1996)	102	United States	HI	TP	.34	.89	0.31

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Settoon et al. (1996)	102	United States	HI	OCB	.42	.81	0.36
Settoon et al. (1996)	102	United States	HI	AC	.36	.84	0.30
Shalhoop (2004)	141	United States	HI	LMX		.92	1.72
Shalhoop (2004)	141	United States	HI	OCB	.28	.91	1.42
Shalhoop (2004)	141	United States	HI	DJ	.32	.91	1.30
Shalhoop (2004)	141	United States	HI	PJ	.40	.82	0.71
Shalhoop (2004)	141	United States	HI	IJ	.56	.92	1.10
Shalhoop (2004)	141	United States	HI	AC	.39	.84	1.42
Shalhoop (2004)	141	United States	HI	JS	.42	.84	1.77
Shalhoop (2004)	141	United States	HI	TI	-.30	.95	1.77
Shapiro et al. (2011)	162	United States	HI	LMX		.88	1.69
Shapiro et al. (2011)	162	United States	HI	TI	-.04	.89	3.13
Sherony (2002)	98	United States	HI	LMX		.96	1.70
Sherony (2002)	98	United States	HI	TP	.03	.89 ^a	
Shull (1994)	236	United States	HI	LMX		.80	0.52
Shull (1994)	236	United States	HI	TP	.23	.85	0.76
Shull (1994)	236	United States	HI	OCB	.21	.81	0.92
Shull (1994)	236	United States	HI	DJ	.34	.78	0.86
Shull (1994)	236	United States	HI	PJ	.47	.85	0.85
Shull (1994)	236	United States	HI	IJ	.49	.94	0.88
Sias (2005)	400	United States	HI	LMX		.93	0.63
Sias (2005)	400	United States	HI	JS	.49	.73	0.58
Sias (2005)	400	United States	HI	AC	.35	.91	0.46
Smith (2002)	150	United States	HI	LMX		.96	2.16
Smith (2002)	150	United States	HI	TP	.24	.80	0.94
Smith (2002)	150	United States	HI	AC	.40	.86	1.77
Smith (2002)	150	United States	HI	JS	.25	.90	1.32
Soldner & Crimando (2010)	41	United States	HI	LMX		.95	
Soldner & Crimando (2010)	41	United States	HI	OCB	.15	.72	
Soldner & Crimando (2010)	41	United States	HI	AC	.38	.86 ^a	
Sparrowe (1994)	182	United States	HI	LMX		.75	1.10
Sparrowe (1994)	182	United States	HI	TI	-.19	.85	2.82
Sparrowe et al. (2006)	177	United States	HI	LMX		.92	0.96
Sparrowe et al. (2006)	177	United States	HI	OCB	.16	.87	0.85
Stepina et al. (1991)	81	United States	HI	LMX		.73	0.37
Stepina et al. (1991)	81	United States	HI	TP	.28	.73	0.62
Stepina et al. (1991)	81	United States	HI	JS	.39	.71	1.88
Story (2010)	223	China	VC	LMX		.91	0.83
Story (2010)	223	China	VC	AC	.41	.81	0.55
Stringer (2006)	57	United States	HI	LMX		.90	0.52
Stringer (2006)	57	United States	HI	JS	.62	.93	0.86
Suazo (2002)	128	United States	HI	LMX		.90	0.69
Suazo (2002)	128	United States	HI	TP	.10	.85	0.58
Suazo (2002)	128	United States	HI	OCB	.22	.88	0.86
Tansky (1993)	75	United States	HI	LMX		.85	0.32
Tansky (1993)	75	United States	HI	OCB	.42	.86	0.41
Tansky (1993)	75	United States	HI	PJ	.52	.88	
Tansky (1993)	75	United States	HI	JS	.45	.88	0.27
Tansky (1993)	75	United States	HI	AC	.30	.85	0.23
Tekleab & Taylor (2003)	130	United States	HI	LMX		.89	0.72
Tekleab & Taylor (2003)	130	United States	HI	TP	.34	.70	0.66
Tekleab & Taylor (2003)	130	United States	HI	OCB	.52	.85	0.62
Tekleab & Taylor (2003)	130	United States	HI	JS	.45	.75	0.64
Tekleab & Taylor (2003)	130	United States	HI	TI	-.31	.85	1.12
Tepper et al. (2006), Sample 1	347	United States	HI	LMX		.74	
Tepper et al. (2006), Sample 1	347	United States	HI	TP	.30	.87	1.60
Tepper et al. (2006), Sample 2	207	United States	HI	LMX		.90 ^a	
Tepper et al. (2006), Sample 2	207	United States	HI	TP	.46	.88	0.46

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Tierney et al. (2002)	100	Mexico	VC	LMX		.89	1.06
Tierney et al. (2002)	100	Mexico	VC	OCB	.62	.91	0.81
Tierney et al. (2002)	100	Mexico	VC	JS	.52	.90	0.61
Tierney et al. (2002)	100	Mexico	VC	AC	.58	.89	0.72
Tierney et al. (1999)	159	United States	HI	LMX		.91	0.35
Tierney et al. (1999)	159	United States	HI	TP	.30	.95	1.21
Townsend et al. (2002)	420	United States	HI	LMX		.87	0.42
Townsend et al. (2002)	420	United States	HI	TP	.28	.89 ^a	0.64
Townsend et al. (2000)	150	United States	HI	LMX		.90	0.76
Townsend et al. (2000)	150	United States	HI	TP	.45	.75	0.76
Townsend et al. (2000)	150	United States	HI	OCB	.43	.88	0.69
Trepanier (2011)	324	Canada	HI	LMX		.94	0.61
Trepanier (2011)	324	Canada	HI	TP	.42	.83	0.28
Truckenbrodt (2000)	63	United States	HI	LMX		.87	0.36
Truckenbrodt (2000)	63	United States	HI	OCB	.28	.72	0.19
Truckenbrodt (2000)	63	United States	HI	AC	.35	.88	1.08
Uhl-Bien & Maslyn (2003)	232	United States	HI	LMX		.90	0.59
Uhl-Bien & Maslyn (2003)	232	United States	HI	TP	.36	.94	0.52
Uhl-Bien & Maslyn (2003)	232	United States	HI	OCB	.32	.91	0.62
Uhl-Bien & Maslyn (2003)	232	United States	HI	AC	.33	.87	0.66
van Breukelen et al. (2002)	152	Netherlands	HI	LMX		.90	0.46
van Breukelen et al. (2002)	152	Netherlands	HI	AC	.40	.74	0.64
Van Dyne et al. (2002)	195	United States	HI	LMX		.90	0.94
Van Dyne et al. (2002)	195	United States	HI	TP	.03	.89 ^a	
Van Dyne et al. (2002)	195	United States	HI	OCB	.37	.88	1.02
Van Dyne et al. (2008), Sample 1	218	India	VC	LMX		.91	1.25
Van Dyne et al. (2008), Sample 1	218	India	VC	OCB	.52	.91	1.38
Van Dyne et al. (2008), Sample 2	234	Singapore	VC	LMX		.93	1.06
Van Dyne et al. (2008), Sample 2	234	Singapore	VC	OCB	.34	.95	2.04
Vecchio (1985)	45	United States	HI	LMX		.64	0.20
Vecchio (1985)	45	United States	HI	JS	.32	.82	2.86
Vecchio (1987)	303	United States	HI	LMX		.91	0.43
Vecchio (1987)	303	United States	HI	TP	.35	.94	
Vecchio & Brazil (2007)	1,974	United States	HI	LMX		.90	0.53
Vecchio & Brazil (2007)	1,974	United States	HI	TP	.17	.94	1.56
Vecchio & Brazil (2007)	1,974	United States	HI	TI	-.34	.90	0.50
Vecchio et al. (2006)	860	United States	HI	LMX		.90	0.58
Vecchio et al. (2006)	860	United States	HI	TP	.29	.89	0.83
Vecchio & Gobdel (1984)	45	United States	HI	LMX		.64	0.20
Vecchio & Gobdel (1984)	45	United States	HI	TP	.27	.86	0.53
Vecchio & Gobdel (1984)	45	United States	HI	JS	.25	.82	
Vecchio & Gobdel (1984)	45	United States	HI	TI	-.20	.86 ^a	
Vecchio et al. (1986)	173	United States	HI	LMX		.82	0.29
Vecchio et al. (1986)	173	United States	HI	JS	.41	.68	
Vecchio & Norris (1996)	105	United States	HI	LMX		.80	0.69
Vecchio & Norris (1996)	105	United States	HI	TP	.37	.93	0.96
Venkataramani et al. (2010)	184	India	VC	LMX		.90	0.45
Venkataramani et al. (2010)	184	India	VC	JS	.36	.85	0.69
Venkataramani et al. (2010)	184	India	VC	TI	-.25	.78	0.71
Vidyarathi et al. (2010)	254	India	VC	LMX		.84	0.46
Vidyarathi et al. (2010)	254	India	VC	TP	.15	.80	0.48
Vidyarathi et al. (2010)	254	India	VC	OCB	.15	.86	0.34
Volmer et al. (2011)	279	Germany	HI	LMX		.86	0.52
Volmer et al. (2011)	279	Germany	HI	JS	.51	.84 ^a	0.96
Waismel-Manor et al. (2010)	163	Israel	HI	LMX		.89	0.41
Waismel-Manor et al. (2010)	163	Israel	HI	OCB	.39	.75	0.28

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Wang et al. (2008)	168	China	VC	LMX		.86	0.57
Wang et al. (2008)	168	China	VC	TP	.27	.87	0.55
Wang et al. (2008)	168	China	VC	OCB	.29	.91	0.67
Wang et al. (2008)	168	China	VC	TI	-.05	.70	0.46
Wang et al. (2005)	162	China	VC	LMX		.81	0.34
Wang et al. (2005)	162	China	VC	TP	.38	.89	0.62
Wang et al. (2005)	162	China	VC	OCB	.29	.81	0.27
Wang et al. (2005)	162	China	VC	TL	.71	.93	0.20
Wat & Shaffer (2005)	183	China	VC	LMX		.88	0.90
Wat & Shaffer (2005)	183	China	VC	OCB	.12	.95	2.04
Wat & Shaffer (2005)	183	China	VC	DJ	.25	.95	1.77
Wat & Shaffer (2005)	183	China	VC	PJ	.25	.93	0.98
Wat & Shaffer (2005)	183	China	VC	IJ	.16	.90	1.14
Wat & Shaffer (2005)	183	China	VC	LT	.32	.95	2.72
Watson (2010)	182	United States	HI	LMX		.89	0.38
Watson (2010)	182	United States	HI	LT	.40	.88	0.44
Wayne & Ferris (1990), Sample 1	96	United States	HI	LMX		.77	
Wayne & Ferris (1990), Sample 1	96	United States	HI	TP	.65	.87	0.50
Wayne & Ferris (1990), Sample 2	84	United States	HI	LMX		.81	
Wayne & Ferris (1990), Sample 2	84	United States	HI	TP	.54	.91	0.37
Wayne & Green (1993)	73	United States	HI	LMX		.91	0.67
Wayne & Green (1993)	73	United States	HI	OCB	.25	.76	0.59
Wayne et al. (1999)	245	United States	HI	LMX		.91	1.39
Wayne et al. (1999)	245	United States	HI	TP	.34	.87	2.69
Wayne et al. (2002)	211	United States	HI	LMX		.89	2.02
Wayne et al. (2002)	211	United States	HI	TP	.31	.85	1.04
Wayne et al. (2002)	211	United States	HI	OCB	.20	.83	1.02
Wayne et al. (2002)	211	United States	HI	DJ	.48	.92	2.31
Wayne et al. (2002)	211	United States	HI	PJ	.51	.88	1.96
Wayne et al. (2002)	211	United States	HI	AC	.41	.82	1.93
Wayne et al. (1997)	252	United States	HI	LMX		.90	1.17
Wayne et al. (1997)	252	United States	HI	TP	.45	.92	0.45
Wayne et al. (1997)	252	United States	HI	OCB	.26	.86	0.94
Wayne et al. (1997)	252	United States	HI	AC	.36	.87	0.94
Wayne et al. (1997)	252	United States	HI	TI	-.40	.89	2.16
Wech (2001)	403	Canada	HI	LMX		.90 ^a	0.20
Wech (2001)	403	Canada	HI	TP	.52	.95	0.42
Wech (2001)	403	Canada	HI	OCB	.32	.93	0.23
Wech (2001)	403	Canada	HI	JS	.15	.77	0.49
Wheeler et al. (2010)	282	United States	HI	LMX		.94	0.74
Wheeler et al. (2010)	282	United States	HI	TI	-.28	.86 ^a	1.54
White (2007)	1,200	United States	HI	LMX		.75	0.42
White (2007)	1,200	United States	HI	IJ	.77	.79	0.56
White (2007)	1,200	United States	HI	LT	.80	.81	1.88
Whittington (1997)	209	United States	HI	LMX		.91	1.64
Whittington (1997)	209	United States	HI	TP	.34	.81	0.25
Whittington (1997)	209	United States	HI	OCB	.38	.95	1.17
Whittington (1997)	209	United States	HI	AC	.43	.80	0.69
Whittington (1997)	209	United States	HI	NC	.10	.75	1.04
Whittington (1997)	209	United States	HI	CC	-.14	.76	1.35
Whittington (1997)	209	United States	HI	LT	.85	.96	2.86
Wilhelm et al. (1993)	141	United States	HI	LMX		.92	0.62
Wilhelm et al. (1993)	141	United States	HI	TP	.34	.87	0.75
Wilhelm et al. (1993)	141	United States	HI	DJ	.76	.95	1.77
Wilhelm et al. (1993)	141	United States	HI	JS	.72	.89	0.08
Wilhelm et al. (1993)	141	United States	HI	TI	-.38	.88	3.24
Williams et al. (1996)	183	United States	HI	LMX		.95	
Williams et al. (1996)	183	United States	HI	AC	.39	.81	
Y.-J. Wu (2009)	231	Taiwan	VC	LMX		.93	1.12
Y.-J. Wu (2009)	231	Taiwan	VC	OCB	.19	.92	0.25

(Appendix continues)

Appendix (continued)

Study	N	Moderator coding		LMX/correlate			
		Country	HI/ VC	Variable	r	α	Var
Yagil (2006)	152	Israel	HI	LMX		.78	1.37
Yagil (2006)	152	Israel	HI	PJ	.45	.84	1.42
Yagil (2006)	152	Israel	HI	JS	.67	.84 ^a	1.46
Yeh (2005)	202	United States	HI	LMX		.88	0.80
Yeh (2005)	202	United States	HI	AC	.55	.89	0.86
Yeh (2005)	202	United States	HI	NC	.22	.81	0.64
Yeh (2005)	202	United States	HI	CC	-.10	.82	0.79
Yeh (2005)	202	United States	HI	JS	.49	.89	0.96
Yeh (2005)	202	United States	HI	TI	-.31	.85	1.37
Yi (2002)	633	China	VC	LMX		.72	0.32
Yi (2002)	633	China	VC	JS	.21	.81	0.31
Yi (2002)	633	China	VC	AC	.49	.88	0.53
Zalesny & Kirsch (1989)	76	United States	HI	LMX		.90 ^a	
Zalesny & Kirsch (1989)	76	United States	HI	TP	.46	.84	1.00
Zhang et al. (2010)	165	China	VC	LMX		.92	1.44
Zhang et al. (2010)	165	China	VC	TP	.34	.88	0.36
Zhang et al. (2010)	165	China	VC	AC	.28	.85	1.17
Zhang et al. (2010)	165	China	VC	JS	.39	.88	0.61

Note. LMX = leader-member exchange; HI = horizontal individualism; VC = vertical collectivism; α = internal consistency (Cronbach's α); Var = study variance; OCB = organizational citizenship behavior; TP = task performance; DJ = distributive justice; PJ = procedural justice; JS = job satisfaction; TI = turnover intentions; TL = transformational leadership; AC = affective organizational commitment; IJ = interactional justice; LT = leader trust; NC = normative organizational commitment; CC = continuance organizational commitment.

^a Imputed Cronbach's α based on reliability generalization.

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