

**Leader Reinforcement Behavior and Leader-Member Exchange:  
The Moderating Effect of Cultural Orientation**

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### **Abstract**

Drawing on Reinforcement (Skinner, 1969) and Social Exchange (Blau, 1964) theories, we hypothesized that the relationship between leader reinforcement behavior and leader-member exchange (LMX) is contingent on individual cultural orientation. We conceptualized reinforcement behavior in terms of four behaviors: contingent reward (of good performance), contingent punishment (of bad performance), omission (non-reinforcement to good performance), and extinction (non-reinforcement to poor performance). We included four exchange currencies--contribution, affect, loyalty, and respect—in conceptualizing LMX. Finally, we used four cultural orientations: vertical individualism, vertical collectivism, horizontal individualism, and horizontal collectivism. Data were obtained from 820 employees and their 291 supervisors representing diverse organizations in Malaysia. Leader behavior and cultural orientations were reported by the subordinates and LMX was rated by their respective supervisors. Controlling for supervisor and subordinate gender and the duration of their work relationships, contingent reward had significant positive impact on all LMX currencies, but contingent punishment was related to just one currency of exchange. Interestingly, leader omission and extinction behaviors were unrelated to LMX currencies. More importantly, the relationship between leader behavior and LMX was found to be significantly moderated by the cultural orientation of the subordinates.

**Keywords:** Cross-cultural Management, Intra-national Diversity;

Global Leader Competencies; Reinforcement Behavior; LMX

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“Giving credit where credit is due is a very rewarding habit to form.”

Loretta Young

“If people are good only because they fear punishment, and hope for reward, then we are a sorry lot indeed.”

Albert Einstein

The role of culture in leadership effectiveness has been of interest to organizational researchers since the seminal work by Hofstede (1980) up until more recently massive data provided by the GLOBE studies (House & Aditya, 1997; House, Hanges, Javidan, Dorfman, & Gupta, 2004). In the same vein, within country cultural variations at the individual level have been reported (Triandis, 1995; Triandis, Bontempo, Villareal, Asai, & Laccu, 1988). Triandis and colleagues have differentiated the cultural level classification of individualism-collectivism dimension from the individual psychological level of this cultural dimension. Nonetheless, the importance of understanding cultural orientation at the individual level seems to have diminished as a result of the greater importance attached to culture at the national level. Thus the primary purpose of this study is to examine the role of individualized individualism-collectivism cultural orientation in explaining the relationship between leadership reinforcement behavior and leader-member exchange (LMX).

While examining the role of individual cultural orientation, we contribute to the existing cross-cultural leadership literature in three distinctive ways. First, while the relationship between various leader reinforcement behavior and work outcomes has been tested in the past (see such excellent meta-analytic reviews as those of Judge & Piccolo, 2004; Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006), we are aware of no research that has addressed the cultural orientation of subordinates in this relationship. Thus we include the cultural orientation of

individual subordinates as a boundary condition of leader reinforcement behavior. Stated differently, we attempt at blending the three constructs—reinforcement behavior, cultural orientation, and LMX—in a single theoretical model. Second, researchers in the past have mostly employed the subordinate perspective of LMX to examine its antecedent and/or consequences. We employ the subordinate perspective for leader reinforcement behavior and the supervisor perspective for LMX. Having different sources of data has been strongly recommended in leadership research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), as it is likely to minimize the variance that is attributable to common method. Third, the few studies that examined the relationship between leader reinforcement behavior and work outcomes were conducted in the West. Thus, our study contributes to the leadership literature by testing the effect of reinforcement behavior on the quality of LMX along with the individual cultural orientation of subordinates as a boundary condition in a slightly different milieu--the Malaysian context.

### **Theory and Hypotheses**

Leadership is a fascinating yet controversial topic that has been addressed from diverse perspectives (Barling, Christie, & Hopton, 2011). As such, there are a myriad of leadership approaches that have been taken to define leadership behavior (Bass & Bass, 2008; Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003; Yukl, 2013). A review of the leadership literature (Bass & Bass, 2008; Barling et al., 2011; Pearce et al., 2003; Yukl, 2012, 2013) suggests that extensive research on leadership has accumulated during the past 60 years to understand leader behavior directed at influencing and facilitating to accomplish individual and collective goals. In course of these research efforts, many different leadership theoretical perspectives have been advanced (see such reviews as those of Bass & Bass, 2008; Barling et al., 2011). One such recent perspective that has been found to have great promise is leader-member exchange (LMX).

The LMX theory, formerly known as the vertical dyad linkage (VDL) theory (Dansereau, Graen, & Haga, 1975), focuses on the two-way, reciprocal exchange relationship between supervisors and subordinates (Graen & Scandura, 1987). The theory posits that leaders have unique relationships with members within work groups due to varying quality of social exchanges between them (Allinson, Armstrong, & Hayes, 2001). The theory employs a transactional framework for leadership where leaders treat each of their individual subordinates differently (Duchon, Green, & Taber, 1986), and which results in the development of relatively stable dyads (Liden, Wayne, & Stilwell, 1993) that range on a scale from lower to higher quality exchanges (Dienesch & Liden, 1986; Graen & Cashman, 1975; Liden & Graen, 1980; Liden et al., 1993). High quality exchanges, also known as “in-group” exchanges, are friendly working relationships characterized by mutual trust, respect, liking, high level of interaction, and interpersonal attraction (Dansereau et al., Haga, 1975; Graen & Cashman, 1975; Graen & Scandura, 1987). The members are committed, competent, and conscientious subordinates (Dansereau et al., 1975; Liden & Graen, 1980) who not only perform their jobs in accordance with the employment contract but also can be counted on to perform unstructured tasks, to volunteer for extra work, and to take on additional responsibilities (Truckenbrodt, 2000). These subordinates, who might eventually serve as assistants or advisors to the leader (Dienesch & Liden, 1986), in return receive favorable performance appraisals, valued promotions, satisfying positions, and career development support (Dienesch & Liden, 1986; Graen, Wakabayashi, Graen, & Graen, 1990; Liden & Graen, 1980), greater access to information, influence, opportunities for professional growth, decision-making latitude, supervisory support, more freedom, better job assignments, and increased opportunities to work with their leaders (Ashkanasy & O’Connor, 1997) as compared to out-group members (Graen & Scandura, 1987).

Over the past 40 years, LMX has been conceptualized in several ways (Bhal & Ansari, 1996; Dansereu et al., 1975; Yukl, 2013). But perhaps the most widely used multidimensional conceptualization is that by Liden and Maslyn (1998). This is the conceptualization that we have adopted in this study. Liden and Maslyn (1998) conceptualized LMX in terms of four dimensions: (a) *Contribution*—the perception of the amount, direction, and quality of work-oriented activity each member puts forth toward the mutual goals of the dyad; (b) *Loyalty*—the extent to which both the leader and the member express public support for each other's actions and character; (c) *Affect*—the mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values; and (d) *Professional respect*—the perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work.

The significance of factors predicting positive exchanges is increasingly acknowledged. The two most prevalent antecedents of LMX, perhaps, are individual characteristics, namely subordinate ability (Dockery & Steiner, 1990; Kim & Organ, 1982; Liden & Graen, 1980; Scandura, Graen, & Novak, 1986; Wayne & Ferris, 1990) and supervisor liking for the subordinate (Dockery & Steiner, 1990; Wayne & Ferris, 1990). Leader and member demographic characteristics have also been reported to predict LMX (Duchon, Graen, & Taber, 1986; Green, Anderson, & Shivers, 1996), though Duchon et al. (1986) state that this might be explained by leader-member similarity. Besides leader-member similarity, as reported by Dienesch and Liden (1986) and Graen and Cashman (1975), other similarities between leader and member that are found to predict LMX quality include attitude similarity (Phillips & Bedeian, 2000), value congruity (Ashkanasy & O'Connor, 1997), and interpersonal attraction (Graen & Cashman, 1975; Liden et al., 1993), where interpersonal attraction may be associated

with personality trait similarity (Byrne, 1971). Other studies show that similarity between leaders and members' conscientiousness (Deluga, 1998), emotional intelligence (Ansari, Effendi, & Aafaqi, 2011), and cognitive ability (Engle & Lord, 1997) predict LMX quality. The work of Allinson et al. (2001), however, indicates that the extent to which leaders' and members' cognitive styles differ might have an effect on the nature of the relationship. Although descriptions and models of LMX have identified the importance of individual characteristics, much of the theoretical attention has been on initial task performance.

There is some evidence in the organizational literature that leadership behavior does make a significant amount of variance in LMX. For example, Wang, Law, Hackett, Wang, and Chen (2005) found that transformational leadership behavior was significantly related to LMX in the Chinese cultural context. On the other hand, Ansari, Jayasingam, Aafaqi, and Ahmad (2010) reported that paternalistic style of leadership significantly predicted LMX in Malaysian organizations. In both of the these described studies, LMX was considered a mechanism of the relationship between leadership behavior (transformational or paternalistic) and employee outcomes such as task performance, extra-role behavior, and attitudinal outcomes. The current study, therefore, intends to expand the literature on LMX, specifically relating to leader reinforcement behaviors as antecedents of LMX.

### **Leader Reinforcement Behavior and LMX**

Among the many approaches to leadership, the full range leadership (transformational-transactional) "... theory dominates current thinking about leadership research" (Judge & Piccolo, 2004, p. 762). Between the two leadership behavior—transformational and transactional—the latter seems to have diminished its importance during the past few decades (Podsakoff, Podsakoff, & Kuskova, 2010), though evidence exists that

contingent reward (a dimension of transactional leadership) had a stronger relationship with several leadership effectiveness criteria than did transformational leadership (Judge & Piccolo, 2004). Clearly, a call for in-depth research on transactional leadership is warranted. Given this argument, we believe that the connecting link between contingent reward/laissez-faire leadership and LMX is “give-and-take” or “social exchange” relationship. In exchange relationships, “the leader provides rewards to employees in exchange for their performance on the job” (Podsakoff et al., 2006, p. 114). Hence, the kind of reinforcement behavior the leader exhibits will determine the exchange relationship between the leader and members.

Contingent reward and punishment as well as extinction and omission of behavior is grounded in B. F. Skinner’s (1969) classic learning theory called operant conditioning (also known as reinforcement theory). Drawing on reinforcement theory, Hinkin and Schriesheim (2004) developed the following four-factor model of leader reinforcement behavior:

(1) *Contingent Reward Behavior* (CR) is leader’s contingent positive reinforcement behaviors upon employee’s good performance through the usage of such positive reinforcements as recognition, acknowledgment, encouragement, and commendation (Podsakoff, Todor, & Skov, 1982).

(2) *Contingent Punishment Behavior* (CP) is leader’s contingent negative reinforcement behaviors upon employee’s poor performance through the usage of such negative reinforcements as reprimands and disapproval (Podsakoff et al., 1982).

(3) *Omission in Response to Good Performance* (OG) is leader’s non-reinforcement behaviors for employees’ good performance (Hinkin & Schriesheim, 2004).

(4) *Omission in Response to Poor Performance* (OP) is leader’s non-reinforcement behaviors for employees’ poor performance (Hinkin & Schriesheim, 2004).



In summary, past studies (e.g., Hinkin & Schriesheim, 1994; Hinkin & Schriesheim, 2004; Podsakoff et al., 1982; Podsakoff et al., 2010; Podsakoff & Todor, 1985; Sims & Szilagyi, 1975; Szilagyi, 1980) revealed that there were significant impact of leader reinforcement behaviors on various employee work outcomes. Collectively, it was found that contingent reward and punishment significantly related to employee outcomes, but the impact was stronger for the former than for the latter reinforcement behavior. On the other hand, non-reinforcement behavior (omission and extinction) had negative influence on employee outcomes. Consistent with these findings and above discussion, we offer the following hypotheses for empirical verifications.

*Hypothesis 1a:* Contingent reward (of good performance) and contingent punishment (of bad performance) behavior are positively related to each of the LMX currencies.

*Hypothesis 1b:* Omission (non-reinforcement to good performance), and extinction (non-reinforcement to poor performance) behavior are negatively related to each of the LMX currencies.

### **Boundary Condition of Reinforcement Behavior**

Culture is defined as an acquired knowledge that people use to interpret experience and generate social behavior in terms of shared socially constructed environments and commonly experienced events including the history, language, and religion of their members (Schein, 1992; Triandis, 1972). Stated precisely, it is “the collective mental programming of the people in an environment” (Hofstede, 1980, p. 16). Hofstede advocated cultural values to have a significant impact on leadership and organizational behavior. He was undoubtedly the earliest to identify four value dimensions that distinguished national cultures: power distance, uncertainty avoidance, individualism vs. collectivism, and masculinity vs. femininity. Subsequently, Bond (1988) introduced the fifth dimension--long-term vs. short-term orientation—to the list.

It should be noted that “when theories regarding culture are tested within one country, researchers must determine the extent to which within country variance exists on cultural dimensions and whether this variance is adequate for hypothesis testing” (Clugston, Howell, & Dorfman, 2000, p. 7). Researchers are advised to give due attention to intercultural encounters and not merely assume comparison across cultural groups is reflective of a group’s cultural values (Gelfand, Erez, & Aycan, 2007). For example, according to Hofstede (1980), the US is primarily an individualist country, but other cross-cultural researchers (e.g., Cross & Madson, 1997; Triandis, 1995) have noted a great deal of within-country variability along cultural dimensions in the US. To clarify the phenomenon of within-country variability at the individual level, Triandis (1995) has made the distinction between the *culture level* classification of collectivism and individualism, and the individual or *psychological level* classification. Given this perspective, it has been suggested that individualized measures of culture must be used when culture is an independent or moderator variable predicting any individually measured dependent variables (Bochner & Hesketh, 1994). More recent evidence (Taras, Kirkman, & Steel, 2010) also suggests that values predict outcomes with similar strength at the individual level of analysis as they do at the national level.

In line with the above arguments we expect that, within the Malaysian culture, individuals will vary considerably on measures of cultural dimensions. We chose a recent conceptualization of individualism and collectivism (Triandis, 1995; Triandis et al., 1988). Individualism refers to a tendency of people to look after themselves and their immediate family only. On the other hand, collectivism refers to a tendency of people to belong to groups or collectives and to look after each other in exchange for loyalty. Triandis and colleagues expanded the concept of individualism and collectivism by adding another dimension, called

vertical-horizontal dimension. Crossing the two dimensions, they came up with four culture or cultural orientations:

- (1) *Vertical Collectivism*: People emphasize the integrity of the in-group, are willing to sacrifice their personal goals for the sake of in-group goals, and support competitions of their in-groups with out-groups. If in-group authorities want them to act in ways that benefit the in-group but are extremely distasteful to them, they submit to the will of these authorities.
- (2) *Vertical Individualism*: People often want to become distinguished and acquire status, and they do this in individual competitions with others.
- (3) *Horizontal Collectivism*: People see themselves as being similar to others (e.g., one person, one vote) and emphasize common goals with others, interdependence, and sociability, but they do not submit easily to authority.
- (4) *Horizontal Individualism*: People want to be unique and distinct from groups but they are not especially interested in becoming distinguished or in having high status.

Though national culture can influence the effectiveness of leadership (Hofstede, 1980; Shamir & Howell, 1999), culture at the individual level (i.e., individual cultural orientation) can and do influence leadership effectiveness in meaningful ways. For example, Jung and Avolio (1999) provided experimental evidence that transactional leadership had stronger positive influence on subordinate performance with individualist orientation than with collectivist orientation, whereas transformational leadership had stronger positive influence on subordinate performance with collectivist orientation than with individualist orientation. In line with this study and recent conceptualization of individualism-collectivism, we state the following hypotheses:

*Hypothesis 2a:* Contingent reward and punishment has stronger positive influence on LMX for horizontal individualist subordinates than for vertical collectivist subordinates.

*Hypothesis 2b:* Non-reinforcement behavior (omission and extinction) has stronger positive influence on LMX for vertical collectivist subordinates than for horizontal individualist subordinates.

## **Method**

### **Research Site, Participants, and Procedure**

We included in our sample both manufacturing (65%) and service (35%) organizations located in Malaysia. The manufacturing organizations consisted of mainly electronics and computer organizations. On the other hand, service sectors included organizations such as financial sector, transportation, insurance, and internet services. The selection of diverse organizations was a deliberate attempt to make the survey findings generalizable in significantly different settings.

We distributed our survey questionnaires to 1500 full-time employees and their immediate supervisors. In the process of distributing the questionnaires, managers (supervisors) were asked to prepare a code list with the corresponding name(s) of employee(s), and the subordinates' questionnaires were numbered based on the code list before the questionnaires were distributed to the subordinates. The survey was coded so that the supervisor and subordinate responses were matched for statistical analysis. In order to protect the confidentiality of the respondents, completed questionnaires were returned directly to the researchers in sealed envelopes. We received usable questionnaires from 820 subordinates and their 291 immediate supervisors (a response rate of 54.6%). The demographic profile of the respondents is as follows:

Subordinates were mostly in the age range of 25 to 45 years ( $M = 30.51$ ;  $SD = 6.65$ ). There were 416 female participants (about 51%). In terms of ethnicity, 378 participants were Chinese (46.1%), followed by 322 Malay (39.4%), and 117 Indian and others (14.3%). Over half of them were diploma and high school graduates (58.9%), and the remaining were degree holders. The average tenure with the current organization was 5.25 years ( $SD = 5.00$ ) and the average tenure with the current immediate supervisor (i.e., LMX tenure) was 2.96 years ( $SD = 2.60$ ). With 17.6% representing the middle level of management, majority were in clerical (15.7%) or lower (51.1%) management positions.

On the other hand, supervisors were mostly in the age range of 25 to 50 years ( $M = 37.78$ ;  $SD = 6.76$ ). Over half of them were male (66.2%). Their racial composition was as follows: Malay = 28.2%; Chinese = 58.2%; Indian and others = 13.6%. Over 75% of the supervisors were degree holders (bachelor's and above). Their average tenure with the present organization was 7.75 years ( $SD = 5.16$ ). About 70% of them held middle and top echelons of management.

In conclusion, supervisors were significantly older ( $p < .01$ ) and better educated ( $p < .01$ ) than their subordinates. As expected, their organizational tenure was significantly longer ( $p < .01$ ) than their subordinates. However, the supervisors and subordinates were not significantly ( $p > .05$ ) different in terms of gender and ethnicity.

## Measures

Data were obtained from two sources. The subordinate survey included, in addition to demographic items, leader reinforcement behavior and cultural orientation (INDCOL) scales. The supervisor survey consisted of demographic and LMX scale items. Collecting two sources of data was a deliberate attempt to minimize any common method bias (Podsakoff et al., 2003, Podsakoff, MacKenzie, & Podsakoff, 2012). Except for personal-demographics, all other scale

items were rated on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). The item scores in each scale were summed up and then averaged to arrive at an overall score for the scale.

Higher scores represented higher levels of each of the constructs.

**Leader reinforcement/non-reinforcement behaviors.** We used 16 single-statement items to assess the leader reinforcement/non-reinforcement behavior (Hinkin & Schriesheim, 2004) reported by the subordinates. The scale consisted of four dimensions, each measured with four items: contingent reward (of good performance, CR), contingent punishment (of bad performance, CP), omission (non-reinforcement to good performance, OG), and extinction (non-reinforcement of poor performance, OP). Sample items are: “Gives special recognition when performance is especially good” (CR); “Shows displeasure when work is below acceptable levels” (CP); “Good performance often goes unacknowledged” (OG); “Poor performance often goes unacknowledged” (OP). Subordinates indicated their degree of agreement or disagreement with each statement.

**Cultural orientation.** A short version (Triandis & Gelfand, 1998) of the individualism and collectivism (INDCOL, Singelis, Triandis, Bhawuk, & Gelfand, 1995) measure was used to assess the employees’ cultural orientation. The INDCOL measure has been found to be robust with regards to the interpretability of correlations (Robert, Lee, & Chan, 2006). We used 11 items to measure vertical individualism (2 items), vertical collectivism (3 items), horizontal individualism (3 items), and horizontal collectivism (3 items). Items with highest factor loadings were drawn from the Triandis and Gelfand (1998) study, keeping in view their suitability in this study. Employees indicated their degree of agreement or disagreement with each statement. Sample items are: “It is important that I do my job better than others” (Vertical Individualism, VI); “It is my duty to take care of my family, even when I have to sacrifice what I want” (Vertical

Collectivism, VC); “I rely on myself most of the time; I rarely rely on others” (Horizontal Individualism, HI); “The well-being of my co-workers is important to me” (Horizontal Collectivism, HC).

**Leader-member exchange (LMX).** We employed a 12-item scale (LMX-MDM, Liden & Maslyn, 1998) to assess the quality of exchange between participating managers and their immediate supervisors. The scale was originally developed to assess four exchange dimensions (contribution, loyalty, affect, and professional respect), with three items for each dimension. Supervisors were asked to indicate their degree of agreement or disagreement with each statement. Sample items are: “This employee is willing to apply extra efforts beyond those normally required, to meet my work goals” (Contribution); “I am impressed with this employee's knowledge of his/her job” (Professional Respect); “I like this employee very much as a person” (Affect); “This employee would defend me to others in the organization if I make an honest mistake” (Loyalty). Though the four dimensions (often called “currencies”) have been found to fall under a second-order factor (Erdogan, Kraimer, & Liden, 2004; Liden & Maslyn, 1998) that makes the scale suitable to measure overall LMX as well, we treated them as multidimensional in this research.

**Demographic control variables.** Subordinates provided information about their age, gender, ethnicity, employment status, level of education, organizational level, organizational tenure, tenure with the current supervisor, and the type of industry described in the questionnaire. Supervisors also provided demographic data similar to those collected from the subordinates. Certain demographic variables such as subordinate gender, supervisor gender, and supervisor-subordinate dyadic tenure were statistically controlled for in all hierarchical multiple regression analyses because of their potential effects on the quality of the relationship between supervisors

and subordinates (Erdogan & Liden, 2002; Graen & Scandura, 1987; Liden & Maslyn, 1998; Seers, 1989; Stajkovic & Luthans, 1998). Doing so also ruled out any alternative explanations for the findings.

## Results

### Psychometric Properties of the Measures

Prior to testing the major moderation hypothesis, we performed a series of exploratory (EFA) and confirmatory factor analyses (CFA) to examine the psychometric properties (i.e., dimensionality, construct validity, and distinctiveness) of the measures employed in the study and to gather empirical evidence against common method variance (CMV).

**Evidence of construct validity and dimensionality.** We used three indices to assess the fit of the measurement models: the incremental fit index (IFI), comparative fit index (CFI) (Bentler, 1990), and root mean square error of approximation (RMSEA) (Browne & Cudeck, 1993). First, the four-factor LMX model (reported by supervisors) was compared to the one-factor LMX model. The analysis showed the four-factor model to have the better fit ( $\chi^2 = 252.42$ ,  $df = 48$ ,  $p < .01$ ;  $IFI = .96$ ;  $CFI = .96$ ;  $RMSEA = .07$ ) than the one-factor model ( $\chi^2 = 1901.32$ ,  $df = 104$ ,  $p < .01$ ;  $IFI = .80$ ;  $CFI = .80$ ;  $RMSEA = .15$ ).

Second, we compared the four-factor INDCOL model (reported by subordinates) to the one-factor model. The analysis showed the four-factor model to have the better fit ( $\chi^2 = 107.73$ ,  $df = 38$ ,  $p < .01$ ;  $IFI = .97$ ;  $CFI = .97$ ;  $RMSEA = .05$ ) than the one-factor model ( $\chi^2 = 647.27$ ,  $df = 44$ ,  $p < .01$ ;  $IFI = .07$ ;  $CFI = .70$ ;  $RMSEA = .13$ ). Third, we compared the four-factor leader reinforcement behavior model (reported by subordinates) to the one-factor model. The analysis again showed the four-factor model to have the better fit ( $\chi^2 = 541.83$ ,  $df = 98$ ,  $p < .01$ ;  $IFI = .90$ ;



$CFI = .90$ ;  $RMSEA = .07$ ) than the one-factor model ( $\chi^2 = 2208.51$ ,  $df = 104$ ,  $p < .01$ ;  $IFI = .54$ ;  $CFI = .54$ ;  $RMSEA = .16$ ).

**Empirical evidence against CMV.** Since subordinates rated both INDCOL and leader reinforcement behavior items at the same time, the possibility of CMV cannot be ruled out. In order to provide evidence against this bias, we performed two analyses. First, we conducted Harman's 1-factor test and examined the unrotated factor solution involving all 27 items rated by subordinates (11 INDCOL items and 16 Reinforcement Behavior items) in an exploratory factor analysis (EFA). The analysis constrained to 6 factors, explaining a total of 57.6% of the variance in the matrix. It was evident that no single factor accounted for the majority of the variance in the data. In other words, a single factor did not emerge from an unrotated principal components analysis, and the first factor accounted for just 17.6% of the variance in the matrix, suggesting that common method variance was not a serious issue in this data set (Podsakoff et al., 2003, Podsakoff et al., 2012).

Second, we conducted a CFA to provide additional statistical evidence against CMV. We included two items from each of the four reinforcement behavior and four INDCOL factors together in this analysis. The CFA analysis indicated that the subordinate-rated eight-factor model had much superior fit indices ( $\chi^2 = 234.74$ ,  $df = 76$ ,  $p < .01$ ;  $IFI = .94$ ;  $CFI = .94$ ;  $RMSEA = .05$ ) to the one-factor model ( $\chi^2 = 1566.26$ ,  $df = 104$ ,  $p < .01$ ;  $IFI = .46$ ;  $CFI = .46$ ;  $RMSEA = .13$ ).

### **Descriptive Statistics**

Means, standard deviations, intercorrelations, and coefficients alpha are presented in Table 1. As can be seen, three of the INDCOL scale reliabilities were marginal (between .64 and .66), yet consistent with published findings (e.g., Probst, Carnevale, & Triandis, 1999; Robert et

al., 2006; Singelis et al., 1995), and the rest were in the .70s and .80s, exceeding the recommended level (Hair, Black, Babin, & Anderson, 2010). It can also be seen in Table 1 that the constructs were as correlated as one would expect on theoretical grounds.

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Table 1 goes about here

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In conclusion, results of the CFA, Harman's 1-factor test, reliability analysis, and measurement model analysis indicate that the measures have sound psychometric properties in terms of reliability and construct validity and that there is no serious threat of common method bias in this research.

### **Test of Hypotheses**

We performed a four-step hierarchical regression analysis to test our direct and moderation hypotheses for each LMX dimension. For each interaction pair, scores on reinforcement behavior and INDCOL were first converted to *z* scores and then a product term was formed. If the moderator hypothesis was to be confirmed, the beta weight of the product term (i.e., interaction) had to be significant. Following significant interactions, simple slopes analysis was conducted to show any interaction effects (Aiken & West, 1991). The hierarchical regression analysis results are summarized in Table 2. As can be seen, Hypothesis 1a received substantial support in that leader reinforcement behavior (reported by subordinates) significantly predicted each of the LMX currencies (reported by supervisors). Controlling for leader gender, subordinate gender, and LMX tenure, reinforcement behavior explained additional variance of 10 to 14% of the variance in LMX. Specifically, contingent reward (CR) significantly predicted each of the LMX currencies. Contrary to our expectation, contingent

punishment (CP) significantly and positively predicted loyalty dimension of LMX. As expected, nonresponse to good (OG) or bad performance (OP) was not significantly associated with any LMX currencies (Hypothesis 1b).

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Table 2 goes about here

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Of interest was the role of individual level cultural orientation (INDCOL) as moderator in predicting LMX. Interestingly, Hypotheses 2a and 2b too received substantial support, explaining additional variances of 3%, 2%, 4%, and 3%, respectively, in LMX-contribution, LMX-affect, LMX-loyalty, and LMX-professional respect (see Table 2 for regression analysis results and Figures 1 through 4 for significant interactions).

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Figures 1 thru 4 go about here

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**LMX-contribution.** Employees having high and low VI cultural orientation had higher LMX-contribution with high OG and low OG leaders, respectively (Figure 1a). On the other hand, employees having low and high HC cultural orientation differed significantly in terms of LMX-contribution for high OP leaders. But the difference was not significant for low OP leaders (Figure 1b).

**LMX-affect.** The pattern of leader OG behavior by VI cultural orientation interaction on LMX-affect (Figure 2a) was identical to the first interaction for LMX-contribution (Figure 1a). Interestingly, the converse was true for LMX-affect as regards OP leader behavior by VI cultural orientation interaction is concerned (2b). In other words, employees having low and high VI

orientation had the greatest LMX with high and low OP leader behaviors, respectively. The third significant interaction for LMX-affect indicated that CR leader behavior predicted highest LMX for low VI oriented employees (Figure 2c). Finally, high CP behavior led to the higher LMX-affect for low HC-oriented employees than for high HC-oriented employees (Figure 2d). But, low and high VC orientation did not differ significantly in terms of LMX-affect for low CP behavior.

**LMX-loyalty.** Only in one case was there a significant reinforcement behavior by cultural orientation interaction on LMX-loyalty: High CR leader behavior led to greater LMX-loyalty for high VI-oriented employees than for low VI employees (Figure 3).

**LMX-professional respect.** It is interesting to note that reinforcement behavior by cultural orientation interaction predicted LMX-professional respect more than any other LMX currencies. For example, the first interaction (Figure 4a) indicated that for high VI employees there was a positive relationship between OG and LMX-respect; the converse was true for low VI. For OP, just opposite trend was observed (Figure 4b).

### Discussion

The purpose of this study was to investigate the moderating role of cultural orientation (expanded version of individualism-collectivism) in the leader reinforcement behavior-LMX relationship. Given this purpose, we tested two sets of hypothesized relationships. Our major findings are summarized below.

### Major Findings

The analysis indicated that leader reinforcement behavior had significant influence (10 to 14% of the variance) on LMX. Specifically, contingent reward had significant influence on all currencies of LMX (contribution, affect, loyalty, and professional competence). In contrast,

contingent punishment had significant positive influence on only loyalty dimension of LMX. An unexpected finding was that non-reinforcement behavior (omission and extinction) was unrelated to any currencies of LMX. These findings relating to contingent reward and punishment is consistent with those by Hinkin and Schriesheim (2004). But non-reinforcement behavior results are not aligned with previous research. One plausible explanation is that performance was the criterion variable in the Hinkin and Schriesheim study, whereas the criterion measure was LMX in our study. It is likely that non-reinforcement behavior of good or bad performance does not relate to high or low quality LMX.

Next, as hypothesized, cultural orientation of the subordinates did make a significant amount of variance in the leader reinforcement behavior-LMX relationship. Some of the interesting interaction findings are reported below.

Low non-reinforcement behavior (non-reinforcement to good performance) made subordinates with low vertical individualism to report high LMX-C and LMX-A. The lowest LMX-C and LMX-A were reported by those subordinates with high vertical individualism orientation for high non-reinforcement behavior. Interestingly, subordinates with horizontal collectivism reported high LMX-C for high non-reinforcement behavior (non-reinforcement to punishment). High contingent reward behavior generated highest LMX-L for high vertical individualist subordinates, whereas the lowest LMX-L was reported by the same group of subordinates for low contingent reward behavior. There was just one significant interaction for LMX-Loyalty. High contingent reward generated the highest LMX-L for subordinates with high vertical individualism than with those low on this orientation. It should be noted that the number of significant interactions was the highest for LMX-R.

### **Implications**

The study has some obvious implications. First and foremost, the study favors a large contingency model of leadership, treating cultural orientation of the subordinates as a contingency (or moderator) factor. The leader should use reinforcement behavior depending upon the cultural orientation of the subordinates. Since LMX is conceptualized at the dyadic level, leaders need to understand the individual subordinate orientation. Given that LMX has been reported to be positively related to most positive indicators of leadership effectiveness (Barling et al., 2011), it should serve as a mechanism between leader reinforcement behavior and behavioral and attitudinal outcomes.

### **Limitations and Directions for Future Research**

Despite substantive theoretical and practical contributions, our study has some potential limitations. First, we considered just one cultural dimension: individualism-collectivism. Future research should also focus on other individualized cultural dimensions such as power distance, paternalism, and masculinity-femininity as potential moderators of the reinforcement behavior-LMX relationship. Second, as our data were limited to the Malaysian context, it is recommended that future researchers compare data from other different cultures. A comparative study would help shed some light on cultural differences (within and between variances) and its influence on the model of this study. Third, we treated LMX as an outcome variable, given that it has positive influence on various indicators of behavioral and attitudinal outcomes (Barling et al., 2011). It is suggested that, in future studies, LMX be treated as a mechanism of reinforcement behavior-work outcomes relationship (Wang et al., 2005).

### **Conclusion**

The present study has demonstrated the effect of reinforcement behavior on the quality of exchange relationship between leader and members. The analysis indicated that contingent

reward has the strongest positive influence on all LMX currencies, contingent punishment has a weak positive relationship with LMX, and non-reinforcement behavior is completely unrelated to currencies of LMX. Interestingly, the role of individualized cultural orientations in explaining leader reinforcement behavior and LMX is clearly evident. While knitting the thread, the study calls for future research to treat LMX as a mechanism in the reinforcement behavior-work outcomes relationships.

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Table 1

*Intercorrelations of Study Variables*

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
Reinforcement: OG (1)	3.48	1.29	.82											
Reinforcement: OP (2)	3.17	1.37	.56**	.80										
Reinforcement: CR (3)	4.90	1.00	-.28**	-.01	.79									
Reinforcement: CP (4)	4.85	0.94	.09*	-.09*	.39**	.64								
VI (5)	4.87	1.11	.19**	.09**	.26**	.27**	.64							
HI (6)	4.60	1.05	.25**	.22**	.13**	.24**	.27**	.66						
VC (7)	5.53	0.91	.03	-.04	.20**	.25**	.36**	.23**	.74					
HC (8)	5.17	0.84	.00	.02	.33**	.35**	.40**	.16**	.48**	.73				
LMXL-C (9)	5.25	0.97	-.13**	-.03	.30**	.11**	.11**	.11**	.09**	.23**	.81			
LMXL-A (10)	5.17	1.00	-.10**	.01	.34**	.12**	.10*	.10*	.08*	.17**	.70**	.85		
LMXL-L (11)	4.83	0.99	.01	.05	.33**	.23**	.27**	.19**	.19**	.25**	.58**	.58**	.82	
LMXL-R (12)	5.11	1.04	-.12**	.01	.34**	.11**	.10**	.16**	.12**	.21**	.71**	.75**	.55**	.88

*Note.*  $N = 820$ . Diagonal entries indicate coefficients alpha; Decimal points are omitted from correlation matrix and coefficients alpha; VI = Vertical individualism; VC = Vertical collectivism; HI = Horizontal individualism; HC = Horizontal collectivism; CR = Contingent reward; CP = Contingent punishment; OG = Nonresponse to good performance; OP = Nonresponse to poor performance; LMX = Leader-member exchange; LMX-C = LMX-contribution; LMX-A = LMX-affect; LMX-L = LMX-loyalty; LMX-P = LMX-professional respect.

\* $p < .05$ ; \*\* $p < .01$ .



Table 2

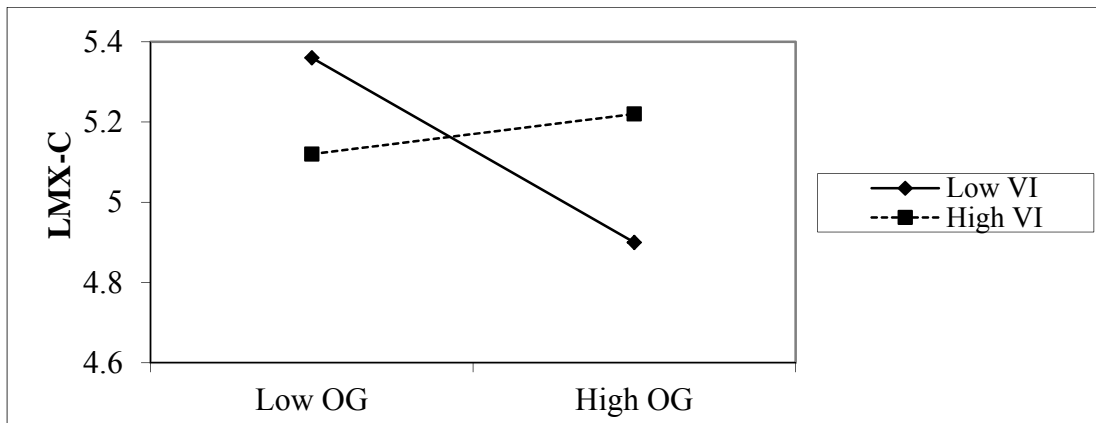
Summary of Moderated Multiple Regression Analysis Results

<i>LMX-C</i>		<i>LMX-A</i>		<i>LMX-L</i>		<i>LMX-P</i>	
<i>Variable Entered</i>	$\beta$	<i>Variable Entered</i>	$\beta$	<i>Variable Entered</i>	$\beta$	<i>Variable Entered</i>	$\beta$
<i>Step 1</i> ( $R^2=.00$ )		<i>Step 1</i> ( $R^2=.01^*$ )		<i>Step 1</i> ( $R^2=.01^{**}$ )		<i>Step 1</i> ( $R^2=.02^{**}$ )	
Member Gender	-.03	Member Gender	-.06	Member Gender	-.05	Member Gender	-.11**
Leader Gender	-.01	Leader Gender	-.05	Leader Gender	-.04	Leader Gender	-.07
LMX Tenure	-.02	LMX Tenure	-.07	LMX Tenure	.09**	LMX Tenure	-.01
<i>Step 2</i> ( $R^2 =.10^{**}$ )		<i>Step 2</i> ( $R^2 = .12^{**}$ )		<i>Step 2</i> ( $R^2 = .14^{**}$ )		<i>Step 2</i> ( $R^2 =.13^{**}$ )	
OG	-.05	OG	.01	OG	.08	OG	-.03
OP	.00	OP	.00	OP	.02	OP	.02
CR	.30**	CR	.36**	CR	.31**	CR	.34**
CP	.00	CP	-.02	CP	.10**	CP	-.03
<i>Step 3</i> ( $R^2=.13^{**}$ )		<i>Step 3</i> ( $R^2=.13$ )		<i>Step 3</i> ( $R^2=.17^{**}$ )		<i>Step 3</i> ( $R^2=.16^{**}$ )	
VI	.05	VI	.00	VI	.05	VI	.02
VC	-.04	VC	-.03	VC	.10**	VC	.00
HI	.05	HI	.05	HI	.07	HI	.10**
HC	.16**	HC	.09*	HC	.08*	HC	.11**

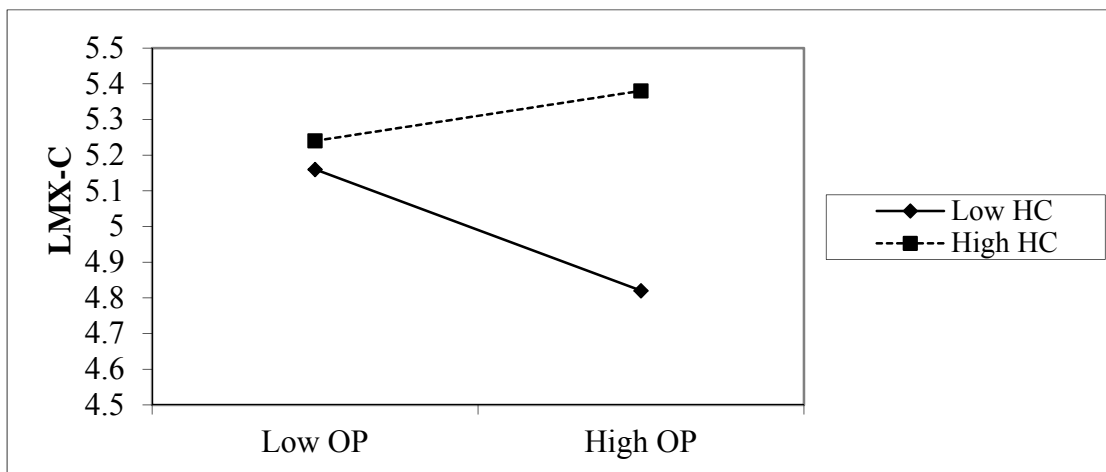
<i>Step 4</i> ( $R^2 = .16^*$ )	<i>Step 4</i> ( $R^2 = .15^{**}$ )	<i>Step 4</i> ( $R^2 = .20^{**}$ )	<i>Step 4</i> ( $R^2 = .20^{**}$ )
OG x VI .14*	OG x VI .16*	OG x VI .10	OG x VI .19**
OP x VI -.13	OP x VI .15*	OP x VI -.06	OP x VI -.18**
CR x VI .05	CR x VI .14**	CR x VI .18**	CR x VI .12*
CP x VI -.05	CP x VI -.05	CP x VI -.05	CP x VI -.12*
OG x VC -.02	OG x VC -.01	OG x VC .06	OG x VC -.05
OP x VC .00	OP x VC .03	OP x VC -.06	OP x VC .05
CR x VC .05	CR x VC .02	CR x VC .08	CR x VC -.01
CP x VC -.00	CP x VC .04	CP x VC -.07	CP x VC .10*
OG x HI -.04	OG x HI .05	OG x HI -.04	OG x HI .05
OP x HI .02	OP x HI .03	OP x HI .07	OP x HI -.02
CR x HI -.01	CR x HI .06	CR x HI .01	CR x HI .05
CP x HI .04	CP x HI -.01	CP x HI .05	CP x HI -.03
OG x HC .04	OG x HC -.10	OG x HC -.09	OG x HC -.02
OP x HC .12*	OP x HC .06	OP x HC .02	OP x HC .09
CR x HC .01	CR x HC -.07	CR x HC -.05	CR x HC -.00
CP x HC .04	CP x HC .12**	CP x HC .07	CP x HC .05

*Note.*  $N = 820$ . VI = Vertical individualism; VC = Vertical collectivism; HI = Horizontal individualism; HC = Horizontal collectivism; CR = Contingent reward; CP = Contingent punishment; OG = Nonresponse to good performance; OP = Nonresponse to poor performance; LMX = Leader-member exchange; LMX-C = LMX-contribution; LMX-A = LMX-affect; LMX-L = LMX-loyalty; LMX-P = LMX-professional respect.

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

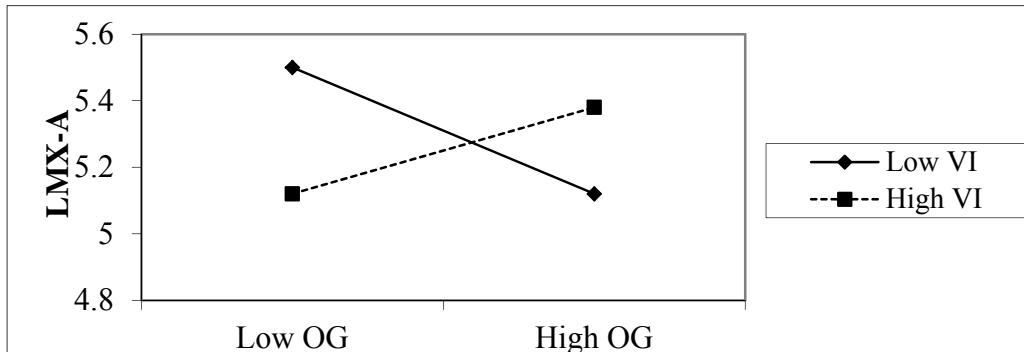


(Figure 1a)

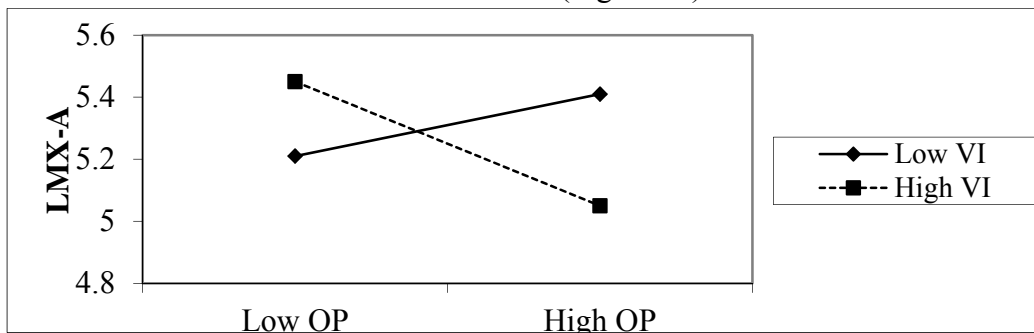


(Figure 1b)

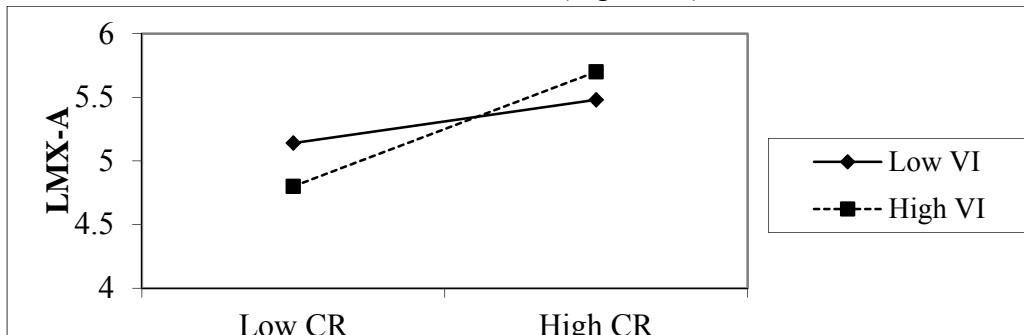
Figure 1. Reinforcement behavior x cultural orientations on LMX-contribution.



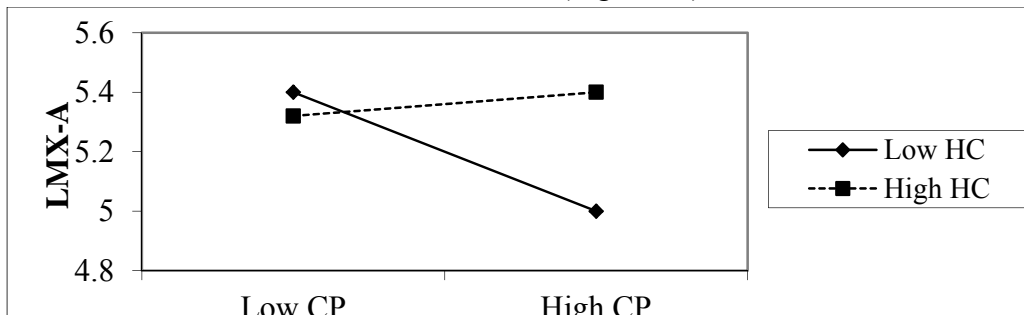
(Figure 2a)



(Figure 2b)



(Figure 2c)



(Figure 2d)

Figure 2. Reinforcement behavior x cultural orientations on LMX-affect.

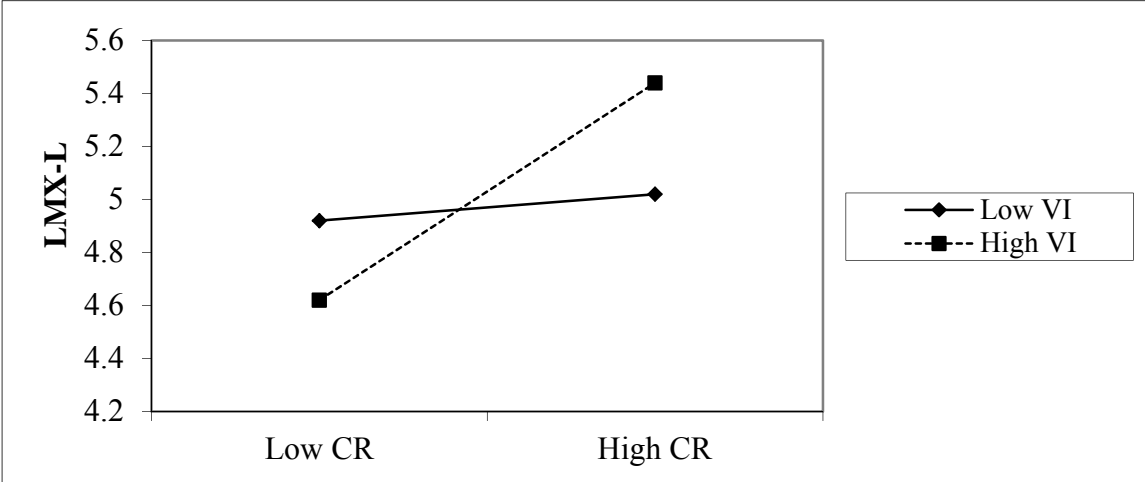
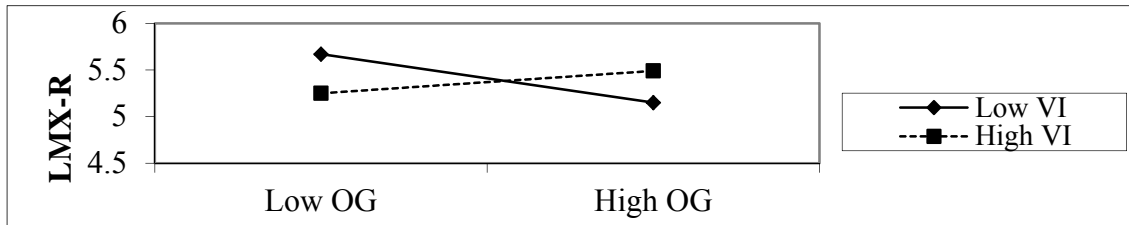
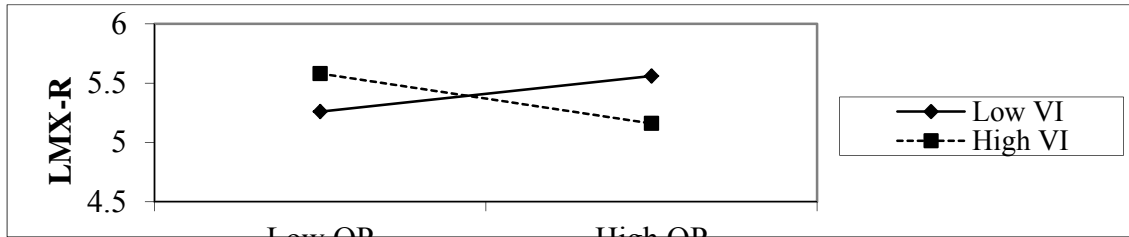


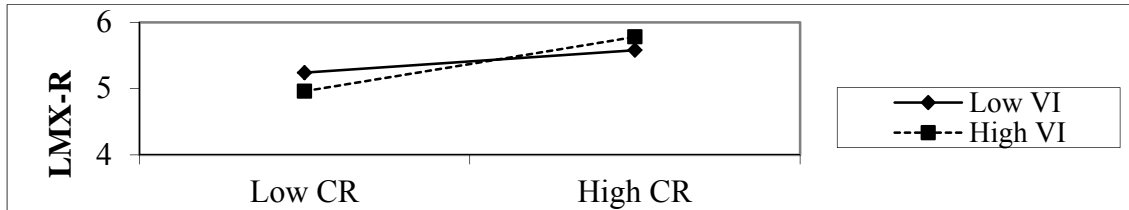
Figure 3. Reinforcement behavior x cultural orientations on LMX-loyalty.



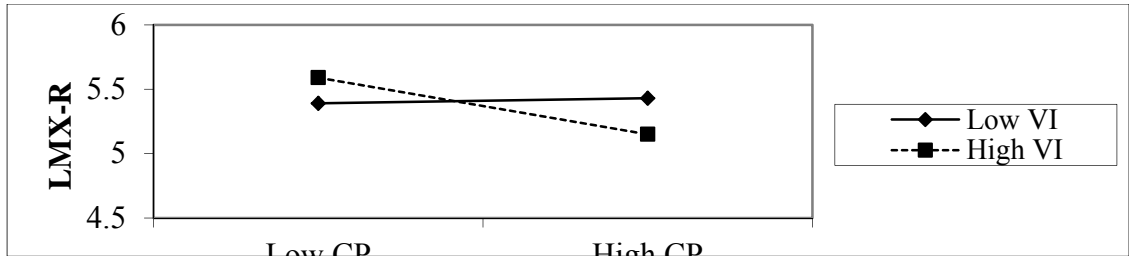
(Figure 4a)



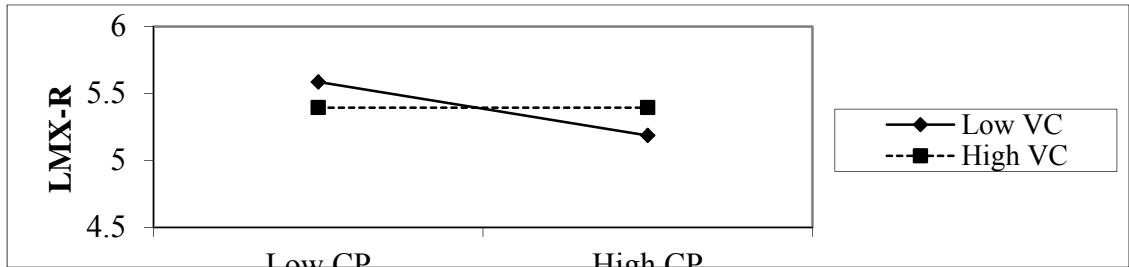
(Figure 4b)



(Figure 4c)



(Figure 4d)



(Figure 4e)

Figure 4. Reinforcement behavior x cultural orientations on LMX-professional respect.