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**Abstract**

This exploratory study investigated the link between economic and social leader-member exchange relationships and follower work performance and organizational citizenship behavior. Instead of viewing exchange relationships between leaders and subordinates on a continuum from low to high quality, we conceptualize social and economic exchange relationships as relationships with different qualities, rather than different levels of quality. Data from 552 followers and 78 leaders supported our two-dimensional model of leader-member exchange relationships. Furthermore, an economic leader-member exchange relationship was negatively related to both work performance and organizational citizenship behavior. As expected, positive relationships were obtained for a social leader-member exchange relationship and work performance and organizational citizenship behavior. Implications for practice and future research are discussed.

According to leader-member exchange (LMX) theory, leaders develop unique exchange relationships of varying quality with individual followers. These exchange relationships are assumed to fall on a continuum from low-quality transactional-based relationships involving little more than what is stipulated in the employment contract, to more encompassing high-quality relationships involving the exchange of resources and support based on trust, mutual liking, and respect (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Liden & Graen, 1980). Qualities such as economic, transactional, contractual, out-group, quid pro quo and instrumental have been used to denote low-quality relationships where both the leader and follower expect direct reciprocity characterized by short-term economic exchange of behaviors. In contrast, social, relational, and in-group are qualities associated with high-quality relationships where long-term generalized reciprocity is the norm (Goodwin, Bowler, & Whittington, 2009; Sparrowe & Liden, 1997). Even though much LMX research relies on social exchange theory (Blau, 1964; Walumbwa, Cropanzano, & Goldman, 2011), it has still not taken into account that social and economic exchanges are exchanges with different qualities, despite several calls for research that explicitly incorporates both transactional and transformational processes (Gerstner & Day, 1997; Graen & Uhl-Bien, 1995; Scandura & Schriesheim, 1994). According to Sparrow and Liden (1997, p.: 524), one particular challenge with respect to applying social exchange theory to LMX research is that "...the dimensions of actual exchange behavior that differentiate economic from social exchange have not been specified in a way that facilitates empirical verification."

In the current exploratory study, we offer an alternative to the dominating view of exchange relationships between leaders and subordinates on a continuum from low to high quality. Based on social exchange theory (Blau, 1964), prior research that uses social exchange theory to explain the relationship between LMX and effective work behaviors (e.g. Wayne, Shore, & Liden, 1997), and research on exchange relationships between employees

and their organizations (e.g. Shore, Tetrick, Lynch, & Barksdale, 2006), we propose that leader-member exchange relationships may be represented by both social leader-member exchange (SLMX) and economic leader-member exchange (ELMX) relationships. Accordingly, we consider SLMX and ELMX as relationships with different qualities rather than different levels of quality. Existing LMX research has exclusively measured social exchange relationships (Bernerth, et al., 2007), where a lack of social rather than a transactional or economic LMX relationship is in fact investigated. Therefore, the single continuum approach may be insufficient in assessing subordinates' psychological sense-making of both the social and the economic aspects of the leader-member exchange relationship. By considering SLMX and ELMX as two distinct constructs rather than two ends of one continuum, we do not conceptualize transactional relational experiences merely as a deviation from social relational experiences, but as a phenomenon that contributes to the totality of the dyadic leader-member relationship. Goodwin et al. (2009) recently justified such a position by proposing that the economic or instrumental behaviors that are associated with a low-quality relationship can exist over time and remain as the relationship develops into a higher quality relationship.

An SLMX relationship aligns well with traditional conceptualizations and measures used in LMX research (Walumbwa, et al., 2011). Therefore, and based on meta-analytical findings, SLMX should be positively related to work and contextual performance (Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007). An ELMX relationship, however, differs from a low SLMX relationship and represents a different type of relationship. Accordingly, empirical research is needed to learn more about the association between ELMX relationships and employee outcomes. Some scholars argue that both social and economic exchanges are effective in motivating productive behavior (e.g. Judge & Piccolo, 2004; Rhoades & Eisenberger, 2002). Others have observed that negotiated exchanges, that is exchanges that

tend to be more explicit and quid pro quo, produce less effective work relationships than reciprocal exchanges (for a review, see Cropanzano & Mitchell, 2005). Therefore, as applied to leader-member exchange relationships, the effectiveness of ELMX has yet to be empirically examined. Accordingly, the intended contribution of the current study is to address this gap in the literature by directly investigating the transactional exchange dimension of dyadic leader-member exchange relationships.

### **Theory and Hypotheses**

One of two dominating theories used to explain the relationship between LMX and effective work behaviors is social exchange theory (Masterson, Lewis, Goldman, & Taylor, 2000; Walumbwa, et al., 2011; Wayne, et al., 1997; Wilson, Sin, & Conlon, 2010). Social exchange theory posits that LMX exerts its benefits by creating social exchange relationships between leaders and subordinates. Social exchange theory, with its emphasis on reciprocation or the felt obligation to reciprocate, can to a large extent explain why workers are motivated to exert effort on behalf of their organizations or their supervisors (Walumbwa, et al., 2011). However, until Shore et al. (2006) made a significant empirical contribution to social exchange theory by developing measures of employees' social and economic exchange relationships with their organizations, most scholars had exclusively investigated the degree to which social, as opposed to economic, exchange relationships are related to employee outcomes. Relying on Shore et al.'s (2006) conceptualization, as well as other scholars applying social exchange theory to LMX relationships (Coyle-Shapiro & Conway, 2004; Masterson, et al., 2000; Wayne, et al., 1997; Wilson, et al., 2010), we suggest that LMX relationships can be characterized as both social and economic.

Social LMX relationships, on the one hand, are characterized by a long-term orientation, where the exchanges between leaders and followers are ongoing and based on feelings of

diffuse obligation, and less in need of an immediate “pay off” (Blau, 1964; Cropanzano & Mitchell, 2005; Cropanzano, Rupp, Mohler, & Schminke, 2001; Shore, et al., 2006; Walumbwa, et al., 2011). The emphasis is on socio-emotional aspects of exchanges, such as give and take and being taken care of, and the exchange partners trust that the other partner will reciprocate. SLMX is thus corresponding to the traditional notion of LMX (Walumbwa, et al., 2011).

ELMX relationships, on the other hand, have more marketplace, transactional, and contractual character, and do not imply long-term or open-ended and diffuse obligations. Rather, the exchanges rest upon downward influence, formal status differences and discrete agreements and they demand repayment within a particular time period, involve economic or quasi-economic goods, and are motivated by immediate self-interest (Blau, 1964; Shore, et al., 2006; Walumbwa, et al., 2011). In such relationships, emphasis is on the balance between what one gets from the relationship and what one gives. That is, an employee can go beyond the call of duty, but not unless he or she knows exactly what to get in relatively immediate return.

### **ELMX Relationships, Work Performance and Organizational Citizenship Behavior**

Existing theoretical and empirical evidence to guide the development of hypotheses relating ELMX relationships to work and contextual performance suggests both positive and negative effects. On the performance enhancing side, ELMX relationships have a clear transactional character that share similarities with the definitions of the two subdimensions “contingent reward” and “active management by exception” used in research on transformational and transactional leadership. And, meta-analytical findings suggest that these transactional subscales of the multifactor leadership questionnaire (MLQ) are significant predictors of several leadership criteria (Judge & Piccolo, 2004). Furthermore,

social exchange theory acknowledges that both social and economic exchanges are assumed to motivate productive behavior. According to Rhoades and Eisenberger (2002: 698), “Social exchange theorists have alluded to employment as the trade of effort and loyalty for tangible benefits and social rewards.” Their meta-analysis (Rhoades & Eisenberger, 2002) also shows that both tangible and social organizational inducements are positively related to perceived organizational support, which in turn is positively related to both work performance and organizational citizenship behavior.

Shore et al. (2006, p. 846), when investigating perceptions of exchange relationships with the organization, did not hypothesize a relationship between economic exchange perception and work performance because it was expected to “... encourage behavior that meets, rather than exceeds, organizational expectations for employee job performance.” Similarly, Organ (1990) argued that the contractual nature of economic exchange should make it unrelated to the incremental contribution of organizational citizenship behavior (OCB). But, to the extent that work and contextual performance that exceeds expectations is tangibly rewarded, this line of reasoning should imply a positive relationship between ELMX and performance. In a related vein, meta-analytical findings from the pay-for-performance literature suggest that the instrumental performance–outcome relationship successfully influences performance quantity (Jenkins, Gupta, Mitra, & Shaw, 1998) and strongly increases performance for non-interesting tasks (Weibel, Rost, & Osterloh, 2010).

These theories and empirical findings suggest that there should either be a positive relationship between ELMX and both work performance and OCB or no relationship. We however, question this view for several reasons. First, the meta-analytical findings with respect to organizational support theory (Rhoades & Eisenberger, 2002) may represent rather weak evidence for predicting the outcomes of ELMX as the measure of perceived organizational support is one-dimensional and focuses heavily on the social reward side, not



on tangible rewards or specific obligations that would be more relevant for ELMX. The same may be true for the empirical support for a relationship between transactional leadership and different leadership criteria. First, the MLQ measures of transactional leadership are far from being purely transactional (Hinkin & Schriesheim, 2008). Second, the contingent reward subscale is obfuscated by the inclusion of both tangible material rewards as well as psychological rewards (Walumbwa, Wu, & Orwa, 2008). Third, it seems to represent two separate factors; one of which loads with transactional subscales, and one of which loads with transformational subscales (Goodwin, Wofford, & Whittington, 2001). Accordingly, these scales represent both the social and the economic sides of exchange relationships, which make them less informative in predicting consequences of ELMX.

Theoretically, ELMX relationships, like economic exchange relationships with an organization, should encourage behavior that meets organizational expectations (Shore, et al., 2006). Nevertheless, empirical research on organizational exchange perceptions has observed negative relationships between economic exchange perception and both work performance and OCB (Kuvaas & Dysvik, 2009, 2010; Song, Tsui, & Law, 2009). If the mechanisms underlying economic exchange relationships with organizations apply to economic leader-member exchanges relationships, we should expect a negative relationship between ELMX and work performance and OCB. Song et al. (2009, p. 63), argued that employees with an economic exchange relationship with the organization "... worry about the equivalence of returns, calculate and negotiate with their employer for rewards, have no patience for or expectations of future returns, and finally resort to the pursuit of self-interest ...". If an economic exchange relationship with the leader instill the same type of attitudes and behaviors as an exchange relationships with the organization does, we may expect negative relationships between ELMX relationships and work performance and OCB. Finally, indirect evidence for a negative relationship between ELMX and work performance can also be

obtained from the organizational commitment literature, which rests heavily on social exchange theory. Continuance commitment, which in a meta-analysis by Meyer, Stanley, Herscovitch, and Topolnytsky (2002) was found to relate negatively to work performance, shares some similarity with ELMX as it derives from the perceived tangible costs associated with leaving the organization. In sum then, we hypothesize that the impersonal, contingent, transactional, and short-term nature of an ELMX relationship will negatively affect work performance and OCB:

**Hypothesis 1.** There will be a negative relationship between ELMX relationships and (a) work performance and (b) OCB.

### **SLMX Relationships, Work Performance and Organizational Citizenship Behavior**

Meta-analyses suggest that SLMX relationships should be positively related to both work performance (Gerstner & Day, 1997) and organizational citizenship behaviors (Ilies, et al., 2007). Whereas LMX research has been criticized for being theoretically underspecified, a recent study by Walumbwa et al. (2011) reveals that high-quality LMX supervisors enhance their subordinates' work performance and citizenship behaviors through increased commitment to their supervisors and higher levels of self-efficacy and means efficacy. These findings provide support for the social exchange perspective as commitment to supervisor is a manifest of reciprocal obligations, as well as to efficacy theory. Accordingly, we hypothesize:

**Hypothesis 2.** There will be a positive relationship between SLMX relationships and (a) work performance and (b) OCB.

## Method

### Participants and Procedure

A questionnaire was distributed to the employees and store managers of 106 gas stations located in Norway. The questionnaires were returned to the authors by post paid envelopes. All stations operate convenience stores and belong to the same chain. Of approximately 1200 distributed questionnaires, we received complete responses from 557 employees, corresponding to a response rate of approximately 46 per cent. 78 of the 106 store managers returned complete questionnaires, representing a response rate of 74 per cent. The final and matched sample consisted of 552 followers and 78 leaders. Of the followers, 316 were women (57.2 per cent) and 236 were men (42.8 per cent). With respect to their tenure, 172 (31.2 per cent) had less than a year, 204 (37 per cent) between one and two years, 118 (21.4 per cent) between three and five years, and 58 (10.5 per cent) more than five years.

### Measures

The items were scored on a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree). All items are shown in Appendices A and B.

**SLMX and ELMX.** We based our measures of SLMX and ELMX relationships on the 16-item scale developed by Shore et al. (2006) originally developed to measure perceptions of social and economic exchange relationships with organizations. For most items we simply replaced “my organization” with “my store manager”, for instance “I don’t mind working hard today – I know I will eventually be rewarded by my store manager.” Some of the items had to be more thoroughly refined as store managers (as many line and middle managers) have limited discretion with respect to pay and compensation issues. We therefore rewrote items that could be interpreted mainly as pay decisions to issues of formal authority. For instance, we rewrote the item “My relationship with my organization is strictly an economic one – I

work and they pay me” from the original scale, to “My relationship with my store manager is mainly based on authority, he or she has the right to make decisions on my behalf and I do what I am told to do.”

**Work Performance and OCB.** We measured work performance and OCB by having store managers fill out a 10-item scale to assess work effort and work quality (Dysvik & Kuvaas, 2011) and a 7-item OCB-scale (Van Dyne & LePine, 1998). The internal consistency (Cronbach's alphas) for these scales were .93, .86, and .95, respectively.

**Control variables.** Employees' gender and organizational tenure were included as control variables. Gender was measured as a dichotomous variable coded such that 1 was female and 2 male. Tenure was measured by four categories ranging from less than one year to more than five years. As the number of subordinates per supervisor could affect interaction frequency and therefore LMX (Antonakis & Atwater, 2002), we also controlled for team size.

## **Analyses**

The data were analyzed in several phases. First, we conducted a confirmatory factor analysis (CFA) to test whether the social and economic leader-member exchange items would conform to the *a priori* hypothesized structure of the data (Hurley, et al., 1997). More specifically, given that unobserved heterogeneity affects the variance in the LMX measures as well as their covariance (Bollen, 1989; Muthén, 1989), we estimated a MIMIC (Multiple Indicator Multiple Cause) model to control for sample heterogeneity (Muthén, 1989) when performing the CFA. Furthermore, given the non-independent observations in the dataset (the data are nested such that some followers report to the same leader) the MIMIC-CFA was performed using cluster robust standard errors at the leader level. Because “ordinal variables are not continuous and should not be treated as if they are” (Jöreskog, 2005, p. 10), we used the weighted least squares (WLSMV) estimator of the Mplus program (Muthén, du Toit, &

Spisic, in press), which can accommodate binary or ordered categorical data (e.g. Flora & Curran, 2004).

Second, House and Aditya (1997), in their critique of the LMX literature, indicated that LMX-theories may suffer from an endogeneity problem (Antonakis, Bendahan, Jacquart, & Lalive, 2010). That is, LMX relationships “may be influenced by a host of situational factors, follower attributes and behaviors, and leader behaviors” (House & Aditya, 1997, p. 432) which are not specified “as the appropriate leader behavior is dependent on anticipated subordinate response” (House & Aditya, 1997, p. 432). Given that ELMX and SLMX do not vary independently of such other potential causes, and accordingly, will correlate with the error term (i.e., omitted causes), the potential exists for an endogeneity threat in our data (Antonakis, et al., 2010). That is, any observed relationships between the LMX variables and the hypothesized outcomes may be spurious, due to unobserved common causes. For instance, it is possible that certain leader or follower characteristics causes both variation in LMX relationships and follower performance, thus only making it seem like LMX causes follower performance (i.e. the problem of endogeneity). Statistically, the issue is, as pointed out by Antonakis et al. (2010, p. 1089), that “In the process of satisfying the orthogonality assumption, the estimator (whether OLS or maximum likelihood) “adjusts” the slope,  $\beta_1$  of  $x$ , accordingly”, thus making the estimate inaccurate. Accordingly, the more ELMX and SLMX correlates with omitted causes (e.g. leader behaviors), the more inconsistent the estimate between ELMX and SLMX and the outcomes will be. Thus, corrective modeling procedures must be undertaken to ensure estimate consistency and reduce the endogeneity threat (Antonakis, et al., 2010). The first step to control for possible sources of variation in the dependent variables is to remove this variation from the disturbance term, as we do with the inclusion of the control variables subordinate gender, subordinate tenure and leader’s span of control (team size). However, in the present study we have panel data which are hierarchical

(followers nested within leaders). Thus, we need to explicitly model fixed effects at the leader level, which will capture unobserved heterogeneity common to the followers nested under a particular leader (Antonakis, et al., 2010). To capture the fixed effects of leaders we followed the procedures suggested by Antonakis et al. (2010) and Mundlak (1978) and included the cluster means of the LMX variables (at the leader level). Furthermore, because we have geographic-level variance (geographically dispersed gas stations) that could reflect cultural level differences (or other unobserved effects), we modeled the fixed effects of region too (by means of four dummy variables). Accordingly, we estimated the following equations in a structural equation model:

$$\text{ELMX} = \gamma_0 + \gamma_1\text{ClusterELMX} + \gamma_2\text{ClusterSLMX} + \gamma_3\text{Gender} + \gamma_4\text{Tenure} + \gamma_5\text{Teamsize} + \gamma_6\text{Location1} + \gamma_7\text{Location2} + \gamma_8\text{Location3} + \zeta_1 \quad (1)$$

$$\text{SLMX} = \delta_0 + \delta_1\text{ClusterELMX} + \delta_2\text{ClusterSLMX} + \delta_3\text{Gender} + \delta_4\text{Tenure} + \delta_5\text{Teamsize} + \delta_6\text{Location1} + \delta_7\text{Location2} + \delta_8\text{Location3} + \zeta_2 \quad (2)$$

$$\text{WP} = \alpha_0 + \alpha_1\text{ELMX} + \alpha_2\text{SLMX} + \alpha_3\text{Gender} + \alpha_4\text{Tenure} + \alpha_5\text{Teamsize} + \alpha_6\text{Location1} + \alpha_7\text{Location2} + \alpha_8\text{Location3} + \zeta_3 \quad (3)$$

$$\text{OCB} = \beta_0 + \beta_1\text{ELMX} + \beta_2\text{SLMX} + \beta_3\text{Gender} + \beta_4\text{Tenure} + \beta_5\text{Teamsize} + \beta_6\text{Location1} + \beta_7\text{Location2} + \beta_8\text{Location3} + \zeta_4 \quad (4)$$

## Results

The means, standard deviations, bivariate correlations, and alpha coefficients for all the variables included in the present study are reported in Table I.

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 Insert Table I about here  
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In the initial MIMIC-CFA model we tested, we regressed the full scales of a two-factor model representing ELMX and SLMX on the control variables and leader-fixed effects. This model (see Appendix A) did not fit the data very well ( $\chi^2 [216] = 493.52, p < 0.05$ ; RMSEA = 0.05; CFI = 0.88; TLI = 0.86). Accordingly, to ensure the adequacy of the measurement model before testing the hypotheses, we performed a more exploratory approach where we used the modification indices to delete the items that cross-loaded. This resulted in a four-item scale measuring ELMX and a four-item scale measuring SLMX (see Appendix B) which provided excellent fit to the data ( $\chi^2 [67] = 77.54, p = 0.18$ ; RMSEA = 0.02; CFI = 0.99; TLI = 0.99) when controlling for sample heterogeneity (i.e. by regressing the two factors on the leader-fixed effects and the controls).

To acknowledge the potential endogeneity of ELMX and SLMX, we also performed a generalized version of the Hausman (1978) test; in this model, we constrained the residual covariances of ELMX and SLMX with OCB and work performance to zero (and only estimated the residual covariance between ELMX and SLMX, as well as that of OCB with work performance). The results of this Wald test ( $\chi^2 [4] = 8.10, p = 0.09$ ) indicated that ELMX and SLMX may not be endogenous with respect to work performance and OCB in our specification; thus, we can assume that they have been “*d-separated*” (Hayduk, et al., 2003). When removing the cluster means controls, the model failed to fit the data  $\chi^2 [67] = 106.88, p < 0.001$ . Moreover, OCB-work performance and ELMX-SLMX seem to be endogenous with respect to each other (Wald  $\chi^2 [2] = 119.75, p < 0.01$ ) suggesting that they share some unmodeled common causes. Thus, we proceeded to test our hypotheses by a structural equation model where we estimated the residual covariance of SLMX and ELMX and the residual covariance of work performance and OCB, while we constrained the residual covariances between the LMX variables and the outcomes to zero. This procedure allows for

a consistent interpretation of the estimates between the LMX variables and work performance and OCB because the estimates are not confounded (Antonakis, et al., 2010).

The structural equation model we estimated demonstrated good fit to the data ( $\chi^2 [83] = 99.07, p = 0.11$ ; RMSEA = 0.02; CFI = 0.99; TLI = 0.98). In specific, the results presented in Table II demonstrates a significant and negative relationship between ELMX and work performance (standardized  $\alpha_1 = -.27, p < .001$ ), and hence, we obtained support for H1a. In addition we found support for H1b, hypothesizing a negative relationship between ELMX and OCB (standardized  $\beta_1 = -.22, p < .001$ ).

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 Insert Table II about here  
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We also found support for Hypotheses 2a and 2b. SLMX was significantly and positively related to work performance (standardized  $\alpha_2 = .20, p < .001$ ) and OCB (standardized  $\beta_2 = .26, p < .001$ ), when controlled for the fixed effects and the included control variables. Regarding the leader-fixed effects, and control variables we note that ELMX was significantly predicted by the cluster mean of ELMX (standardized  $\gamma_1 = .47, p < .001$ ), subordinate's tenure (standardized  $\gamma_4 = -.17, p < .01$ ) and subordinate's gender (standardized  $\gamma_3 = .09, p < .05$ ), whereas SLMX was significantly predicted by the cluster mean of SLMX (standardized  $\delta_1 = .55, p < .001$ ) and subordinate's tenure (standardized  $\delta_4 = .09, p < .05$ ). Furthermore, subordinate's gender significantly predicted work performance (standardized  $\alpha_3 = -.11, p < .01$ ) and OCB (standardized  $\beta_3 = -.12, p < .01$ ) whereas subordinate's tenure significantly predicted work performance (standardized  $\alpha_4 = .13, p < .001$ ) and OCB (standardized  $\beta_4 = .16, p < .001$ ). Finally, we note that the cluster mean of ELMX indirectly negatively predicted work performance (standardized effect =  $-.12, p < .001$ ) and OCB (standardized effect =  $-.10, p < .001$ ), whereas the cluster mean of SLMX indirectly



positively predicted work performance (standardized effect = .11,  $p < .001$ ) and OCB (standardized effect = .14,  $p < .001$ ).

### Discussion

The aim of the current study was to examine SLMX and ELMX as relationships with different qualities rather than different levels of quality and how the two different forms of leader-member exchange relationships relate to followers' work and contextual performance. In short, we found that ELMX relationships relate negatively to work performance and OCB and that SLMX relationships relate positively to these outcomes. These findings hold two distinct contributions to LMX research.

First, the transactional and contractual character of ELMX based upon downward influence, formal status differences and discrete agreements where the follower's emphasis is on the balance between what one gets from the relationship and what one gives, seems to negatively impact follower work and contextual performance. Taken together with similar findings from research on organizational exchange perceptions (Kuvaas & Dysvik, 2009, 2010; Loi, Mao, & Ngo, 2009; Song, et al., 2009), we should perhaps reconsider the traditional conception of social exchange theory that both social and economic exchanges *in general* motivate productive work behavior (e.g. Judge & Piccolo, 2004; Rhoades & Eisenberger, 2002). It is not unlikely, however, that ELMX relationships and economic exchange relationships with the organization may be effective under particular conditions, for instance when work is trivial and performance is easy to measure and monitor.

Second, the modest negative correlation between ELMX and SLMX relationships ( $r = -.19, p < .001$ ) supports our view that SLMX and ELMX should be considered as relationships with different qualities rather than different levels of quality on a single pole. It is also in line with Goodwin et al. who argued that "The instrumental and social aspects of the relationship

appear to exist simultaneously” (2009, p. 973 ), although one form of LMX probably dominates over the other.

The observation that gender significantly predicted work performance (standardized  $\alpha_3 = -.11, p < .01$ ) and OCB (standardized  $\beta_3 = -.12, p < .01$ ) in our sample, should also be addressed. In specific, this finding indicates that females are working harder and engaging in more OCBs than their male counterparts. One reason for this finding may be that males are more inclined to develop ELMX relationships than females, as implied by the observation that ELMX was significantly predicted by the subordinates’ gender (standardized  $\gamma_3 = .09, p < .05$ ). Although not hypothesized, this finding aligns well with research reviewed by Podsakoff, MacKenzie, Paine, and Bachrach (2000) suggesting a male preference for equity, or *quid pro quo* exchanges. On the other hand, supplementary analyses did not reveal any indirect effects of subordinates’ gender on work performance (standardized effect =  $-.03, p > .05$ ) or OCB (standardized effect =  $-.03, p > .05$ ). Thus, even though females seem to be working harder and engaging in more discretionary behaviors than males, this is probably for other reasons than a pronounced tendency to develop less ELMX (or more SLMX) relationships. It may, however, be that traits such as emphatic concern and perspective taking, which are commonly associated with females, influence their inclination to engage in courtesy and helping behaviors (e.g., Kidder & McLean Parks, 1993). Nevertheless, future research is needed before we can draw any firm conclusions.

### **Limitations, Research Directions, and Practical Implications**

The findings and contributions of this study should be viewed in light of several limitations. First, and most importantly, the data were gathered at one point in time such that we are not able to infer causal relationships or rule out the possibility of reverse causality. Furthermore, owing to company restrictions and to ensure the anonymity of the respondents

we were not able to control for more than followers' gender and tenure, and team size. Therefore, we cannot rule out the possibility that other variables can account for the observed relationships, such as relational demography (Kacmar, Witt, Zivnuska, & Gully, 2003). On the other hand, because we used corrective modeling procedures to reduce the threat of endogeneity (Antonakis, et al., 2010; Lee, et al., 2011), we have confidence in our estimates and the causal implications of our study. We encourage future research to employ similar corrective procedures to facilitate valid causal claims. In this regard, to derive consistent estimates, future research is advised to model the potential causes of ELMX and SLMX, and to employ an instrumental variable estimation strategy where ideally all exogenous variables that may correlate with the dependent variables are included as instruments (Antonakis, et al., 2010). When following this procedure, however, it is important to acknowledge any unmodeled common causes by estimating the cross-equation disturbances whenever the Hausman (1978) endogeneity test indicates that the residual covariances are not zero (Antonakis, et al., 2010).

A second limitation is that the leaders may have been biased in their work performance and OCB ratings. Even though the leader-member agreement in LMX relationships is modest (Gerstner & Day, 1997), it is possible that leaders with a strong SLMX relationship with some followers may rate these higher than others. Accordingly, future studies should control for leaders' LMX relationships with their followers. Furthermore, we relied exclusively on survey measures, which may have resulted in mono-method bias and inflated relationships between the measures of work performance and OCB. A strength of the present study, on the other hand, is that we obtained LMX ratings and performance ratings from different sources, in order to alleviate potential common method variance due to, for instance, the *implicit theories and illusory correlations* of the respondents (Conway & Lance, 2010; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Given that common method variance poses an

endogeneity problem in the sense that it introduces a correlation between the predictors and the error term (see Antonakis, et al., 2010), we regard obtaining ratings from different sources as particularly important.

Another limitation is that four of the ELMX items and four of the SLMX items were excluded from the final measurement model because they either cross-loaded or had weak factor loadings. On the other hand, an inspection of the included items indicate that they align well with descriptions of economic leader-member exchange relationships, as "...based on compliance with job descriptions" (Wayne, et al., 2009, p. 254) involving formal role-defined relations and unidirectional downward influence (Graen & Uhl-Bien, 1995). Such relationships are posited "...not to evolve beyond what is specified in the employment contract" (Wayne, et al., 2009, p. 254) , and as limited to the fulfillment of contractual obligations (e.g., Graen & Uhl-Bien, 1995; Walumbwa, et al., 2011; Wayne, et al., 2009). In this respect, included items such as "I do what my store manager demands from me, mainly because he or she is my formal boss" aligns well with LMX research positing the leader in economic leader-member exchange relationships to make "... requests based upon his/her hierarchical status within the organization", which the subordinate complies with "because of his/her formal obligation to the leader" (Graen & Uhl-Bien, 1995, p. 232) , Nevertheless, since the more contingent *quid pro quo* items were excluded in our study, we encourage further development of the scales in order to better capture all the aspects of ELMX and SLMX relationships.

Also, we were not able to correlate our SLMX measure with commonly used measures of LMX, which is certainly a limitation of our study. When comparing the items in our scale with more traditional measures, however, they are quite similar, especially the measures that have been developed on the basis of social exchange theory (e.g. Bernerth, et al., 2007). In addition, the direction and magnitude of the relationships between SLMX and our dependent

variables do not deviate from findings obtained with commonly used measures. Similarly, the ELMX scale needs to be more formally validated against similar scales such as the contingent reward subscale of the multifactor leadership questionnaire (MLQ). Finally, the measures of social and economic leader-member exchange have not been cross-validated with the use of an independent sample, which is also a limitation of our exploratory study.

There are also limitations associated with the sample we used. First, we do not have access to company data to compare respondents and non-respondents. Second, we only have data from a particular type of gas stations located in Norway, and investigations in other businesses in other countries could have resulted in different results. The strength of such a design, however, is that provides sufficient homogeneity with respect to organizational context to rule out many alternative explanations for the observed relationships. Third, it should be noted that we measured organizational tenure and not the length of the follower-supervisor relationship. Since the gas stations are located all over Norway and that very few employees start to work for another gas station within the chain, organizational tenure is probably a good proxy for the follower-supervisor tenure. In any case, we encourage researchers to explicitly include measures of the latter in future research.

As far as we know, our study is the first one to investigate ELMX relationships. Accordingly, in order to learn more about the implications of LMX relationships with economic versus social qualities a number of studies including ELMX and SLMX relationships are welcome. First, we need studies from other businesses and other countries to learn more about the generalizability of our findings. As we already know much about the positive implications of high quality LMX or SLMX relationships, studies that investigate ELMX relationships in contexts where it should be expected to have more positive implications than observed in our study are particularly welcome (e.g., independent sales positions). Then we can start identifying the conditions under which ELMX relationships

would be more effective than high quality LMX or SLMX relationships. To maximize the effort of all followers, identifying moderators that translate ELMX relationships into higher levels of follower performance may also be of great importance as one of the premises of LMX theory is that leaders only develop social exchange relationships with a chosen few (e.g. Graen & Uhl-Bien, 1995; Wayne, et al., 2009).

Another avenue for future research is to follow up the important research on the role of instrumentality within high quality LMX relationships. In our study, we found a modest negative relationship between ELMX and SLMX relationships, and Goodwin et al.'s (2009) study indicates that instrumental and social aspects of the relationship appear to exist simultaneously. One particularly interesting research question is thus to what extent instrumental aspects can be a part of a high-quality LMX relationship before it turns into an LMX relationship of a more economic character. Research reviewed by Pazy and Ganzach (2009) suggests that when economic and social exchanges appear simultaneously, the economic aspect predominates (Deckop, Mangel, & Cirka, 1999; Heyman & Ariely, 2004; Stamper & Johlke, 2003). A related question is how stable ELMX and SLMX relationships are. The low- to high-quality continuum of LMX is often understood as a dynamic process where a LMX relationship develops from lower quality to higher quality relationships over time (Boyd & Taylor, 1998; Graen & Uhl-Bien, 1991). This should imply a positive relationship between tenure and SLMX. In our sample, however, only ELMX is significantly related to tenure ( $r = -.18, p < .01$ ), which may suggest a sorting effect where followers experiencing a strong ELMX relationship may choose to leave the organization.

With respect to practical implications, this study not only restates the positive implications of high-quality or SLMX relationships for follower work performance and OCB. In addition, our exploratory study may be taken as an early warning about ELMX relationships. Even though we need more empirical research to provide clear implications, it

is probably safe to argue that such relationships should not be deliberately developed for most followers.

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**Appendix A. Initial MIMIC-CFA on the full scales of ELMX and SLMX**

	ELMX	SLMX
<b>ELMX1:</b> The most accurate way to describe my relationship with my store manager is that I do what I am told to do	.69	
<b>ELMX2:</b> My relationship with my store manager is impersonal – we don't have a personal relationship	.55	
<b>ELMX3:</b> I only want put in extra effort for my store manager when I know in advance how he or she will repay me	.63	
<b>ELMX4:</b> I do what my store manager demands from me, mainly because he or she is my formal boss	.69	
<b>ELMX5:</b> I do not care what my store manager does for me in the long run, only what he or she does right now	.59	
<b>ELMX6:</b> I watch very carefully what I get from my store manager, relative to what I contribute	.41	
<b>ELMX7:</b> My relationship with my store manager is mainly based on authority, he or she has the right to make decisions on my behalf and I do what I am told to do	.65	
<b>ELMX8:</b> All I really expect from my store manager is that he or she fulfils his or hers formal role as supervisor or boss	.60	
<b>SLMX1:</b> I don't mind working hard today – I know I will eventually be rewarded by my store manager		.49
<b>SLMX2:</b> I worry that all my efforts on behalf of my store manager will never be rewarded (reverse scored)		.58
<b>SLMX3:</b> My relationship with my store manager is about mutual sacrifice, sometimes I give more than I receive and sometimes I receive more than I give		.63
<b>SLMX4:</b> Even though I may not always receive the recognition from my store manager I deserve, I know that he or she will take good care of me in the future		.59
<b>SLMX5:</b> My relationship with my store manager is based on mutual trust		.80
<b>SLMX6:</b> My store manager has made a significant investment in me		.68
<b>SLMX7:</b> I try to look out for the best interest of my store manager because I can rely on my store manager to take care of me		.83
<b>SLMX8:</b> The things I do on the job today will benefit my standing with my store manager in the long run		.66

*Note:*  $N = 552$ . The CFA displayed above is a MIMIC (Multiple Indicator Multiple Cause) model where the full scales of ELMX and SLMX were regressed on the control variables and leader-fixed effects. Standardized factor loadings are shown.  $\chi^2 [216] = 493.52, p < 0.05$ ; RMSEA = 0.05; CFI = 0.88; TLI = 0.86. The MIMIC model was estimated using cluster robust standard errors with the use of the weighted least squares (WLSMV) estimator. SLMX = Social Leader-Member Exchange; ELMX = Economic Leader-Member Exchange.

**Appendix B. MIMIC-CFA on the trimmed scales of ELMX and SLMX**

	ELMX	SLMX
<b>ELMX1:</b> The most accurate way to describe my relationship with my store manager is that I do what I am told to do	.63	
<b>ELMX4:</b> I do what my store manager demands from me, mainly because he or she is my formal boss	.75	
<b>ELMX7:</b> My relationship with my store manager is mainly based on authority, he or she has the right to make decisions on my behalf and I do what I am told to do	.72	
<b>ELMX8:</b> All I really expect from my store manager is that he or she fulfils his or hers formal role as supervisor or boss	.64	
<b>SLMX5:</b> My relationship with my store manager is based on mutual trust		.78
<b>SLMX6:</b> My store manager has made a significant investment in me		.71
<b>SLMX7:</b> I try to look out for the best interest of my store manager because I can rely on my store manager to take care of me		.87
<b>SLMX8:</b> The things I do on the job today will benefit my standing with my store manager in the long run		.63

*Note:*  $N = 552$ . The CFA displayed above is a MIMIC (Multiple Indicator Multiple Cause) model where the trimmed scales of ELMX and SLMX were regressed on the control variables and leader-fixed effects. Standardized factor loadings are shown.  $\chi^2 [67] = 77.54, p = 0.18$ ; RMSEA = 0.02; CFI = 0.99; TLI = 0.99. The MIMIC model was estimated using cluster robust standard errors with the use of the weighted least squares (WLSMV) estimator. The cluster mean of SLMX ( $\gamma = .56, p < 0.01$ ) and Tenure ( $\gamma = .09, p < 0.05$ ) significantly predicted SLMX, whereas Gender ( $\gamma = .09, p < 0.05$ ), Tenure ( $\gamma = -.17, p < 0.05$ ) and the cluster mean of ELMX ( $\gamma = .47, p < 0.01$ ) significantly predicted ELMX.



**TABLE I**  
**Descriptive Statistics, Correlations, and Scale Reliabilities**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Location 1	0.57	0.50												
2. Location 2	0.26	0.44	.67**											
3. Location 3	0.10	0.29	-.37**	-.19**										
4. Location 4	0.08	0.27	-.34**	-.17**	-.10*									
5. Subordinate's gender <sup>a</sup>	1.43	0.50	.05	-.06	-.01	.02								
6. Subordinate's tenure	2.11	0.97	.15**	-.05	-.13**	-.05	.00							
7. Team size	8.59	3.42	.12**	-.07	-.03	-.14**	.01	-.02						
8. Cluster mean(ELMX)	3.01	0.36	.06	-.21**	-.26**	-.05	.09*	-.07	.24**					
9. Cluster mean(SLMX)	3.82	0.33	-.01	-.11*	-.12**	-.02	.02	-.03	-.06	-.26**				
10. ELMX	3.01	0.83	.03	-.09*	-.11*	-.02	.11**	-.18**	.10*	.43**	-.11**	(.74)		
11. SLMX	3.82	0.66	-.01	.05	-.06	-.01	-.01	.05	-.03	-.13**	.50**	-.19**	(.78)	
12. Work Performance	3.64	0.76	-.01	.02	.00	-.01	-.15**	.19**	-.01	-.06	-.29**	-.29**	.21**	(.95)
13. OCB	3.56	0.78	.03	.01	-.02	-.03	-.15**	.22**	-.05	-.03	-.14**	-.24**	.25**	.82** (.94)

*Note.* <sup>a</sup> Female = 1; Male = 2; Coefficient alphas are displayed on the diagonal where appropriate.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**TABLE II**  
**Structural Equation Model**

	<b>ELMX</b>	<b>SLMX</b>	<b>WP</b>	<b>OCB</b>
Cluster mean(ELMX)	.47***	.01		
	(.051)	(.046)		
Cluster mean(SLMX)	-.00	.55***		
	(.025)	(.079)		
Location 1	.03	.00	-.01	.04
	(.025)	(.054)	(.165)	(.137)
Location 2	-.01	.01	.00	.02
	(.026)	(.048)	(.181)	(.152)
Location 3	.00	.01	.03	.02
	(.032)	(.066)	(.217)	(.149)
Subordinate's gender <sup>a</sup>	.09*	-.03	-.11*	-.12*
	(.058)	(.073)	(.071)	(.076)
Subordinate's tenure	-.17***	.09*	.13**	.16**
	(.030)	(.039)	(.038)	(.042)
Team size	-.01	.01	.01	-.05
	(.003)	(.003)	(.014)	(.016)
ELMX			-.27***	-.22***
			(.075)	(.070)
SLMX			.20***	.26***
			(.052)	(.053)
R <sup>2</sup>	.28	.31	.19	.21

*Note.* <sup>a</sup> Female = 1; Male = 2; Standardized structural equation estimates. Cluster robust standard errors are displayed in parentheses.

\* p < .05; \*\* p < .01; \*\*\* p < .001.