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Abstract

Purpose – The purpose of this study is to investigate whether leader self-efficacy and leader role ambiguity are related to follower LMX. In addition, we examine whether the relationship between follower LMX and turnover intention will be mediated by need satisfaction.

Design/methodology/approach – Data were collected using an electronic survey tool filled out by 109 leaders and 696 followers.

Findings – Leader role ambiguity was positively related to an economic LMX relationship and negatively related to a social LMX relationship. Furthermore, the links between social and economic LMX relationships and turnover intention were mediated by satisfaction of the needs for autonomy and relatedness.

Research limitations/implications – The main limitation of our study is the cross-sectional nature of the data from the followers.

Practical implications - Provided that our findings are generalizable organizations should provide role clarification initiatives to leaders with high role ambiguity.

Originality/value – Despite the centrality of role theory in the development of LMX theory, prior research has not investigated whether the extent to which leaders perceive that they meet the expectations of their leadership roles affects followers' perception of LMX relationships.

A recent meta-analysis including more than 930,000 observations from more than 3000 primary-level studies of leadership has revealed that leader-member exchange (LMX) relationships mediate the association between four major leadership behaviors and followers task and contextual performance (Gottfredson & Aguinis, 2017). Accordingly, LMX relationships can explain why and how leadership behaviors improve follower performance. LMX theory is distinguished from other leadership theories by positing that leaders develop differentiated dyadic relationships with their followers and by adopting the dyadic relationship as the level of analysis. (Liden, Sparrowe, & Wayne, 1997). Such dyadic relationships can range from low-quality transactional relationships to high-quality socio-emotional relationships. LMX theory was originally rooted in role theory (Kahn, Wolfe, Quinn, & Snoek, 1964), which postulates that role-emerging processes lead to differentiated role definitions and thereby different dyadic LMX relationships between the leader and individual followers (Graen, 1976; Graen & Scandura, 1987).

Despite the strong focus on dyadic relationships and that leader characteristics have long been acknowledged as instrumental to the development of LMX relationships (e.g., Dienesch & Liden, 1986), only a small fraction of studies have considered both sides of the dyad. What we do know based on meta-analytical findings, however, is that leader personality (extraversion and agreeableness) and leader expectations of follower success exhibit small to moderate positive relationships with LMX (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). Still, research on leader characteristics and follower LMX has been limited (Dulebohn et al., 2012).

In the current study, we investigate whether leader self-efficacy and leader role ambiguity are related to follower LMX. Leaders feel a pressure to meet the expectations associated with their roles, but they differ in their self-efficacy (Bandura, 1977) or “their belief in their own ability to complete tasks and to reach goals in specific situations” (Fast,

Burris, & Bartel, 2014, p. 1017). Leaders may also differ in role ambiguity or the lack of necessary information available to a given organizational position (Kahn et al., 1964). Both low self-efficacy and high role ambiguity represent stressful psychological states that may lead the role incumbent to avoid the sources of stress or to use different defense mechanisms (e.g. Fast et al., 2014; Rizzo, House, & Lirtzman, 1970). For a leader, this may imply that (s)he will take fewer exchange initiatives in the dyadic process with the follower and that these exchange initiatives will be more transactional than socio-emotional in nature.

Although LMX researchers have typically conceptualized LMX as falling on a continuum from low- to high-quality exchange relationships, LMX theory has increasingly relied on social exchange theory (SET) as a theoretical framework (e.g., Dulebohn et al., 2012; Matta & Van Dyne, 2015). SET views social and economic exchange relationships as qualitatively different relationships rather than relationships of different quality (Blau, 1964; Shore, Tetrick, Lynch, & Barksdale, 2006). To acknowledge this fundamental distinction, we investigate the relationships between leader self-efficacy and role ambiguity and follower social *and* economic LMX relationships. A social LMX relationship refers to what is characterized by a high-quality LMX; that is, ongoing exchanges less in need of an immediate “pay off” because they are based on interpersonal trust and diffuse future obligations to reciprocate (Kuvaas, Buch, Dysvik, & Haerem, 2012). In essence, because a social LMX relationship requires that the leader actively takes the initiative to ongoing exchanges of socio-emotional resources, we expect that leader self-efficacy will be positively associated and leader role ambiguity will be negatively associated with such a LMX relationship.

An economic LMX relationship, on the other hand, is more contractual in nature and the reciprocation is more explicit and immediate, implying that the trust required is less tied to the relationship itself (Kuvaas et al., 2012). Therefore, an economic LMX relationship is more

impersonal and rests more upon formal status differences and calculus-based trust (Scandura & Pellegrini, 2008). Thus, an economic LMX relationship may result from leaders who take fewer exchange initiatives and where the exchange of financial and tangible resources is based on explicit and discrete agreements between the parties. Therefore, we expect that leader self-efficacy will be negatively associated and leader role ambiguity will be positively associated with an economic LMX relationship.

As proximal outcomes of follower social and economic exchange relationships, we investigate followers' satisfaction of the needs for autonomy, competence, and relatedness. According to self-determination theory, these needs are universal and essential for optimal human functioning (Deci & Ryan, 2000). Previous research has established a positive relationship with high-quality LMX relationships and satisfaction of these needs (Graves & Luciano, 2013). Therefore, we expect that a social LMX relationship will be positively related to need satisfaction. Finally, and consistent with prior research (Van den Broeck, Ferris, Chang, & Rosen, 2016), we expect need satisfaction to be negatively related to turnover intention and that need satisfaction mediates the relationships between follower social and economic LMX relationships and turnover intention (see Figure 1 for our conceptual model).

Insert Figure 1 about here

Investigating the relationships between leader self-efficacy and role ambiguity and follower social and economic exchange relationships should be of both theoretical and practical importance. First, and from a theoretical point of view, self-efficacy and role ambiguity are core constructs in role theory, which LMX theory is derived from (Graen, 1976), but we are not aware of research that investigates whether leader work roles can explain follower LMX. Second, LMX theory increasingly relies on a social exchange

conceptualization (Bernerth, Armenakis, Feild, Giles, & Walker, 2007), and follower social and economic LMX relationships are not mutually exclusive constructs, as evidenced by moderately negative correlations between the two (e.g., Buch, Kuvaas, Dysvik, & Schyns, 2014; Buch, Martinsen, & Kuvaas, 2014; Kuvaas et al., 2012). In addition, a recent study found that employees' other orientation interacted in a different way with ELMX than with SLMX (Buch, Kuvaas, & Dysvik, 2019). Besides, instrumental and social aspects of LMX relationships may appear simultaneously (Goodwin, Bowler, & Whittington, 2009). Therefore, social and economic LMX relationships may have different antecedents and consequences. Furthermore, by examining the mediating role of need satisfaction in the link between social and economic LMX relationships and turnover intention, we aim to contribute to the extant LMX literature by testing whether other mechanisms than the norm of reciprocity can explain consequences of LMX. Finally, our study may have important practical implications. If leader self-efficacy and/or leader role ambiguity are related to follower LMX relationships, interventions targeted toward increasing leader self-efficacy and reducing leader role ambiguity, such as training and communication, would be worthwhile.

Theory and Hypotheses

Graen (1976) and Graen and Scandura (1987) developed a dyadic theory of a role emergence process including three phases: role taking, role making, and role routinization. The process contains role episodes, in which the leader communicates expectations to a follower who responds to the expectations. Below, we argue that leader self-efficacy and role ambiguity will influence the frequency and quality of the role episodes, the dyadic exchanges with followers, and, ultimately, the LMX relationships.

Leader Self-Efficacy, Leader Role Ambiguity, and LMX

Leader self-efficacy refers to the perceived capacity to be effective and influential in the context of the leadership role (Fast et al., 2014). Based on Kahn et al. (1964), we define leader role ambiguity as the lack of necessary information available to a given organizational leadership position. Whereas leader self-efficacy involves a self-evaluation of how well the leadership role expectations are met, leader role ambiguity concerns how well the role expectations are understood.

According to Nahrgang and Seo (2015, p. 88), role behaviors “develop through a series of role episodes in which a member of the organization (i.e., role sender) who holds a set of role expectations, sends those expectations to another member of the organization (i.e., role receiver).” The follower then either performs according to the role expectations or negotiates a different set of role expectations (Nahrgang & Seo, 2015). Furthermore, role theory states that role ambiguity will result in attempts to use defense mechanisms and to avoid sources of stress (Kahn et al., 1964; Rizzo et al., 1970), and empirical research suggests several meta-analytic correlations that are consistent with our expectation that leader role ambiguity will affect follower LMX (Jackson & Schuler, 1985). With respect to leader self-efficacy, Fast et al. (2014) recently found that low leader self-efficacy was related to ego defensiveness and an aversion to employee voice. According to Murphy and Ensher (1999, p. 1376), “leaders high in leadership self-efficacy might feel more comfortable exhibiting the behaviors necessary to establish a high-quality LMX with subordinates.” Thus, both theory and empirical research suggest that low leader self-efficacy and high role ambiguity are associated with threatening psychological states and defensive leadership behavior that will influence how well leaders fulfill their leadership roles and what type of LMX relationships they develop with most of their followers.

During the initial role-taking phase, “the superior acts, and the member reacts” (Graen & Scandura, 1987, p. 181). Because interaction with new followers is a potential source of

stress, and in order to avoid demonstrating a lack of leadership skills, however, we expect that leaders with low self-efficacy and/or high role ambiguity will take few role episode initiatives (e.g., requests and assignments). Graen and Scandura (1987) argued that the role-taking phase would be based exclusively on economic exchanges. We contend, however, that both social and economic LMX relationships can be developed in the role-taking phase. A leader with high self-efficacy and/or low role ambiguity will probably take the initiative to exchanges of socio-emotional resources, such as social support and concern for the follower, even in this initial phase – in addition to engaging in more frequent interactions with most of the followers. Without a more socio-emotional and frequent approach to interactions with the follower, the leader will, to a lesser extent, be able to discover the relevant talents and motivations of the follower, and the follower will have fewer opportunities to demonstrate his/her capacity, which is necessary for the emergence of the role-making phase.

According to Graen and Scandura (1987), social exchanges are crucial in the role-making phase. They argued that leaders typically think about formal rewards, such as salary increases and promotion recommendations, but they emphasized the importance of socio-emotional dimensions, such as trust, respect, loyalty, support, and honesty, in order for the relationship to develop. For a leader with low self-efficacy and/or high role ambiguity, however, it may be particularly stressful and psychologically threatening to engage in the exchange of socio-emotional resources and more comfortable to rely on transactional exchanges of tangible resources (e.g., written versus face-to-face communication and formal job description in exchange for goal achievement). We therefore expect that leaders with low self-efficacy and/or high role ambiguity will limit the exchange of socio-emotional resources to a minimum. Followers, in turn, may also be more likely to focus on the economic exchange aspects of their relationship with their leader as a pre-emptive strategy to protect their own interest, thus creating a self-reinforcing cycle (Ballinger & Rockmann, 2010). Such leadership

behavior may additionally resemble laissez-faire leadership, where the leaders are absent when needed, do not respond to urgent questions, and do not get involved with the follower if important issues arise (Bass, 2008). And, as indirect support for a negative relationship between leader self-efficacy and follower economic LMX and an a positive relationship between leader role ambiguity and follower economic LMX, Buch, Martinsen, and Kuvaas (2014) found a positive relationship between laissez-faire leadership and economic LMX across two samples.

We are not aware of compelling evidence that actually supports the sequential idea that LMX relationships develop from low-quality transactional ones to high-quality socio-emotional ones. In a recent review of the development of LMX relationships, Nahrgang and Seo (2015) stated that dyadic tenure is related to high-quality LMX in some studies but not in others. They concluded, however, that research suggests that the relationship stabilizes rather quickly because measures of LMX quality taken early in the relationship strongly predict LMX quality in later stages of the relationship. Thus, if leaders with low self-efficacy and/or high role ambiguity limit social exchanges to a minimum and rely on formal and transactional exchanges in the role-taking phase, this will probably continue to the role-making and role routinization phases as well. Therefore, the transactional exchanges of tangible resources may become interlocked because the leader has not learned enough about the talents and motivations of the follower. Dockery and Steiner (1990), for instance, found that follower ability in the initial phase was one of the strongest predictors of leader LMX. Accordingly, a leader's transactional leadership behavior will probably result in an economic LMX relationship with the follower, which in turn has been found to be detrimental to follower behaviors and attitudes (Buch, Martinsen, et al., 2014; Buch, Thompson, & Kuvaas, 2016; Kuvaas et al., 2012). If follower attitudes and behaviors develop negatively as the process unfolds, the leader will, in turn, lack successful experiences that can increase leader self-

efficacy as well as information about what leadership behaviors are appropriate and effective to decrease leader ambiguity. Conversely, we know from several meta-analyses that a high-quality or social LMX is associated with positive attitudes and behaviors. Thus, if leaders with high self-efficacy and/or low role ambiguity from the beginning of the dyadic relationship take the initiative to exchange socio-emotional resources and engage in more frequent interactions with the follower, this may result in a self-reinforcing process where follower attitudes and behaviors provide information that should increase or retain leader self-efficacy and keep role ambiguity at a low level or decrease it. Therefore, we hypothesize:

Hypothesis 1: There is a positive relationship between (a) leader self-efficacy and follower social LMX and (b) a negative relationship between leader self-efficacy and follower economic LMX.

Hypothesis 2: There is a negative relationship between (a) leader role ambiguity and follower social LMX and (b) a positive relationship between leader role ambiguity and follower economic LMX.

LMX, Need Satisfaction, and Turnover Intention

The meta-analysis by Dulebohn et al. (2012) showed that a high-quality LMX relationship is negatively related to both turnover intention and actual turnover. Furthermore, research on self-determination-theory has found that satisfaction of the needs for autonomy, competence, and relatedness is negatively related to turnover intention (Van den Broeck et al., 2016). Here we argue that need satisfaction will mediate the relationships between follower social and economic LMX relationships and turnover intention.

According to social exchange theory, social exchanges are mainly intrinsically rewarding. Blau (1964), for instance, noted that providing benefits to others tends to produce social rewards. Furthermore, he pointed out that social exchange will always entail elements of intrinsic significance, which distinguishes it from economic transactions (Blau, 1964). The

mutual trust developed “between committed exchange partners encourages them to engage in a variety of transactions – to exchange advice, help, social support, and companionship – and these diffuse transactions give the partnership some intrinsic significance” (Blau, 1964, p. 315). Accordingly, social LMX relationships clearly have the potential to satisfy the needs for autonomy, competence, and relatedness.

Empirically, the recent meta-analysis by Martin et al. (2016) showed that a high-quality LMX relationship is related to follower outcomes that are closely related to need satisfaction. Indeed, Martin et al. (2016, p. 11) applied self-determination theory (SDT) and argued that “It is clear that high LMX relationships tap into all three components of the theory; autonomy from great job discretion provided by the leader, competence from increased leader feedback and support on performance, and relatedness from an enhanced interpersonal relationship with the leader.” Finally, Graves and Luciano (2013) found that need satisfaction mediated the relationships between LMX, and motivation, vitality, and work attitudes. Accordingly, we hypothesize:

Hypothesis 3: The negative relationship between follower social LMX and turnover intention is mediated by the satisfaction of the needs for (a) relatedness, (b) autonomy), and (c) competence.

We expect an economic LMX relationship to relate negatively to need satisfaction. First, the explicit, contractual, formal, and impersonal nature of such an LMX relationship provides little opportunity for developing close enough ties with the leader to fulfill the need for relatedness. As noted by Blau (1964, p. 315), only “impersonal economic exchange remains exclusively focused on specific extrinsic benefits, whereas in social exchange the association itself invariably assumes a minimum of intrinsic significance.” Second, the contingent, transactional, and short-term nature of an economic LMX relationship may represent a relationship wherein the follower does not feel that the employer trusts his/her

competence and willingness to do well for the organization, which should lower the satisfaction of the needs for autonomy and competence. Furthermore, the explicit reciprocation and the fact that an economic LMX relationship rests mainly upon formal status differences (Scandura & Pellegrini, 2008) will probably result in a narrow job role perception, which in itself will prevent the need for autonomy to be satisfied. Accordingly, we hypothesize that the positive relationship between an economic LMX relationship and turnover intention will be mediated by lower levels of need satisfaction:

Hypothesis 4: The positive relationship between follower economic LMX and turnover intention is mediated by the satisfaction of the needs for (a) relatedness, (b) autonomy), and (c) competence.

Method

Sample and Procedure

The sample for the study consisted of respondents drawn from two public sector organizations in Norway in 2015. The respondents were recruited through students enrolled in executive education programs at the business school where the first author is employed. Specifically, using an electronic survey tool (Questback), separate surveys were distributed to leaders (with managerial responsibility) and followers employed in a police district and in a Norwegian county. We received responses from 696 followers (35.5% response rate) and 109 leaders (52% response rate) in total. Although only 79 of the leaders' responses could be matched with *one* respective follower per leader¹, we included all available data in our analyses. That is, instead of deleting observations with missing values, we analyzed the data using the full

¹ Unfortunately, the students who helped us collect the data only kept track of one follower per leader and deleted the key matching variable before we could correct the mistake.

information maximum likelihood estimator as implemented in Mplus 7.3, which uses all available information in all observations. To be clear, this meant that the relations pertaining to the left side of the model (i.e., the relations between leaders' role ambiguity and self-efficacy and follower LMX) were estimated on the basis of 79 leader-member dyads, whereas the relations pertaining to the right side of the model (i.e., between LMX, need satisfaction and turnover intention) were estimated on the basis of 696 followers. Because we did not have information detailing the group membership of the followers¹, we were not able to test for potential between-group variation.

Of the followers, 47% were men and 53% were women. With regard to their age distribution, 6.3% were between 20-29 years of age, 21.7% were between 30-39 years of age, 34.4% were between 40-49 years of age, 25.4% were between 50-59 years of age, and 12.2% were more than 60 years of age. Regarding dyad tenure, 23.4% of the followers reported having worked with the current leader for less than a year, 52% had worked with the leader between one and five years, and 24.6% reported having worked with the leader more than five years.

Measures

All of the items were scored on a five-point Likert response scale ranging from 1 (strongly disagree) to 5 (strongly agree) unless otherwise noted.

Leader self-efficacy. To measure leader self-efficacy ($\alpha = .85$), we used the eight-item scale developed by Chen, Gully, and Eden (2001). To ensure that we measured *leader* self-efficacy, we adjusted the wording of the items to include the leadership role or leadership tasks. Sample items include "When facing difficult leadership tasks, I am certain that I will accomplish them" and "I am confident that I can perform effectively on many different leadership tasks."

Leader role ambiguity. We measured leader role ambiguity ($\alpha = .91$) using the six-item scale by King and King (1990). Again, we adjusted the wording of the items to fit the leadership role. Sample items are “I feel certain about how much authority I have in my role as a leader” and “I know that I have divided my leadership time properly.”

Social and economic leader-member exchange (social LMX and economic LMX). Kuvaas et al. (2012) first developed separate measures of social and economic LMX based on Shore et al.’s (2006) measures of social and economic exchange with the organization. Kuvaas et al. (2012), however, encouraged a development of the scales in future research to better capture all the aspects of economic exchange with the leader. Accordingly, we used a refined scales from Dysvik et al. (2015) in the current study to measure social LMX ($\alpha = .89$) and economic LMX ($\alpha = .91$). Sample items to measure economic LMX include “I only want to do more for my immediate supervisor when I know in advance what I will get in return” and “I watch very carefully what I get from my immediate supervisor, relative to what I contribute.” Sample items to measure social LMX include “My relationship with my immediate manager is about mutual sacrifice; sometimes I give more than I receive and sometimes I receive more than I give” and “My relationship with my immediate manager is based on mutual trust.”

Work-related basic need satisfaction scale (W-BNS). For the measurement of the satisfaction of the need for relatedness ($\alpha = .78$), autonomy ($\alpha = .81$), and competence ($\alpha = .82$), we used the 18-item Work-related Basic Need Satisfaction scale (W-BNS) from Van den Brock, Vansteenkiste, De Witte, Soenens, and Lens (2010). Sample items for relatedness are “I don’t really feel connected with other people at my job (R)” and “At work, I feel part of a group”, sample items for autonomy are “At work, I often feel like I have to follow other people’s commands (R)” and “I feel free to do my job the way I think it could best be done”,

and for competence sample items are “I really master my tasks at my job” and “I am good at the things I do in my job.”

Turnover intention. To measure turnover intention ($\alpha = .90$), we made use of a five-item scale previously used by Kuvaas (2008) in a Norwegian context. Sample items include “I will probably look for a new job in the next year” and “I often think of quitting my present job.”

Control variables. To rule them out as alternative explanations, we controlled for followers’ age (measured on an ordinal scale from 1 = 20-29 years of age to 5 = more than 60 years of age) and gender (1 = men; 2 = women). We also controlled for organizational affiliation (using a dummy variable) since need satisfaction and turnover intention may depend on where the followers work. Finally, we controlled for dyad tenure since the length of time the follower has worked with his or her leader (measured on an ordinal scale from 1 = less than a year to 3 = more than five years) may relate to LMX relationships (Nahrgang & Seo, 2015).

Analyses

We conducted structural equation modeling (SEM) using the full information maximum likelihood estimator and the delta method procedure as implemented in Mplus 7.3 to test our hypotheses. Arguably, the SEM approach is particularly advantageous when it comes to testing mediated relationships because it estimates everything all together instead of assuming independent equations (e.g., Zhao, Lynch, & Chen, 2010). Furthermore, the causal steps approach of Baron and Kenny (Baron & Kenny, 1986) has been shown to be amongst the lowest in power (Fritz & MacKinnon, 2007). Given the number of scale items included in the present study, we employed a parceling approach where we reduced the initial set of items into a smaller set of parcels as indicators of the latent variables. The parceling approach is often used in similar research on leadership, need satisfaction, and role ambiguity (e.g.,

Graves & Luciano, 2013; Mossholder, Settoon, Harris, & Armenakis, 1995; Piccolo & Colquitt, 2006) and avoids an excessive number of parameters in relation to the sample size, which often results in the failure to find a good fit (Bentler & Chou, 1987). To meet the recommended minimum of three or more indicators per latent variable (Kenny, 1977), we created item parcels (i.e., sums of two to three items) for all the latent variables that were measured by the use of six items or more (i.e., all variables except turnover intention, which was measured with five items). Following Mossholder et al. (1995), we estimated a single-factor CFA solution for each of the constructs and used the resulting factor loadings to develop the parcels. Specifically, we first formed one parcel of each construct by averaging the items with the highest and lowest factor loadings and then formed the second parcel by averaging the items with the next highest and lowest loadings, and so forth, until all items were assigned as indicators of their respective constructs. According to Mathieu and Taylor (2006, p. 1045), an additional advantage of combining items in this fashion is that it “yields parcels that better fulfil the normal distribution assumptions of SEM indicators.”

Results

Preceding the hypotheses testing, we performed a confirmatory factor analysis (CFA) to examine whether the indicators (i.e., parcels and items) sufficiently represented their hypothesized constructs. The overall measurement model provided a good fit to the data (χ^2 [349] = 932.71, $p < 0.01$; RMSEA = 0.048 (90 % CI: 0.044 - 0.052); CFI = 0.94). Furthermore, all the factor loadings were statistically significant and ranged from .62 to .93. Table 1 shows the descriptive statistics, correlations, and coefficient alphas of the final scales.

Insert Table 1 about here

The structural equation model that we estimated ($\chi^2 [453] = 1513.44, p < 0.01$; RMSEA = 0.059 (90 % CI: 0.056 - 0.063); CFI = 0.89) indicated acceptable fit with the data although the CFI was slightly below the desired threshold of .90 (Hu & Bentler, 1999). In addition, and as noted by Kenny and McCoach (2003, p. 333), the CFIs “tend to worsen as the number of variables in the model increases” and “It would be most unfortunate to penalize researchers for estimating elaborate, theoretically interesting models with many variables” (Kenny & McCoach, 2003, p. 350). Hence, we regarded the model fit as satisfactory. Figure 2 shows the results for this SEM model. Contrary to Hypothesis 1, the results did not demonstrate a positive relationship between (a) leader self-efficacy and social LMX ($\gamma = -.22, n.s.$) or a negative relationship between (b) leader self-efficacy and economic LMX ($\gamma = .15, n.s.$). In support of Hypothesis 2, however, we unveiled (a) a negative relationship between leader role ambiguity and social LMX ($\gamma = -.67, p < .001$) and (b) a positive relationship between leader role ambiguity and economic LMX ($\gamma = .52, p < .001$). Hypothesis 3 stated that the negative relationship between social LMX and turnover intention is mediated by the satisfaction of the need for (a) relatedness, (b) autonomy), and (c) competence. In this respect, the results demonstrate positive relationships between social LMX and satisfaction of the needs for (a) relatedness ($\beta = .42, p < .001$), (b) autonomy ($\beta = .46, p < .001$), and (c) competence ($\beta = .15, p < .001$). Satisfaction of the needs for relatedness and autonomy was, in turn, negatively related to turnover intention ($\beta = -.15, p < .01$, and $\beta = -.39, p < .001$, respectively). Furthermore, the indirect relationships from social LMX to turnover intention via (a) the satisfaction of the need for relatedness (indirect effect = $-.06, p < .01$) and via (b) the satisfaction of the need for autonomy (indirect effect = $-.18, p < .01$) were statistically significant. Accordingly, Hypothesis 3a and 3b were supported. Hypothesis 3c, however, was not supported as the indirect relationship from social LMX to turnover intention via the satisfaction of the need for competence was not significant (indirect effect = $.01, n.s.$). Since

the results additionally showed a significant direct relationship between social LMX and turnover intention ($\gamma = -.15, p < .01$), and since the direct relationship was of the same sign as the indirect relationships, the form of mediation is classified as “complementary” (Zhao et al., 2010, p. 199). Finally, Hypothesis 4 stated that the positive relationship between economic LMX and turnover intention is mediated by the satisfaction of the need for (a) relatedness, (b) autonomy), and (c) competence. In support, the results demonstrate negative relationships between economic LMX and satisfaction of the needs for (a) relatedness ($\beta = -.17, p < .001$), (b) autonomy ($\beta = -.24, p < .001$), and (c) competence ($\beta = -.22, p < .001$). In addition, the results revealed significant indirect relationships from economic LMX to turnover intention via (a) the satisfaction of the need for relatedness (indirect effect = $.03, p < .01$), via (a) the satisfaction of the need for autonomy (indirect effect = $.10, p < .001$), but not via (c) the satisfaction of the need for competence (indirect effect = $-.01, n.s.$). Accordingly, we received support for Hypothesis 4a and 4b but not 4c. Since the direct relationship between economic LMX and turnover intention was not statistically significant ($\beta = .04, n.s.$), the form of mediation can be classified as “indirect only” (Zhao et al., 2010, p. 199). It should be noted that we also tried estimating the entire model using only the 79 dyads, but could not get the model to converge.

 Insert Figure 2 about here

With respect to the control variables, we note that organizational affiliation was positively related to turnover intention ($\gamma = .17, p < .001$) and negatively related to social LMX ($\gamma = -.11, p < .01$) as well as economic LMX ($\gamma = -.20, p < .001$), and satisfaction of the needs for relatedness ($\gamma = -.10, p < .05$), autonomy ($\gamma = -.16, p < .001$), and competence ($\gamma = -.10, p < .05$). Furthermore, followers’ age was negatively related to turnover intention ($\gamma = -.12, p <$

.01), social LMX ($\gamma = -.16, p < .001$), and economic LMX ($\gamma = -.11, p < .01$). Dyad tenure and gender, however, were not significantly associated with any of the factors.

Discussion

Despite the strong focus on dyadic relationships in LMX theory, research on leader characteristics and follower LMX has been limited (Dulebohn et al., 2012). Furthermore, we are not aware of studies investigating whether the extent to which leaders perceive that they meet the expectations of their leadership roles affects followers' perceived LMX relationships. Drawing from role theory, the first aim of our study was to investigate whether leader self-efficacy and role ambiguity were related to follower social and economic LMX relationships. By integrating LMX theory, social exchange theory, and self-determination theory (SDT), the second aim of our study was to examine whether follower need satisfaction mediated the relationship between social and economic LMX and turnover intention.

Specifically, the results of our study showed that leader role ambiguity was negatively related to follower social LMX and positively related to follower economic LMX. Leader self-efficacy, however, was not significantly related follower social and economic LMX. Based on prior research on *leader* self-efficacy (Fast et al., 2014; Hannah, Avolio, Luthans, & Harms, 2008), this is surprising. Yet, the only study that we are aware of that has tested the link between leader self-efficacy and follower high-quality LMX found no significant relationship (Murphy & Ensher, 1999). Furthermore, research on ordinary self-efficacy in the workplace suggests that the relationship between self-efficacy and performance is mainly found for relatively simple tasks or jobs when it is controlled for other factors (Judge, Jackson, Shaw, Scott, & Rich, 2007).

With respect to need satisfaction, we found that satisfaction of the need for autonomy and relatedness mediated the relationships between both social and economic

LMX and turnover intention. The lack of a relationship between satisfaction of the need for competence and turnover intention echoes prior research demonstrating that this need is less relevant in predicting follower outcomes (Dysvik, Kuvaas, & Gagné, 2013). The mediating role of satisfaction of the needs for autonomy and relatedness contributes to social exchange theory by demonstrating that need satisfaction can partly explain how social exchanges often result in favorable work outcomes, such as lower turnover intention. Specifically, the mediating role of satisfaction of the the need for autonomy adds muscle to the criticism raised by Coyle-Shapiro and Shore (2007) when they challenged the overemphasis that social exchange theory has given to the norm of reciprocity as the only explaining mechanism in social exchange relationships.

As need satisfaction has already been found to mediate relationships between high-quality LMX and relevant employee outcomes (Graves & Luciano, 2013), our contribution to LMX theory and SDT is the relationship between follower economic LMX, need satisfaction, and turnover intention. Specifically, little is known about the nature of economic exchange, both in terms of its antecedents and underlying “rules” or mechanisms (Cropanzano & Mitchell, 2005). In this respect, a contribution of the present study is demonstrating mechanisms (i.e., need satisfaction) through which economic LMX relationships may have negative implications for employee outcomes (i.e., increased turnover intentions). That is, economic LMX seems to negatively impact employee outcomes partly by reducing need satisfaction. Overall, our findings suggest that social *and* economic LMX play important, albeit different roles in need satisfaction and, thereby, in the process of self-determination.

Limitations and Future Research Opportunities

The main limitation of our study is the cross-sectional nature of the data from the followers, which prevents us from being able to draw conclusions about causality and creates concerns

about common method variance. Ideally, we should have collected the data from followers in three points of time to reduce common method variance. The risk of ending up with too few matched responses from both leaders and followers, however, prevented us from doing so. With respect to the relationship between leader self-efficacy and role ambiguity and follower social and economic LMX, common method variance should not be a concern. Even though we received data from the leaders before we submitted surveys to the followers, we did not control for all possible antecedents to followers' social and economic LMX (i.e., follower, leader, and interpersonal characteristics). Therefore, we cannot establish support for the causality for these findings either and experimental or longitudinal studies with a full range of control variables are needed to support causal claims. It is also obviously worthwhile to consider the generalizability of our findings. The studies were conducted in two public organizations in Norway, and data from other types of organizations and in other countries are needed to determine the generalizability of our findings.

Beyond using stronger research designs, future research should investigate the role of leader self-efficacy in general and how it relates to the development of follower LMX in particular. Mixed findings suggest the presence of moderators or perhaps curvilinear relationships. Thus, future research could investigate the boundary conditions for the relationship between leader self-efficacy and follower LMX.

The relationships between leader role ambiguity and follower social and economic LMX calls for research in other contexts to test the generalizability of the findings as well as potential mediators of the relationships. We have relied on the quantity and quality of exchanges to explain these relationships. This can be tested in longitudinal research where data on initial leader role ambiguity and follower LMX are collected at Time 1, and data on the frequency (e.g., McAllister, 1995) and quality (social versus economic) of exchanges are collected over time, followed by measures of follower LMX at Time 3.

Practical Implications

Provided that our findings are generalizable organizations should provide role clarification initiatives to leaders with high role ambiguity, such as discussions about authority and responsibilities and what the most important goals, priorities, and expectations are. Although it may be difficult to identify managers with high role ambiguity, one can observe signs of stress or measure followers' social and economic LMX. Organizations could also take steps to decrease leader role ambiguity through providing personal recognition, persuasion, job autonomy, intrinsic job satisfaction, and other factors found to be negatively related to role ambiguity (Rizzo et al., 1970). In addition, when recruiting and promoting into leadership positions, organizations should ensure that candidates have sufficient levels of tolerance of ambiguity, which is the tendency to perceive ambiguous situations as desirable (Budner, 1962). Research on tolerance of ambiguity has typically investigated the relationship with work-related anxiety and strain (Furnham & Marks, 2013; Judge et al., 2007). Among leaders, Keenan and McBain (1979) observed a positive relationship between role ambiguity and psychological strain among leaders low in tolerance of ambiguity. Accordingly, tolerance of ambiguity can serve as an antidote to the negative effects of leader role ambiguity.

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TABLE 1
Descriptive Statistics, Correlations, and Scale Reliabilities

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Organization	1.41	.49											
2. Follower age ^a	3.16	1.09	-.32**										
3. Follower gender ^b	1.53	.50	-.11**	.01									
4. Dyad tenure ^c	2.01	.69	-.10*	.28**	.11**								
5. Leader self-efficacy	3.85	.41	.07	.06	-.20	.27*	(.85)						
6. Leader role ambiguity	2.30	.70	-.24*	.06	.24*	-.21	-.63**	(.91)					
7. Economic LMX	2.16	.74	-.17**	-.02	.01	.05	-.10	.11	(.91)				
8. Social LMX	3.59	.73	-.03	-.13**	-.05	-.06	.15	-.32**	-.28**	(.89)			
9. Need for relatedness	3.97	.60	-.06	-.10**	.01	-.07	.09	-.11	-.19**	.35**	(.78)		
10. Need for autonomy	3.68	.62	-.16**	.10**	-.03	.06	.21	-.28*	-.26**	.42**	.45**	(.81)	
11. Need for competence	4.15	.51	-.04	.02	.00	.08*	.11	-.09	-.19**	.13**	.31**	.44**	(.82)
12. Turnover intention	2.22	.98	.27**	-.14**	-.02	-.03	.01	.14	.22**	-.40**	-.37**	-.53**	-.21** (.90)

Note. $n = 696$ (follower data); $n = 109$ (leader data). Descriptive statistics and correlations are based on the averages of the scale items. Coefficient alphas are displayed on the diagonal.

* $p < .05$.

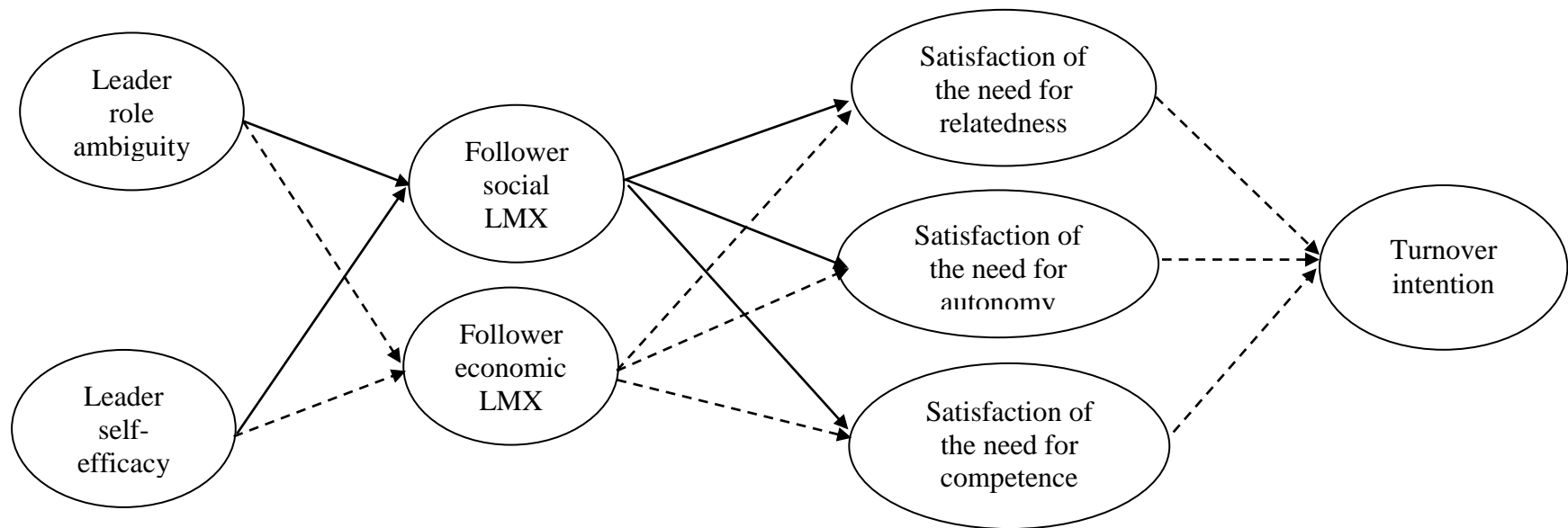
** $p < .01$.

^a 1 = 20-29 years of age; 5 = more than 60 years of age

^b 1 = men; 2 = women

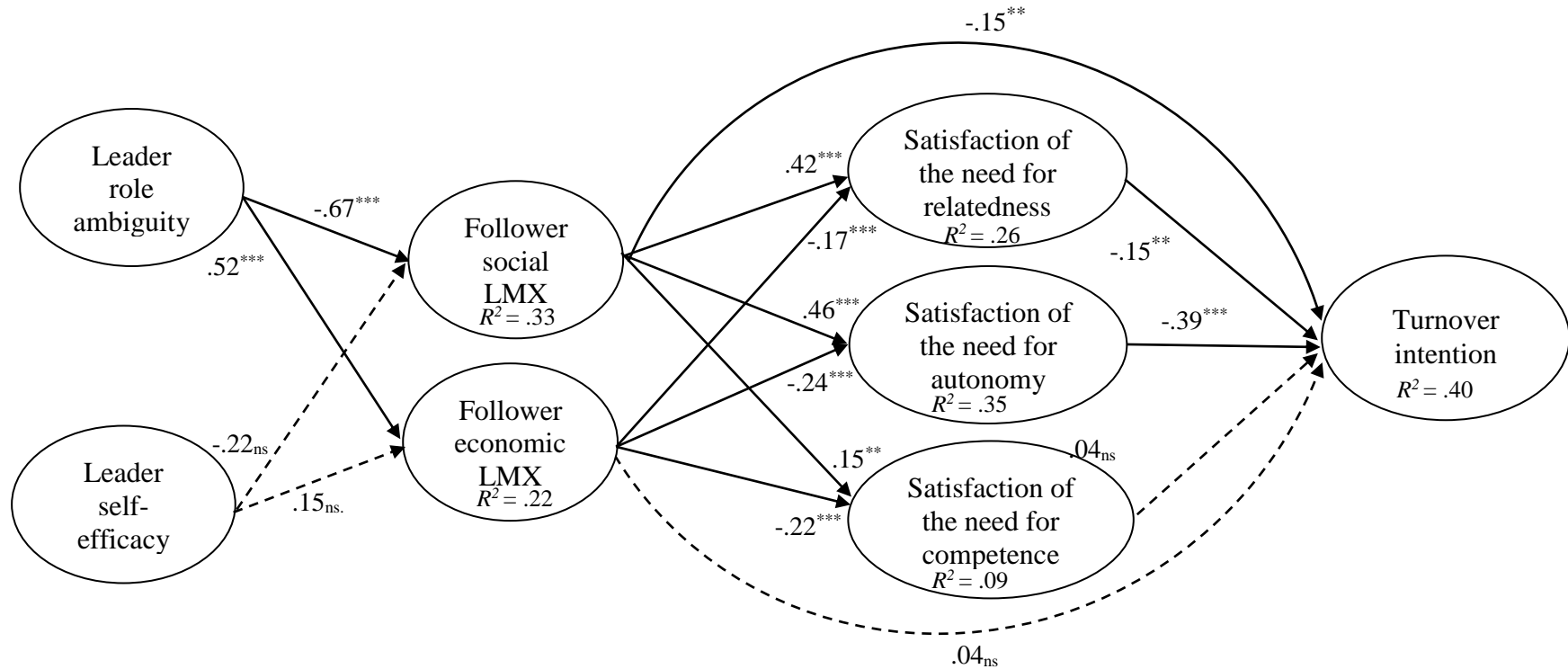
^c 1 = less than a year to 3 = more than five years

FIGURE 1
Hypothesized Model



Solid lines represent positive associations and dashed lines represent negative associations.

FIGURE 2
Structural Equation Model



Note. $n = 696$ (follower data); $n = 109$ (leader data). To simplify the graphical presentation, the relationships between the control variables (dyad tenure, followers' age and gender, and dummy variable representing organization) and outcomes are reported in the text. $*p < .05$, $**p < .01$, and $***p < .001$.