

RESEARCH ARTICLE

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# The Path from Leader-Member Exchange to Citizenship: An Empirical Test of Self-Determination as a Linchpin

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## Abstract

In response to calls to uncover the mechanisms whereby leadership influences subordinate outcomes, the present study proposes and tests a path from leader-member exchange (LMX) to subordinate organizational citizenship behaviors (OCBs) through work motivation as conceptualized by self-determination theory (SDT). We conducted a survey study on a Romanian sample of 338 subordinates nested under 59 leaders from a large variety of organizational contexts. Our findings at the within-group level offer limited support for the incremental validity of autonomous motivation and amotivation, but suggest controlled motivation—and, through it, LMX—has a negative incremental contribution to both OCB targeted at co-workers and OCB targeted at the organization. None of the paths was supported at group level. Results thus suggest that leaders should be wary of the consequences of high LMX—despite its established overall positive influence on OCB, LMX may also undermine OCB to the extent to which it enhances controlled motivation.

## Keywords

leader-member exchange; LMX; work motivation; self-determination theory; organizational citizenship behavior

Work motivation is, at least in theory, a key explanation for the impact of leadership on follower performance, susceptible of addressing decade-old calls to uncover the underlying mechanisms of this impact (e.g., Yukl, 2010). However, the scarcity of empirical tests limits our current knowledge of the role of motivation in linking leadership to subordinate performance-related outcomes. This is especially true for leadership perspectives such as leader-member exchange (LMX).

Rooted in social exchange, LMX theory states that supervisors establish relationships of different qualities with each of their direct reports (Graen & Uhl-Bien, 1995). Low-

quality relationships are limited to the employment contract, whereas high-quality relationships are characterized by the exchange of a great variety of tangible and non-tangible resources (Liden, Sparrowe, & Wayne, 1997). Empirical research has demonstrated that LMX is salient for a plethora of important subordinate outcomes such as task performance, citizenship behaviors, job satisfaction, turnover intentions, organizational justice perceptions, innovative behaviors, affective climate, affective and normative organizational commitment, satisfaction with supervision, and even satisfaction with pay (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012;

Gerstner & Day, 1997). However, more research is needed to ground and test the underlying mechanisms linking LMX to many of these consequences.

The present study focuses on explaining the effect of LMX on organizational citizenship behaviors (OCBs). A positive association between LMX and OCBs is firmly established (Carter, Armenakis, Feild, & Mossholder, 2012; Dulebohn et al., 2012; Ilies, Nahrgang, & Morgeson, 2007; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; Wang, Law, Hackett, Wang, & Chen, 2005), but relatively few studies have aimed to elucidate how LMX actually stimulates citizenship. For example, despite encouraging results reported by Liden, Wayne, and Sparrowe (2000), motivational mediating mechanisms have been rarely studied ever since (Martin et al., 2016).

Furthermore, though self-determination sometimes was alluded to in the few LMX studies addressing motivation (such as in the Liden et al. [2000] paper), even fewer studies appealed to the integrative self-determination framework to explain the influence of LMX, which may have yielded misleading results. Martin et al. (2016) reported that empirical research of the LMX-motivation relationship employed heterogeneous operationalizations of motivation, the majority of studies focusing on intrinsic motivation. Due to conceptual overlaps with other forms of motivation that whose effects were not accounted for, confounding variables are a major concern in these studies. We argue that a comprehensive view of both the LMX-OCB relationship and the role of motivation in it warrants testing other forms of motivation, such as controlled motivation.

Our paper addresses the aforementioned limitations by testing unique effects of self-determination based types of motivation as potential explanations of the LMX-OCB association. Self-determination theory (SDT; Deci & Ryan, 2000; Gagné & Deci, 2005) depicts a simplex model in which motivation internalization lies on a continuum from amotivation (i.e., the complete lack of motivation) to autonomous motivation (i.e., adopting goals as part of the person's identity or even finding intrinsic pleasure in pursuing those goals) through the extrinsic controlled

motivation (i.e., pursuing goals as a consequence of an external pressure). SDT-based concepts are becoming increasingly popular as explanations of the influence of leadership styles on subordinate outcomes (e.g., Eyal & Roth, 2011; Kovjanic, Schuh, Jonas, Van Quaquebeke, & Van Dick, 2012). Other leadership perspectives, such as LMX, may thus benefit from the integration with the SDT framework. We contend that SDT would allow a deeper understanding of the mediating effects of motivation through the analysis of unique contributions of the different SDT-based internalization categories. Given conceptual overlaps, unique effects are of primary interest. For example, controlled and autonomous motivation can both be opposed to amotivation in that they indicate the presence of determination. Yet, unlike autonomous motivation, controlled motivation has been often found to display negative effects on subordinate outcomes (Gagné & Deci, 2005). A closer look into the incremental contributions of SDT concepts could further suggest specific motivation-targeted interventions for boosting citizenship.

## **Explaining the Impact of LMX on Citizenship via Motivation**

### **LMX as an Antecedent of Self-Determination**

By and large, motivation is expected to be one of the key mechanisms linking leadership behaviors and attitudes to subordinate performance (Gottfredson & Aguinis, 2017; Ng, 2017).

Intuitively, LMX should appeal to self-determination by satisfying the three basic psychological needs associated with the degree of goal internalization: autonomy, competence, and relatedness. First, LMX can easily be qualified as an autonomy-supportive behaviour, showing a notable conceptual overlap with leader autonomy support as defined by Slemp, Kern, Patrick, and Ryan (2018). Slemp et al. describe leader autonomy support as leader behaviors which encourage choice and agentic behaviour on the part of subordinates—similar to early conceptualizations of LMX as negotiating latitude (Gerstner & Day, 1997; Liden & Maslyn, 1998). Second, LMX is based

on mutual professional respect and delegation by the leader, increased responsibility, trust in the subordinate, etc. (Graen & Uhl-Bien, 1995), which can be expected to fulfil the subordinate's competence need. Finally, the relatedness need should also be expected to be satisfied, as high LMX encompasses affect and loyalty.

Hints that SDT-based concepts may be placed on the path to influence of LMX have also been provided by several empirical studies. For example, the quality of an employee's relationship with his or her supervisor, as well as the quality of the relationships with subordinates, were shown to enhance autonomous motivation and feelings of self-efficacy (Trépanier, Fernet, & Austin, 2012). Ng (2017) meta-analytically confirmed paths from LMX to subordinate performance-related outcomes via job self-efficacy.

Besides nurturing autonomous motivation, however, we argue that LMX could also be expected to enhance controlled motivation. LMX theory posits that provisions by one party trigger a growing feeling of obligation to reciprocate on the part of the recipient (Graen & Uhl-Bien, 1995). This felt obligation may act as an external social pressure. Similarly, inasmuch supervisor provisions contingent upon the subordinate's contribution to the exchange consist of tangible resources, they may act as an external material pressure.

### **The Role of Internalization in Explaining OCBs**

We further argue that, in turn, a certain level of motivation internalization may be useful—and to a certain extent necessary—for a subordinate to display OCBs. What we know from LMX theory is that a good relationship with the leader may stimulate quite a few means of reciprocation on the part of the subordinate, and OCB is only one of them. So, what is the route from LMX to OCB? Based on the scarce available studies, Martin et al. (2016) meta-analytically derived a positive indirect effect of LMX on citizenship performance via motivation.

We specifically propose that the same SDT concepts we assumed to be consequences of LMX should be referred to in order to refine the answer to this research question.

As SDT theory builds on the axiomatic premise that behavior needs to be energized by motivation in order to be enacted (Deci & Ryan, 2000; Gagné & Deci, 2005), we also expect that any antecedent of OCBs (in our case, LMX) is bound to affect motivation beforehand. Extant empirical research also furnishes premises in this respect. First, in their meta-analysis, Van den Broeck, Ferris, Chang and Rosen (2016) found basic need satisfaction to enhance OCBs. Similarly, intrapersonal and interpersonal need fulfilment, as correlates of job autonomy and support, were also shown to be conducive of citizenship behaviors (Ilies, Lanaj, Pluut, & Goh, 2018). Second, levels of internalization stipulated by SDT were found to correlate with subordinate performance-related outcomes (Gagné et al., 2015). Furthermore, SDT-based motivation concepts have occasionally been tested—and confirmed—as mediators for LMX in influencing various subordinate outcomes. For example, in one of the few empirical studies that addressed this issue, LMX was shown to partially influence subordinate subjective vitality, job satisfaction, and affective organizational commitment through autonomous motivation (Graves & Luciano, 2013).

Results from the abovementioned studies hint at a positive relationship with OCBs for autonomous motivation. Furthermore, autonomous motivation was directly shown to display strong consistently positive relationships with outcomes such as work role performance, job effort, and affective commitment (Gagné et al., 2015). We thus hypothesize:

*Hypothesis 1.* Autonomous motivation mediates the positive relationship between LMX and subordinate (a) OCB targeted at individuals and (b) OCB targeted at the organization.

The sign of controlled motivation as a predictor of OCBs is less obvious. Controlled motivation was found to be detrimental to citizenship behaviors (e.g., Wright, George, Farnsworth, & McMahan, 1993), possibly through its theorized undermining effect on intrinsic motivation (Gagné & Deci, 2005). Nevertheless, Gagné and Deci (2005) acknowledged that controlled motivation may

also enhance OCB, possibly as an impression management tactic. In a later study, Gagné et al. (2015) unexpectedly found a strong positive effect of controlled motivation on job (extra) effort. Yet, we argue that controlled motivation may covary with autonomous motivation as they are both indicators of the presence of motivation in the first place. As such, especially for behaviors that exceed the employment contract, any positive influence of controlled motivation may in fact be due to the variance shared with autonomous forms of motivation. This would mean that controlling for autonomous motivation is required when testing the impact of controlled motivation on subordinate OCBs. Accordingly, we propose:

*Hypothesis 2.* When controlling for the other two SDT-based types of motivation (autonomous motivation and amotivation), LMX has a negative indirect effect on subordinate (a) OCB targeted at individuals and (b) OCB targeted at the organization through controlled motivation.

As for amotivation, the scarce empirical findings suggest its impact on performance-related and attitudinal outcomes is consistently negative (Gagné et al., 2015). We therefore posit:

*Hypothesis 3.* Amotivation mediates the positive relationships between LMX and subordinate (a) OCB targeted at individuals and (b) OCB targeted at the organization.

Please note that full support for these hypotheses would mean significant effects both at the within-group and between-group levels.

## Method

### Participants and Procedure

Nineteen trained undergraduates who volunteered to take part in our study were asked to recruit working people having at least two direct reports in their supervision. The contacted supervisors were asked to invite all their direct reports in the study, and were assured that participation was voluntary and anonymous for them and their reports, and feedback on individual results was available upon request. Undergraduates then disbursed sealed envelopes containing paper-pencil surveys and collected the surveys once

completed. In order to ensure anonymity, each participant was assigned an alphanumeric code, imprinted on the participant's envelope, which allowed matching supervisor and subordinate surveys.

Sixty-five supervisors and 497 of their subordinates initially agreed to participate. Fifty-nine of the supervisors (response rate of 90.77%) and 352 of their subordinates (70.83% response rate) returned completed surveys. There were no cases of subordinate surveys without matched supervisor data. Removing surveys with missing data or control variables yielded a final sample of 59 managers and 338 of their direct reports. The sample comprised participants from various organizational contexts, including educational and health, information technology, retail, agriculture, energy, etc. Of the organizations, 22.03% were public and 77.97% were private. The number of direct subordinates per supervisor was on average 5.73 (ranging from 2 to 13), for an average within-group response rate of 63.63%.

The subordinates included in the final sample were 59.76% female, with an average age of 36.61 ( $SD = 9.60$ ), an average job tenure of 8.34 years, an average organization tenure of 7.95 years, and an average dyad tenure with their respective supervisors of 4.31 years. In terms of education, the majority (76.27%) of them held a bachelor's or a master's degree, while 8.47% were college graduates, 5.08% held a high school diploma, another 5.08% had completed post-secondary education, and only 3.39% held a doctoral degree.

### Measures

All the instruments were translated into Romanian following a guided forward translation procedure (Iliescu, 2017).

The subordinate survey included the following assessments:

**LMX.** We used the LMX-MDM scale (Liden & Maslyn, 1998), assessing each dimension of the four-dimensional model (affect, loyalty, contribution, and professional respect) by three items. Sample items include "My supervisor is the kind of person one would like to have as a friend," and "I do work

for my supervisor that goes beyond what is specified in my job description.” Responses were collected on a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

**Work motivation.** We measured motivation using the 19-item Multidimensional Work Motivation Scale (MWMS; Gagné et al., 2015), which includes subscales for six SDT-based motivation types: amotivation, three types of controlled motivation (extrinsic regulation—social, extrinsic regulation—material, and introjected regulation), and two types of autonomous motivation (identified regulation and intrinsic motivation). Scale instructions ask respondents to rate the extent to which each item represents a reason why they put or would put efforts into their current jobs on a 5-point Likert scale. Sample items include, “I don’t know why I’m doing this job, it’s pointless work” (amotivation), “To avoid being criticized by others (e.g., supervisor, colleagues, family, clients...)” (extrinsic regulation—social), “Because others will reward me financially only if I put enough effort in my job (e.g., employer, supervisor ...)” (extrinsic regulation—material), “Because I have to prove to myself that I can” (introjected regulation), “Because I personally consider it important to put efforts in this job” (identified regulation), and “Because what I do in my work is exciting” (intrinsic motivation).

For the leader-rated variables in this study, we used the following measures:

**Subordinate OCBs.** This variable was measured using the two seven-item subscales of Williams and Anderson’s (1991) job performance scale that measure organizational citizenship behavior targeting individuals (OCBI) and targeting the organization (OCBO), respectively. Sample items include, “Helps others who have heavy workloads” (OCBI), and “Gives advance notice when unable to come to work” (OCBO). Responses were collected on a 5-point Likert scale.

**Control variables.** We initially included control variables whose relevance to LMX has been confirmed (Bernierth & Aguinis, 2016): subordinate and leader sex and age, subordinate and leader job tenure, dyad tenure,

leader-member gender difference, and group size, as some authors suggested it may be deleterious to individual LMX and increase LMX differentiation (Henderson, Liden, Glibkowski, & Chaudhry, 2009). Controls displaying non-significant correlations with the outcomes in the model were excluded.

## Analytical Strategy

We preliminarily checked whether or not our data warrants multilevel modelling by calculating intraclass correlation coefficients (ICCs; Bliese, 2000). We found ICC(1) values to range from .35 for OCBO to .65 for LMX, indicating high group-level variability for our variables and the suitability of hierarchical linear modeling.

For our analyses, we used multilevel structural equation modeling (MSEM; Muthén & Asparouhov, 2008; Preacher, Zhang, & Zyphur, 2011) with Bayesian estimation in Mplus 7 (Muthén & Muthén, 1998-2012). Simulation studies suggest that Bayesian estimation can be more reliable than maximum likelihood in estimating mediation (Muthén, 2010).

## Results

Descriptive statistics, internal consistency reliabilities, and correlations among study variables are presented in Table 1.

To test the hypothesized model, all three categories of motivation (autonomous motivation, controlled motivation, and amotivation) were entered simultaneously as mediators for the LMX-OCBI and LMX-OCBO associations. Controls variables relevant for the mediators and for the outcomes were introduced in the mediation model as exogenous covariates. The one-tailed *p* values represent the relative frequency in the posterior distribution of effects of the effects of opposite sign (Muthén, 2010). Credibility intervals (CIs) are constructed around each estimate using Markov chain Monte Carlo algorithms for parameter posterior distribution approximation. Effects are considered significant if the CI does not include zero.

Table 1. Means, Standard Deviations, and Correlations among Variables

Variable	M	SD	1	2	3	4	5	9	10	11	12	13
Individual-level variables												
1. Subordinate gender	.60	.49										
2. Subordinate age	36.61	9.60	.00									
3. Subordinate job tenure	7.95	7.64	.06	.74***								
4. Dyad tenure	4.31	4.21	-.08	.42***	.5***							
5. LMX	3.61	.68	.24***	.08	.14*	.05	(.90)					
9. OCBI	3.44	.78	.10	.04	.09	-.01	.34***	(.79)				
1. OCBO	3.99	.70	.25***	.09	.10	.02	.29***	.53***	(.77)			
11. Autonomous motivation	3.57	.93	.20***	.07	.11*	-.06	.60***	.39***	.34***	(.90)		
12. Controlled motivation	3.11	.68	.01	-.03	.03	.00	.04	.00	-.14*	.25***	(.75)	
13. Amotivation	1.73	.82	-.23***	-.17**	-.20***	-.13*	-.45***	-.09	-.33***	-.39***	.12*	(.77)
Group-level variables												
1. Leader gender	.61	.49										
2. Leader age	43.31	8.06	.1									
3. Leader job tenure	8.34	6.67	-.19	.48***								
4. Group size	11.81	9.34	-.11	.34**	.34**							

Note: For individual level variables, N = 338. For group level variables, N = 59. LMX = leader-member exchange; OCBI = organizational citizenship behavior targeted at individuals; OCBO = organizational citizenship behavior targeted at the organization.

\* p < .05, \*\* p < .01, \*\*\* p < .001. Cronbach’s alphas are reported on the diagonal

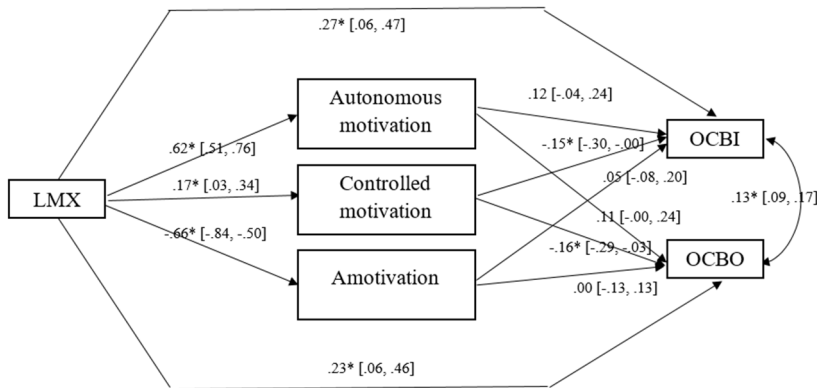


Figure 1. Results for the hypothesized mediation model.

Note: only within-group coefficients are represented. Credibility intervals are reported in brackets. Asterisks mark coefficients significant at p > .05

Figure 1 summarizes within-level results for the mediation models we tested from LMX to subordinate OCBs via subordinate work motivation. As shown in the figure, the direct effects of LMX on both forms of OCB remained significant in the presence of the mediators, indicating at most partial mediation.

Hypothesis 1, which posited that the effects of LMX on OCBs are mediated by autonomous motivation, was not supported. LMX had a significant positive effect on autonomous motivation, but, in turn, in the presence of the other types of motivation (controlled motivation and amotivation), autonomous motivation displayed a non-significant effect on both types of OCB.

Hypothesis 2a, positing an indirect effect of LMX on OCBI through controlled motivation, was also not supported. Within groups, both the paths from the independent variable to the mediator and from the mediator to the outcome were significant (for the relationship between LMX and controlled motivation,  $\gamma = .17, p < .05, 95\% \text{ CI} = [.03, .34]$ , and for the path from controlled motivation to OCBI,  $\gamma = -.16, p < .05, 95\% \text{ CI} = [-.30, -.00]$ ), and the probability of an indirect effect of opposite sign (as indicated by the  $p$ -value) was only 2.9% (thus smaller than 5%). Still, the 95% CI = [-.06, .00] for the indirect effect included zero, so mediation was

rejected. Offering partial support for Hypothesis 2b, however, our results confirmed a significant negative indirect effect of LMX on OCBO via controlled motivation at within-group level ( $-.02, p < .05, 95\% \text{ CI} = [-.06, -.00]$ ) after accounting for the contributions of autonomous motivation and amotivation.

For reasons similar to the case of Hypothesis 1 (non-significant path from mediator to outcomes), our results also failed to support Hypothesis 3, with the indirect effect of LMX on both OCBs via amotivation being non-significant. Indirect effects and their CIs for both levels are presented in Table 2.

Table 2. *Motivation as a Mediator for the Effects of LMX on OCBs*

Dependent Variable: Mediator	Within level		Between level	
	Direct effect	Indirect effect	Direct effect	Indirect effect
OCBI:	.27 [.06, .47], .006		.05 [-1.67, 4.47], .430	
Autonomous motivation		.07 [-.02, .15], .092		.05 [-.10, .32], .225
Controlled motivation		-.02 [-.06, .00], .029		-.00 [-4.52, 1.60], .455
Amotivation		-.04 [-.13, .05], .199		.04 [-.11, .27], .255
OCBO:	.23 [.06, .46], .004		-.06 [-1.75, 2.99], .408	
Autonomous motivation		.07 [-.00, .16], .026		.03 [-.08, .25], .263
Controlled motivation		-.02 [-.06, -.00], .013		.00 [-3.04, 1.70], .497
Amotivation		-.00 [-.09, .10], .218		-.09 [-.34, .05], .096

Notes.  $N = 338$  at the within level and 59 at the between level. Values are reported as unstandardized estimate [95% CI], one-tailed  $p$ -value.

**Discussion**

Our study tested SDT categories of motivation as mediators for the effect of LMX on subordinate OCBs. Partial mediation occurred for the association between LMX and OCBO, via controlled motivation. Neither autonomous motivation nor amotivation were found to mediate the effect of LMX on any of the two investigated types of OCB. Per contra, it was the two forms of motivation that lost their significance in the presence of LMX, while LMX preserved its significant positive direct effect in the presence of all motivation types, leaving room for the exploration of additional mediation mechanisms. While none of the categories of motivation incrementally contributed to OCBI, autonomous motivation and amotivation annihilated each other's

effects in predicting OCBO. These effects held only at the within level.

The significant direct effects of LMX corroborate findings such as Gottfredson and Aguinis's (2017), suggesting that LMX affects performance-related above and beyond concurrent explanatory mechanisms. On the other hand, our results support the negative effect of controlled motivation on OCB, replicating the results reported in Wright et al. (1993), and challenging the more recent findings by Gagne et al. (2015).

Moreover, the negative indirect effects of LMX on OCBO through controlled motivation highlight the possibility for an antecedent with an established total effect of a certain directionality to act differently via different underlying mechanism. In our case, as more types of motivation may constitute

concurrent explanations for the influence of LMX on citizenship, some of which may have opposite effects, this implies that more research is needed to elucidate the conditions under which one mechanism may be triggered to a larger extent than the others—and possibly to the detriment of the others.

### **Theoretical Implications**

We distinguish three major theoretical contributions of the present study. First, relevant to the literature investigating the role of motivation in stimulating citizenship, our results suggest that the distinctive component of controlled motivation, the variance shared with neither autonomous motivation nor amotivation, i.e., the perceived external pressure to pursue work goals, was the only one displaying incremental validity in predicting OCBs, above and beyond the other two types of motivation that practically annulled each other. A closer look at the unique contributions of the three types of motivation may also lead to a slight reinterpretation of the role of amotivation, at least for OCB as an outcome. In light of our findings, because autonomous motivation and amotivation cancel out, amotivation seems to have an effect opposite to the one of autonomous motivation, rather than express the lack of controlled motivation or of motivation in general.

The second important contribution we identify concerns the sign of the confirmed indirect effect. This case illustrated a pattern that may potentially be discovered in other mediation models—in which an overall positive relationship may hide negative indirect effects or vice-versa. While the overall association between LMX and OCBs remained positive, controlled motivation displayed a significant negative contribution to the relationship.

Last but not least, our results challenge findings regarding the level of analysis at which LMX operates. For example, Markham, Yammarino, Murry, and Palanski (2010) reported dyad-level effects of LMX on subordinate performance-related outcomes (or between dyads, i.e., significant effects both within and between groups). Effect sizes in the Markham et al. (2010) study were even greater

at group level. Yet, our results failed to find any significant between-group effect, instead supporting the dyads-within-groups level stipulated by earlier theorizing (Graen & Uhl-Bien, 1995).

### **Practical Implications**

Supervisors should keep in mind that at least part of their influence on subordinate citizenship behaviors and is due to work motivation. LMX related positively to both autonomous and controlled motivation. Thus, while it could be expected to be beneficial to many subordinate outcomes through autonomous motivation, a high quality exchange relationship with the leader may also have a negative impact on, e.g., subordinates' interest in the welfare of the organization to the extent to which it enhances controlled motivation. More specifically, leaders should be wary of controlled motivation which does not overlap with either autonomous motivation or the lack of amotivation, that is, of the external pressure component of controlled motivation. For a leader who seeks to enhance organization-targeted citizenship among his or her direct reports, constantly performing regulatory actions (supervise, direct, correct, etc.) may be deleterious to the desired outcome.

### **Limitations and Directions for Further Research**

The present study has a number of limitations. First, the cross-sectional design used in our study does not allow causal inferences. Second, the level 2 sample size (number of clusters) may not have been large enough to detect weak inter-group effects. Third, our results on a Romanian sample may not be highly generalizable to other cultures. Last but not least, employing only the subordinate perspective of LMX may have offered an incomplete picture of the relationship quality.

We strongly recommend that further research consider longitudinal, or at least cross-lagged designs separating measurement of LMX, motivation variables, and citizenship behaviors in time. Besides allowing causal inferences, such designs are susceptible of revealing different short-term and long-term

effects of LMX and motivation on citizenship. For example, it is conceivable that controlled motivation may become more and more internalized and generate positive effects after a generous time lag. Additionally, assessment of LMX should ideally involve collecting both perspectives—the leader's and the members'.

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