International Journal on Leadership
10 (2) 2022, 18-38
http://publishingindia.com/ijl/

The Link between LMX, Engagement, Job Characteristics, and Workload on Innovative Performance: A Three-Way, Moderated Mediation Model

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Abstract

This study examines how leader-member exchange relates to innovative performance through work engagement. Further, the study examines the moderated mediating role of job characteristics and workload for the positive indirect relationship between LMX and employee innovative performance via work engagement. The conceptual model is based on a literature review and social exchange theory (Blau, 1964). This explains that the quality of LMX is likely to improve employee engagement and, in return, innovative performance when there are motivational job characteristics and less stressful job demand workload. Three mechanisms have been proposed here to collect data from 529 employees. EQS 6.2 were used for psychometric analysis. Hayes's (2018) PROCESS-macro was used to examine the moderating role of job characteristics and workload and mediating role of work engagement in the link of LMX - innovative performance. The result revealed that work engagement mediated the relationship between LMX and innovative performance. The mediated relationship interacted with job characteristics and workload to influence innovative employee performance in such a way that when the level of motivational job characteristics is high and low, workload engagement had a positive relationship with innovative performance. This paper has practical implications for HR practice. It provides practitioners, mainly work that requires innovation, with suggestions on designing work considering job characteristics and workload and placing stress-management intervention programs that enhance positive emotional states to increase engagement and innovative performance.

Keywords: Leader-Member Exchange (LMX), Work Engagement, Job Characteristics, Workload, and Innovative Performance

Introduction

The innovative performance of its workforce dramatically influences the success of an organization. Although innovation is critical for competitiveness and survival, organizations find it challenging to innovate (Kuratko et al., 2014). Remarkably, employees are seen as the driving force behind all types of innovation (Amabile et al., 1996; Zhang & Bartol, 2010) effort how crucial under favorable conditions, organizations with high employee innovativeness deliver increased levels of organizational Performance (Gong et al., 2013). Understanding what can be done to stimulate employees to contribute to innovation is essential.

Knuppert (2007) stated that employee involvement helps create product or process innovation and creates value for the organization. While many employees have great ideas for improving organizational performance, they are reluctant to share them if they perceive their leadership is not supportive (Afsar et al., 2014). Studies also suggest that companies, to be competent, need to motivate employees

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to engage in tasks that go beyond the scope of essential job requirements and responsibilities (Gumusluoglu & Ilsev, 2009). Unlike in-role work performance, innovative performance involves suggesting new ways to achieve objectives, applying new work methods, and investigating and securing resources to implement new ideas. As a result, recent research has focused on identifying specific individual and process-related factors most relevant to employee's innovative Performance (Anderson et al., 2014; Birdi et al., 2016; Maurer et al., 2011).

It has been further suggested that at the individual level, self-efficacy (Mumtaz & Parahoo, 2019) and domain relevant-commitment (Bettencourt et al., 2017) affect work attitudes and behavior –such as innovative performance. On the other hand, different leader behaviors (such as leader-member exchange (LMX)) found as a predictor of innovative employee performance at the team and organizational levels (Hughes et al., 2018; Rangus & Cerne, 2019). Although previous research on the matter has been conducted from a "leader-centric" perspective, where the role of the leader is seen as an active one and that of the follower as a passive one, such a view seems misconstrued as both leadership and followership can be active roles (Hollander, 1992), and followers have to determine roles in the leadership process (Pearce & Conger, 2002; Uhl-Bien et al., 2014). Specifically, followers may actively engage in a series of social exchanges with their leader that, over time, determine the quality of their relationship (Meindl, 1995). Leader-member exchange (LMX) theory, based on role theory, captures this aspect of leadership and suggests that leaders and employees develop a unique bond through a series of work-related interactions in which both members test each other and learn what they can expect from each other (Graen & Uhl-Bien, 1995; Liden et al., 2006). We argue that the more this exchange process results in a high-quality relationship between leader and employees, the more likely employees display extra-role performance (Carnevale et al., 2017; Yuan & Woodman, 2010).

However, researchers (e.g., Bakker & Xanthopoulou, 2013; Christian et al., 2011; Eldor & Harpaz, 2016) have argued that there is a need for more systematic studies that test the relationship between LMX and attitudinal and behavioral effects on innovative performance both directly and indirectly (Kark & Shamir, 2002). Furthermore, according to Hacker's (2003) action regulation theory, LMX quality should not be considered only in predicting innovative performance. In keeping with the above argument, we propose engagement, job characteristics, and workload as proximal contingent factors that interact with innovative performance. Therefore, the primary purpose of the present study is to examine how LMX affects innovative performance through work engagement. Further, the study examines the moderated mediating role of job characteristics and workload for the positive indirect relationship between LMX and employee innovative performance via work engagement.

Theoretical Framework and Hypotheses

Innovative performance has been conceptualized as a multi-stage process consisting of problem recognition, generation of ideas, building support, and idea implementation (Scott & Bruce, 1994). Research reveals that 80 percent of the ideas are initiated by employees (Getz & Robinson, 2003). Researchers in this area implies that organizational social environment factors impact employee innovation (Hunter et al., 2007). One of the social and environmental factors is the quality of the relationship employees have with their immediate supervisor-LMX. We propose that the quality of LMX will likely contribute to employee engagement and innovative performance when there are motivational job characteristics and a less stressful job demand workload.

Leader-Member Exchange and Innovative Performance

The basic principle of LMX theory is defined by a high-quality relationship between the supervisor (leader) and subordinate (follower), and this relationship is characterized by mutual trust, obligation, loyalty, and respect for each other (Morrow et al., 2005). LMX relationships are based on the economic and social exchanges between leaders and subordinates (Liden & Maslyn, 1998; Schriesheim et al., 1999). A leader-member relationship is developed through a series of steps that begin with the initial interaction between the dyad members. Followed by the exchange sequence in which one part of the dyad examines the other part to determine whether they can build a high-quality relationship. During the process, interaction behaviors of the dyad play critical

roles in enhancing the quality of LMX. Most studies agreed on the nature of the LMX as the quality of the exchange relationship between leader and member (Schriesheim et al., 1999). Power theory (Spreitzer & Doneson, 2005) suggests that interactions between leaders and followers establish a social exchange relationship. This relationship between the leader and followers contributes to a positive outcome. According to Sparrowe and Liden (1997), in a high-quality exchange relationship, the employee receives the leader's time, direction, information, autonomy, and emotional support, and it is based on trust, respect, obligation, and loyalty (Graen & Uhl-Bien, 1995; Morrow et al., 2005). In contrast, low-quality exchange relationships are purely based on contractual exchange, not beyond job description requirements characterized by economic exchanges, mistrust, low respect, and a lack of loyalty (Uhl-Bien et al., 2000).

Previous studies have revealed that the quality of LMX promotes attitudinal and behavioral work-related outcomes (Dulebohn et al., 2012; Schermuly & Meyer, 2016). Such as innovative behavior (Basu & Green, 1997) innovation (e.g., Janssen & Van Yperen, 2004; Schermuly et al., 2013; Yuan and Woodman, 2010), employee performance (MacKenzie et al., 1993; Gerstner & Day, 1997; Agarwal et al., 2012; Gu et al., 2015), organizational commitment (Kinicki & Vecchio, 1994; Dulebohn et al., 2012, Martin et al., 2016) and turnover intention (Eisenberger et al., 2010). The justifiable reason is that employees in a high-quality exchange relationship receive the leader's more time, direction, information, autonomy, and emotional support, as compared to employees in low-quality exchange relationships which are purely based on contractual exchange, not beyond job description requirements (Sparrowe & Liden, 1997; Uhl-Bien et al., 2000). In addition, high-quality exchange increase employee motivation to reciprocate their leader's positive contributions through increased effort and extra-role behavior such as innovative performance (DeConinck, 2011) because they feel free (Vecchio & Gobdel, 1984), which inspires them to think beyond the routine at work and gives them to explore and implement new ideas (Schermuly et al., 2013). Furthermore, high-quality LMX can contribute to a positive mood among employees (Fisk & Friesen, 2012). Such feeling at the workplace has been shown to contribute to developing a more open-minded cognitive state among employees that is beneficial for innovation (Basadur, 2004). Employees in high-quality relationships are more able to perform innovatively than those in less-quality relationships (Volmer et al., 2012). Based on the review of such studies, the following hypothesis is forwarded:

H1: Leader-member exchange (LMX) is positively related to member's innovative performance.

LMX and Work Engagement

Work engagement is a motivational concept because it makes the employees struggle hard for challenging goals and inspires them to succeed (Leiter & Bakke, 2010). One way that motivates employees to engage in extra-role behavior is their relationship with their supervisor. There is an enhancement in the level of work engagement when employees perceive an excellent relationship with their supportive leader (Bakker & Xanthopouiou, 2009). The positive association between LMX and work engagement can be explained by social exchange theory (Blau, 1964; Nord, 1969). Social exchange theory suggests that obligations are generated through a series of interactions between parties in a state of reciprocal interdependence (Gouldner, 1960). In high-quality LMX, supervisors provide intangible and tangible resources to employees. In turn, employees feel motivated to work harder to benefit the supervisor as a means of reciprocation (Liden et al., 1997) or could repay the received favors through engagement. Prior research has confirmed similar findings (Agarwal et al., 2012; Runhaar et al., 2013; Breevaart et al., 2015; Burch & Guarana, 2014; Garg & Dhar, 2017).

When the supervisor grants employees more time, direction, information, autonomy, and emotional support, followers feel obliged to repay the supervisor in terms of additional commitment. This is consistent with Robinson et al.'s (2004) conceptualization of engagement as a two-way relationship between employer and employee. Furthermore, researchers have suggested that LMX enhances employees' work engagement through emotional, cognitive, and physical (Schaufeli et al., 2006; Halbeslben, 2010; Christian et al., 2011; Sharoni et al., 2015; Rabenu et al., 2021). Employees and organizations benefit from relationships between supervisors and employees that evolve into high-quality LMX. High-quality LMX may also enhance employees' work engagement (Epitropaki & Martin, 2005; Jacobs et al., 2014; Sparrowe & Liden, 1997; Stander & Rothmann,

2010). Moreover, employees in a high-quality LMX are found to be more optimistic and self-efficacious, and such self-beliefs are essential predictors of work engagement (Halbesleben, 2010). Based on this theoretical foundation, we hypothesize the following:

H2. Leader-member exchange (LMX) is positively related to work engagement.

Work Engagement and Innovative Performance

Work engagement is a work-related affective-motivational state characterized by vigor (i.e., high levels of energy and mental resilience at work), dedication (i.e., substantial involvement in one's work and feelings of enthusiasm, pride, and significance), and absorption (i.e., being entirely focused and happily engrossed in one's work) (Schaufeli et al., 2002). Work engagement involves an active allocation of personal resources toward the tasks associated with a work role (Rich, Lepine & Crawford, 2010); fundamentally, it represents a motivational variable (Christian et al., 2011). Further, Rich et al. (2010) mention that employee engagement is a far broader construct than intrinsic motivation since it accompanies investments of emotional, cognitive, and physical energies into a job role. Thus, engaged employees are believed to have a sense of affective connection to their work activities (Vecina et al., 2012).

Nowadays, it is widely acknowledged that employees are not passive reciprocal of their work environment; instead, they engage actively (Wrzesniewski & Dutton, 2001). 0ne way engagement differs conceptually from many traditional attitudes is that it is closely aligned with task-specific motivation. Engaged employees will be motivated to invest their resources (e.g., effort, time, and energy) into creating other resources and reaching departmental and organizational goals. There is much support for the relationship between employee engagement and positive work outcomes. Specifically, the job demands-resources theory (Bakker & Demerouti, 2007) adapted to propose that work engagement promotes positive work outcomes, such as overall performance (Christian et al., 2011; Halbesleben and Wheeler, 2008; Lin et al., 2016), in-role performance and extra-role performance–innovation (Huhtala and Parzefall, 2007; Aryee et al., 2012; Chang et al., 2013; De Spiegelaere et al., 2014).

In this study, three mechanisms were proposed to explain the positive effect of engagement on innovation performance. Engagement is mainly explained by three attributes, i.e., Physical-vigor, emotional dedication, and cognitive absorption (Schaufeli et al., 2002), with mental fulfillment in work, which leads to higher performance outcomes. The positive affective states associated with emotional engagement induce flexible thinking, which helps produce creative and innovative solutions (Madrid et al., 2014). Likewise, the positive affective experiences associated with dedication promote positive expectations about the outcomes of one's actions (Wegener & Petty, 1997). These clear expectations enhance the personal initiative necessary to self-start the promotion and implementation of innovative ideas (Bledow et al., 2009).

Furthermore, the sense of significance dedicated employees experience about their job motivates them to expend extra efforts to understand a problem from various perspectives and connect diverse sources of information. Such endeavors have been found to facilitate innovation at work (Gilson & Shalley, 2004). Moreover, through cognitive engagement, work engagement helps employees use their cognitive resources to seek new perspectives, information, and knowledge and combine them into new, creative conceptions (Zhang & Bartol, 2010). As a result, people feel motivated to persevere in achieving their work goals despite potential obstacles and difficulties (Aube et al., 2014). Such persistent effort is key to enhancing the odds of converting creative ideas into compelling, implementable innovations (Bledow et al., 2009). Finally, when employees are physically engaged, their ability to attend to and consider different arrays of choices and actions is enhanced (Barsade, 2002). This augmented cognitive flexibility is an essential antecedent of innovation because it allows people to build new associations of ideas (De Dreu et al., 2008) and consider and use multiple plans and pathways to translate new conceptions into usable ones innovations (Hunter et al., 2012). Empirical findings provided evidence for a positive association between work engagement and innovative Performance (Devloo et al., 2015, Hammond et al., 2011; Madrid et al., 2014; Zhou et al., 2014; Bhatanger, 2012). Based on the above argument and in line with the literature, we hypothesize that:

H3: Work engagement is positively related to innovative performance.

The Mediating Role of Work Engagement

To understand the role of work engagement in the relationship between LMX and innovative performance, we use the JD-R theory, which explains job demand and job resources to be linked to organizational outcomes through engagement (Schaufeli & Bakker, 2004). Innovative work is a demanding activity. Thus, it is expected that quality LMX fosters goal accomplishment and stimulates positive affective reactions (Hobfoll, 2001). Such as work engagement, which in turn sparks willingness to repay supervisor by showing high levels of energy, trying new things, and experimenting, leading to the creation of new ideas and novel solutions, leading to higher innovative Performance (Bakker & Leiter, 2010 Gottschalg & Zollo, 2007; Fredrickson et al., 2000; Karatepe, 2013; Xanthopoulou et al., 2008). The extent to which employee engagement implies greater connectedness to an employee's job role increases the perception of the job role as including innovative Performance (Aryee et al., 2012). Therefore, in line with the finding of previous studies, we hypothesized that:

H4: Work engagement mediates the relationship between LMX and innovative performance.

Moderated Mediation Role of Job Characteristics

Previously, studies have considered job characteristics as mediators between leadership and outcome variables (e.g., Piccolo & Colquitt, 2006; Gillet & Vandenberghe, 2014) by conceptually assuming leadership causes job characteristics, and then job characteristics create effects on outcome variables (Kraemer et al., 2008). On the contrary, we argue that job characteristics should be considered moderators because it is an organizational situational factor that should depend more on formal job descriptions and the nature of jobs rather than leadership styles (Hackman & Oldham, 1976; Oldham & Hackman, 2010). Indeed, job characteristics have been empirically shown to significantly moderate the relationship between several variables that impact job performance (Fried & Ferris 1987). Similarly, the relationship between LMX and employee innovative performance through engagement is likely to be strengthened by motivational job characteristics. The job characteristics model proposed by Hackman and Oldham (1976) involves the salient motivational aspects of employment which include skill variety (the extent to which a job requires the use of different skills and talents), task identity (the extent to which the job requires completion of a whole piece of work with a visible outcome), task significance (the extent to which the job affects other's lives), autonomy (the extent to which the job provides significant freedom), and feedback from the job (the extent to which job provides information about performance levels).

Our model extends existing research studies by examining job characteristics as a moderator to the mediated relationships between LMX and innovative performance through work engagement. It is reasonable to expect that employees with perceived quality of LMX would display work engagement more frequently when they perceive motivational job characteristics at work because they are apt to reciprocate these good deeds with positive work attitudes and Performance (Gould-Williams & Davies, 2005). In other words, intrinsically motivating jobs affect the extent to which employees are willing to self-invest their resources in their jobs (Kahn, 1990; Macey & Schneider, 2008) and engaged in their work, and likely to achieve higher innovative performance at work. On the contrary, a lack of motivational job characteristics may turn into a chronic condition whereby employees continuously give more than they receive in return depleting employees' energy resources, eventually making them reserved to engage in extra-role performance and fostering burnout (Bakker et al., 2007). According to the conservation of resources model (Hobfoll, 1989), under conditions of stress and burnout, employees tend to conserve resources for some future event or devalue the resources to counteract the impact of their expected loss.

Finally, it is reasonable to expect that employees with perceived motivational job characteristics would display work engagement more frequently when they perceive the quality of LMX at work because they are apt to reciprocate these good deeds with positive work attitudes and performance (Gould-Williams & Davies, 2005). Based on the JDR theory (Hackman, 1980) and proactive motivation process theory (Parker et al., 2010), we argue that the mediated effect of LMX on innovative performance through work engagement will be strengthened if they experience high motivational job characteristics. Therefore, we hypothesize the following.

H5: Job characteristics will moderate the mediated relationship between LMX and innovative performance via engagement, so the relationship will be stronger for jobs with high motivational characteristics than for jobs with low motivational characteristics.

The Role of Workload: Three-Way Interaction Effect on Innovative Performance

In a similar line of reasoning, by extending H5 further, we hypothesize that workload may also have a more indirect impact in that; it may decrease the effect motivational job characteristics have on the mediated relationship between LMX and innovative performance via work engagement, which suggests a three-way interaction among engagement, job characteristics, and workload. Indeed, generating, promoting, and realizing new ideas is thought to help employees cope with a heavy workload (Bunce & West, 1994). However, these are cognitively and emotionally demanding activities (Janssen & Van Yperen, 2004). For example, activities associated with idea generation imply getting involved in a range of activities (e.g., problem definition, information gathering, and idea evaluation and refinement) that require sustained effort for prolonged periods (Mumford et al., 2002). Moreover, once ideas have been developed, further emotional efforts are required in the idea promotion phase to overcome organizational members' potential resistance to new ideas and obtain support from critical decision-makers (Janssen & Van Yperen, 2004). Finally, because unforeseen obstacles may occur while implementing innovations, people need to devote additional cognitive energy to problem-solving tasks to face unexpected barriers (Bledow et al., 2009). Thus, the workload is considered a barrier to innovative performance because stress negatively impacts the latter (Probst et al., 2007). Though employees have a quality relationship with their immediate supervisor and engage in their job that has motivational job characteristics, if they are under work stress because of workload, they will potentially lose more focus on job completion rather than the generation of new ideas and innovation (Perry-Smith & Shalley, 2003). Thus, the perceived contribution of LMX via work engagement to innovative employee performance when there is a high motivational job characteristic should be stronger when the workload is low or medium. Based on all these arguments, we hypothesize that:

H6: There will be a three-way interaction effect among engagement, job characteristics, and workload on innovative performance such that the moderating/ strengthening effect of motivational job characteristics will be stronger for employees with low (rather than high) workloads.

The overall proposed conceptual model is depicted below in Fig. 1.

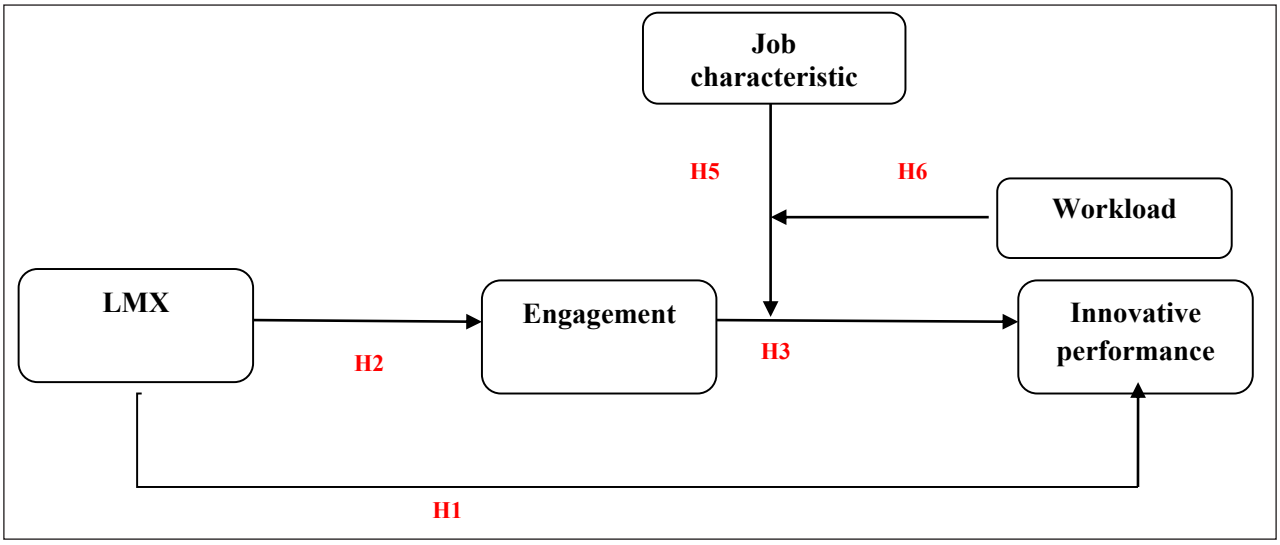


Fig. 1: Proposed Theoretical Framework

Methodology

Sample and Data Collection Procedure

This study was conducted in the Ethiopian banking industry. A cross-sectional design was employed. Data were collected between October to December 2021 from 10 districts and head office employees of one private bank. Subsequently, the Bank's HR departments were contacted to gain permission to collect data.

We distributed surveys to 576 randomly selected employees. The survey was designed based on self-reported measurements of participants' perceptions about the variables usually used in leadership studies (Ng & Feldman, 2012). The participants were selected only from branch managers, division managers and supervisors, senior officers, and junior officers. Questionnaires were administrated by directly sending to their e-mail by the assistant of the system administrator. The respondents received a cover letter explaining the study and a pledge for confidentiality and anonymity so that they could respond honestly as possible. This helps reduce respondents' evaluation hesitation and social desirability bias (Podsakoff et al., 2003). The three-way interaction model used in this study will help minimize common method variance that is potentially biased because respondents cannot easily combine related items and produce the correlation needed in the responses (Chang et al., 2010).

Measures

Multiple-item scales, closely following prior studies, were used to measure each construct. All items were measured in a statement followed by a five-point Likert scale. LMX was assessed using six items based on the member versions of leader-member exchange questionnaires developed and used in prior research (e.g., Graen & Uhl-Bien 1995, Gerstner & Day, 1997). Respondents indicated the agreement level to which the items characterized the quality of their exchange relationships with their supervisors. Work engagement was measured using Rich's (2010) 18-item scale, which fully reflects Kahn's (1990) conceptualization as the degree to which individuals invest their physical, cognitive, and emotional energies into their role performance (Newman & Harrison, 2008). The three sub-dimensions of work engagement had six items each. Response alternatives were given on a Likert scale from 1 "never" to 5 "always/every day." Innovative performance was measured with a 4-item scale. Welbourne, Johnson and Erez (1998) developed and validated this scale. To measure job characteristics, 15 items from the revised form of the Job Diagnostic Survey (Idaszak & Drasgow, 1987; Hackman & Oldham, 1974) were used, ranging from "1" strongly disagree to "5" strongly agree. Finally, the workload was assessed using the Quantitative Workload Inventory (QWI), a three-item scale developed by (Quinn & Staines, 1979). QWI captures the amount of work in a job with participants asked to report their responses on a five-point Likert scale from "1" (never) to "5" (always). A global score was computed for analyses, with higher scores indicative of a higher level of the variables. Demographic variables were also measured as possible control variables in this study. Gender was measured as a dichotomous variable coded as "1" for males and "0" for females. Age was measured in four ranges: "1" for 21-30 years to "4" for those above 51 years. Tenure in the organization (measured by years of experience in the current job) reflects domain expertise (Oldham and Cummings, 1996), ranging from "1" for less than one year to "5" for above16 years. Educational level was measured in three categories, ranging from "1" for Diploma and less than, to "3" for "second degree and above level." The position of the work was also considered by classifying it into three, "1" = non-clerical, "2" = clerical, and "3" = managerial level.

Data Analysis

The value of any research depends on the reliability and validity of the work. Cronbach's alpha is widely used across organizational sciences to measure reliability and internal consistency in Likert-based assessment instruments (Bonett & Wright, 2015). Before testing the hypothesized relationships, we assessed whether the model was robust. Confirmatory factor analysis (CFA) was conducted using EQS 6.2 (Bentler & Weeks, 1979, 1980), with maximum likelihood estimation. Then linear multiple regression analysis was conducted to test hypotheses H1 through H3 using SPSS 25. The mediation model (H4) was estimated using SPSS PROCESS-macro model 4 (Hayes, 2018), applying one significant mediator for the analysis. Finally, the moderated mediation (H5

and H6) was tested PROCESS-macro models 14 and 18 (Hayes, 2018) were employed.

Result and Discussion

Descriptive Statistical Analyses

Out of the 576 questionnaires distributed, 564 usable questionnaires were returned, with a usable response rate of 97.9%. Then, after excluding incomplete and inconsistent responses, 549 (95.3%) were retained for further analyses. Of the participating respondents, 70.2% were male, 58.3% were between the ages of 21 and 30, and 40.4% worked in the organization between 1 and 5 years. Concerning educational level, the majority of the participants, 65%, had a bachelor's degree. 75% held a clerical position, and 77% were from branch offices (see Table 1).

Table 1: Demographics of Respondent

Measure	*Item*	*Frequency*	*Percent*
Gender	Female	161	29.8
	Male	379	70.2
Age	21-30	316	58.3
	31-40	170	31.4
	41-50	41	7.6
	>51	15	2.8
Education	Diploma and less	64	11.7
	Bachelor degree	357	65.0
	Master's degree and above	120	21.9
Tenure	<1 year	133	24.4
	1-5 years	220	40.4
	6-10 years	101	18.6
	11-15 years	71	13.1
	> 16 years	19	3.5
Job Position	Non -clerical	44	8.5
	Clerical	384	74.0
	Managerial	91	17.5

Gender (1= male, 0= female) Age (1= 21-30, 2= 31-40, 3= 41-50, 4= >51). Education level (1= less than Diploma, 2= bachelor's degrees, 3= master's degrees and above). Experience (1= <1 year 2= 1-5, 3= 6-10, 3= 11-15, 5 >16). Job position (1= Non-clerical, 2= Clerical, 3= Managerial).

Table 2 presents the study variables' means, standard deviations, correlations, and reliability indices. It was found that work engagement, LMX, and job characteristics correlated significantly with innovative performance (r =.467, p, 0.01; r =.283, p, 0.01; r = .363, p, 0.01), respectively. Similarly, the workload was significantly correlated with Innovative Performance (r = 0.099, p, 0.05). All the constructs have a good reliability measure (alpha >.7). Descriptive statistics reflecting mean, standard deviation, internal consistency, and correlation are summarized in Table 2.

Table 2: Means, Standard Deviations, and Intercorrelations among Study Variables

Variables	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
Gender	.30	.458	-									
Age	1.55	.752	-.018	-								
Education	2.10	.574	-.032	-.145**	-							
Experience	2.31	1.084	.135**	.614**	-.070	-						
Job Position	2.09	.502	-.040	-.136**	.427**	.013	-					
LMX	4.16	.633	-.076	.045	-.012	-.005	.053	**(.900)**				
WE	4.16	.452	.034	.033	-.038	-.019	.031	.257**	**(.869)**			
JC	3.91	.572	-.068	.041	-.036	-.060	.069	.406**	.362**	**(.829)**		
WL	2.56	.919	-.091*	-.062	-.076	-.071	-.023	-.109*	-.227**	-.083	**(.811)**	
IP	4.21	.555	-.050	-.052	-.028	-.116**	-.002	.283**	.467**	.363**	-.099*	**(.722)**

N = 549, Coefficient alphas are in parentheses; ***p < .001; **p < .01; * p < .05

LMX = Leader Member Exchange, WE = Work Engagement, JC = Job Characteristics, WL = Workload, IP = Innovative Performance.

Measurement Model Analysis

We conducted CFAs using EQS 6.2 (Bentler and Weeks, 1980). According to Hair *et al*. (2010), the recommended fit value for the comparative fit index (CFI) is 0.90. Similarly, while the root means squared error of approximation (RMSEA) indicates perfect fit, values less than 0.08 are considered good fits. Finally, the Akaike information criterion- AIC (Akaike, 1987) was also reported. The results of CFA analysis indicated that the hypothesized 11-factor model suggested a good fit: (χ2= 501.07; df= 159; CFI= 0.902; RMSEA=.064). Furthermore, as seen from Table 3, all variables in the hypothesized model, separately and collectively, exhibited a better fit to the data, thereby providing evidence of the distinctiveness of the study's variables. These results suggest that our study variables are distinct from each other.

Table 3: Fit Indices for Structural Models

Models	χ^2	*Df*	*CFI*	*SRMR*	*RMSEA*	*AIC*
Model 1 LMX (6 items)	45.05	9	0.902	0.026	0.086	27.026
Model 2 WE (3-factors)	254.4	73	0.915	0.045	0.070	108.4
Model 3 IP (4 items)	2.771	2	.998	0.014	0.027	-1.229
Model 4 JC (3 factors)	242.14	67	0.912	0.066	0.074	108.14
Model 5 WL (3 items)	0.00	0	-	-	-	0
Model 6 Full model (11 factors)	501.7	159	0.902	0.064	0.064	185.7

LMX = Leader Member Exchange, WE = Work Engagement, JC = Job Characteristics, WL= Workload, IP = Innovative Performance.

Hypothesis Testing

We first tested hypotheses 1 to 3 using multiple hierarchical regression analyses. In the first step, gender, age, education, and tenure were entered as control; then predictors were entered in the second step. Hypothesis 1 predicted a positive relationship between LMX and innovative performance. As shown in Table 4 (Model 2), LMX is positively related to innovative performance (b =.230, p < .001), providing support for H1. Hypothesis 2 predicted a positive relationship between LMX and work engagement. As shown in Table 4 (Model 5), LMX is significantly related to work engagement (b = .269, P < .001), providing support for H2. As shown in Table 4 (Model 3), Hypothesis 3 was also supported as work engagement was significantly related to (b =.473 p<.001) innovative performance.

To test the indirect effects of LMX on innovative performance (H4), engagement was examined using PROCESS Macro model 4. Estimates were taken at a

95% confidence interval, and the bias-corrected and accelerated (CI). Preacher and Haye's (2008) parametric bootstrapping procedure of over 5,000 were used because the bootstrapped confidence interval approach generates a more accurate estimation of the indirect relationship than traditional methods (Gong et al., 2013; MacKinnon et al., 2004). As shown in Table 4 (Model 7), engagement mediates the relationship between LMX and innovative performance (effect= .517; 95%, SE=.049, CI [.065, .141]), providing support for H4.

Table 4: Relationship between LMX, Work Engagement, and Innovative Performance

	Engagement		Innovative Performance				
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*	*Model 7*
Gender	.061	.082	-.027	-.004	-.056	-.012	-.040
Age	.074	.050	-.032	.004	-.004	-.002	-.021
Education	-.062	-.056	-.027	-.020	.002	-.029	.013
Tenure	-.075	-.063	-.140	-.127	-.104	-.112	-.091
LMX		.269***		.230***		.293***	.177***
WE					.473***		.428***
R^2	.011	.082	.017	.106	.238	.101	.270
R^2 change	.011	.071	.017	.089	.221		
F-value	1.109	7.431	1.715	9.887	26.02	11.80	32.31
Change in F	1.109	38.624	1.715	49.91	145.08		

	Effect	*SE*	*LLCI*	*ULCI*
Total Effect	.258***	.037	.186	.330
Direct effect	.157***	.037	.089	.224
Indirect effect	.115***	.021	.075	.157

$N_{individual\text{-}level}$=549; Standardize coefficient beta are reported ***p< .001; **p<.01; * p< .05; LMX=Leader Member Exchange, WE=Work engagement.

We also examine whether the indirect effects of the quality of LMX on innovative performance via work engagement varied across the level of motivation in job characteristics. We used Hayes' (2018) PROCESS macro (model 14) to compute the conditional indirect effects. The results in Table 7 show that the conditional indirect effects of the quality of LMX on innovative performance were stronger and more positive in the high motivational job characteristics condition but weaker and more significant in the low motivational job characteristics condition.

Table 5: Moderating Effect of Job Characteristics

	Innovative Performance	
Variable	*Model 1*	*Model 2*
Gender	.0825(.0443)	-.0033(.0453)
Age	.0305(.0344)	.0119**(.005)
Education	.0450 (.0385)	-.1319***(.0406)
Experience	-.0267 (.0238)	-00432(.0059)
LMX	.183***(.030)	.095**(.035)
WE		.475***(.049)
JC		.195***(.041)
WE* JC		.155**(.056)
R^2	.066	.282***
R^2-Change		.010**
F	38.57	53.518

$N_{individual\text{-}level}$=532; unsttandardized beta coefficients are reported ***p< .001; **p< .01; * p< .05; LMX=Leader Member Exchange, WE=Work Engagement, JC=Job Characteristics.

Fig. 2 below provides a visual representation of the conditional indirect effects and the total effects of the quality of LMX on innovative performance as a joint function of work engagement and job characteristics. The slope test indicated that when motivational job characteristics are high, the positive relationship between the quality of LMX and innovative performance via work engagement became higher than when motivational job characteristics were low, providing support for hypothesis 5.

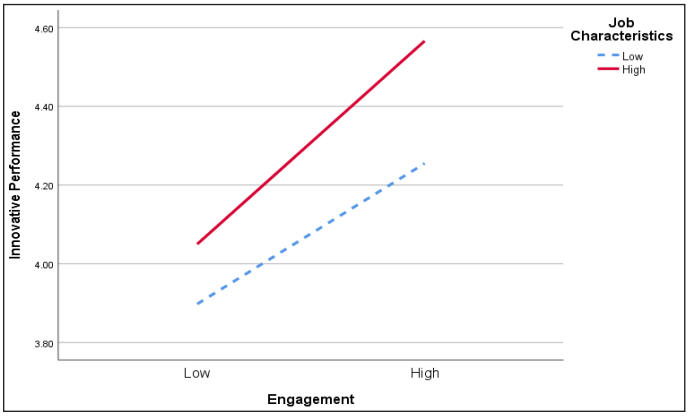


Fig. 2: Moderating Effects of Job Characteristics

As shown in Table 6, three-way interactions among work engagement, job characteristics, and workload were also partially supported in Model 2 (b = -0.1154, p < .05): The moderating effect of job characteristics on the indirect relationship between LMX and innovative performance via engagement was stronger at the low workload.

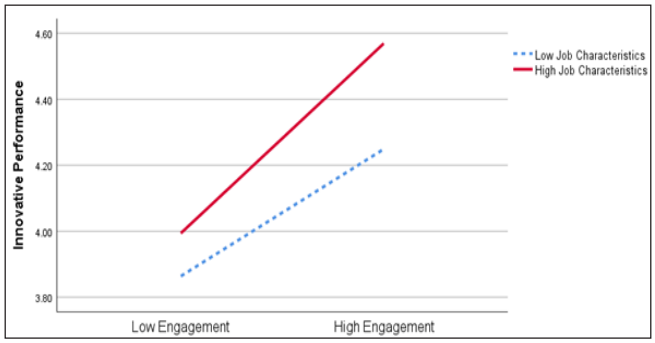
Table 6: Joint Moderating Effects of Job Characteristics and Workload: Three Way Interaction Effect on Innovative Performance

	Innovative Performance	
Variable	*Model 1*	*Model 2*
Gender	.0827(.0444)	-.0033(.0453)
Age	.0306 (.0344)	.0119**(.005)
Education	-.0447(.0386)	-.1319***(.0406)
Experience	-.0267(.0238)	-00432 (.0059)
LMX	.183***(.030)	.103**(.036)
WE		.494***(.051)
JC		.177***(.042)
WL		.028(.023)
WE * JC		.074(.072)
WE*WL		-.032(.047)
WE * JC *WL		-.119*(.057)
R^2	.065***	.287***
change R^2		.006*
F-value	37.9	27.044

LMX=Leader Member Exchange, WE=Work Engagement, JC=Job Characteristics, WL=Workload.

To clarify the three-way interaction (Fig. 3a) shows that the indirect effect of the quality of LMX on innovative performance via work engagement was high when the level of motivational job characteristics is high and low workload, but when a job characteristic is motivational, but the workload is high the indirect effect of quality of LMX on innovative performance via work engagement was slightly weakened (see Fig. 3b). Thus, motivational job characteristics rejuvenated the influence of the quality of LMX into improved, innovative performance by enhancing employee engagement, especially when the workload is low. Thus, Hypothesis 6 was supported.

A. Low Workload



B. High Workload

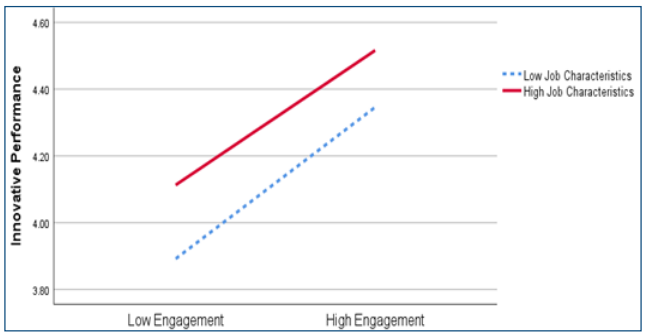


Fig. 3: Three-Way Interaction Effect on Innovative Performance

Discussion and Implication

Nowadays, organizations need energetic employees who engage in extra-role performance beyond that of job descriptions (Macey et al., 2009). Given its vitality, much has been discussed about the importance of engagement and individual innovative performance for organizational results. However, there is little empirical evidence to support these claims, leading to the need for a better understanding of the factors that improve innovative performance. In line with this concern, the purpose of this research was to conceptualize a framework and test a complete model of how employees perceived the quality of their relationship with their immediate supervisor affects innovative performance, the socio-psychological mechanisms (work engagement) explaining LMX-innovative performance relationship, and the role job characteristics and workload play in the indirect relationship between quality of LMX and innovative performance via engagement.

The results showed that employees who perceived high-quality relationships with their immediate supervisors exhibited improved employee engagement and innovative performance. These results align with the works of Halbesleben and Wheeler (2008) and Saks (2006). This finding suggests the crucial role that an immediate leader plays in fostering engagement and innovative performance. Leaders who support subordinates (professionally and emotionally) give them direction and information, unleash hidden potential, and foster willingness among subordinates to dedicate efforts and abilities to accomplish work tasks and perform innovatively (Meijman & Mulder, 1998; Burns, 2016; Jin, McDonald & Park, 2016)

Based on the social exchange theory, the finding suggests that supervisors have an essential role to play, not just in the way they implement and enact policy and procedure (Bowen & Ostroff, 2004) but also through their daily behavior toward their followers sending signals about the extent to which they place value on their employees, which make the latter to reciprocate through high levels of engagement and innovative performance (Bakker et al., 2008, Bakker, 2011; Karatepe & Olugbade, 2009). Karatepe and Ngeche (2012) posited that employees getting adequate resources from their workplace tend to be engaged with their work and thus become more embedded in their jobs.

This study also highlights the attitudinal and behavioral contributions engaged employees make to organizations. Our findings support other studies that have demonstrated that engaged employees promote organizational effectiveness by demonstrating extra-role performance (Christian et al., 2011, Rich et al., 2010, Snape & Redman, 2010). Our study's findings show that the positive effects of work engagement on innovative performance are consistent with the Broaden-and-Build theory of positive emotions (Fredrickson, 2001), positing that experiencing positive emotions broadens the thought-action repertoires, thus increasing the likelihood of innovative performance. Engaged employees are likely to perform extra-role behaviors, perhaps because they can free up resources by accomplishing goals and performing their tasks efficiently, enabling them to pursue activities that are not part of their job descriptions. Another possibility is that engaged employees consider all aspects of work part of their domain; thus, they step outside their roles to work toward goals held by coworkers and the organization.

Employee engagement is an outcome and a process that leads to better performance. In line with this, our results suggest that consistent with the predictions, high-quality LMX relationship not only contributes to directly employees' work engagement but indirectly also positively influences their innovative performance. This is because the quality of the LMX relationship is positively related to employees' job performance and amplifies the initiation of a motivational process (i.e., the provision of job resources that are positively related to work engagement). In other words, even if leaders demonstrate supportive practices, innovative performance depends on how engaged the employees are at work. This suggests that work engagement is pivotal for organizations that desire to achieve competitive advantages through innovative activities of employees.

We also examined whether motivational job characteristics played a role in the indirect relationship between LMX and innovative performance through work engagement. The results of the two-way interactions indicated that job characteristics are essential contingent factors in the indirect relationship between LMX and innovative performance via work engagement. This corresponds with prior arguments suggesting that job characteristics are an essential moderator in creativity research because they provide stimulation and information opportunities

(Shalley et al., 2009). Even if the leader's support enhances employee engagement, this requires motivational job characteristics for them to evolve into different roles, develop new ideas, and push for their implementation and innovative Performance (Barry & Stewart 1997; Wrzesniewski & Dutton 2001).

Finally, the three-way interaction in this study reveals that the enabling role of motivational job characteristics in the indirect relationship between the quality of LMX and innovative performance via work engagement was mainly weakened in the presence of a high job demand workload. This is likely because high strain due to high workload prevails how motivational job characteristics influence idea generation (Hunter et al., 2007) even if employees have good support from their supervisor and are engaged. The reason is that when employees work under stress such as workload, they focus more on job completion rather than the generation of new ideas (Perry-Smith & Shalley, 2003), which diminishes the need for extra-role performance, such as innovation (Molleman & Broekhuis 2001, Winefield & Jarrett, 2001). Moreover, the weakening effect between workload and job characteristics also entails that a high workload worsens how individual employee perception of job characteristics results in an increased feeling of pressure and anxiety, which may pose the practical effect of LMX into innovative performance via work engagement. Such interactions inhibit employees' ability to recognize the contributions that leaders' support can make to engagement.

Theoretical Implications

In line with previous studies (e.g., Basu & Green, 1997; Sanders et al., 2010; Scott & Bruce, 1994), the findings bring some valuable theoretical implications for innovation and leadership literature by showing one of the processes through which the supervisor-subordinate relationship leads to increased innovative performance. One of the significant theoretical contributions of this study is that employees who experience high-quality working relationships with their supervisors tend to reciprocate by displaying innovative behavior because, in such relationships, employees get their supervisors' support by engaging in extra-role behaviors. Thus, this study broadens LMX and innovation literature by analyzing the social-psychological mechanism that explains the LMX - employee innovative performance relationship.

The other theoretical contribution of this study is positioning work engagement as mechanisms that operate between subordinate qualities of relationship with supervisors and employees' innovative performance. Moreover, this study contributes to the job characteristic theory by identifying how job characteristics moderate work engagement—innovative performance. This is a different perspective than other studies considering job characteristics as a mediator (Piccolo & Colquitt, 2006). Finally, to our knowledge, hardly any study examined the framework in the Ethiopian context. Therefore, the present study contributes to the literature by generalizing and validating the social-psychological mechanism that explains the LMX-employee innovative performance in the context of a developing nation.

Practical Implications

We have illustrated that engagement might help employers improve or maintain their competitive advantage. Our results show that supervisors' critical role in stimulating employee engagement affects the extra-role work performance of followers. In terms of innovative performance, this signals that an engaged workforce will likely perform more innovatively. The banking industry in Ethiopia is characterized by high competition and high customer expectations with identical products and services. Support of supervisors will enhance employees' work motivation and engage them even in demanding situations. Thus, the organization must seek to provide an environment that encourages healthy professional solid, informal relationships between leader and subordinates and motivates employees to engage in extra-role behavior. One-way supervisors develop personal relationships with their subordinates by engaging in social exchange activities essential to the employee (Richard et al., 2009). Moreover, to sustain the connectivity of the leader's support and engagement to extra-role performance. A different approach can create an engagement culture by building an environment of trust in management and immediate supervisors and communicating an engagement culture through an onboarding process in which employees learn about the organization's culture.

At an individual level, the organization must ensure that the jobs allow the perception of autonomy, significance, and variety by adopting a job redesign strategy that increases enrichment in their members' roles. However, a one fits for all approach to employee engagement might not be the most effective. Leaders should find out what resources are most desired by employees and are most likely to create a sense of obligation that is returned with greater engagement. Moreover, organizations need to create a work environment that reduces stress by assessing the gains and losses to diminish the stress of a high workload. This can be done by placing work designs that impact employees' workload and stress management intervention programs that focus on enhancing positive emotional states to increase engagement and innovative performance.

Limitations and Future Research Direction

The results of this study should be considered in light of its limitations. This study used a cross-sectional design. Hence, longitudinal studies should confirm the cross-sectional results obtained in this study. All measures were perceptual and self-reported; the response could have been subjective. Future research should use other than self-reports of performance (e.g., supervisor ratings), which would have been helpful to confirm the results (Podsakoff et al., 2003). Data were collected from one organization in a banking sector; there is a need to validate the explanations presented here with additional testing of the hypothesized relationships in a different organizational setting. This study mainly focuses on innovative performance as the outcome variable. Assuming that this may not always apply to the job in different roles, future research also needs to consider different extra-role behavior and attitudinal measures or role behaviors.

Conclusion

Our study contributes to the debates around job resource (LMX)–individual outcome (innovative performance) linked through the development and testing of a moderated mediated model incorporating employee engagement, HRM practices (job characteristics), and job demand (workload). We tested many hypotheses to determine how these factors are interrelated. We found that the quality of LMX is positively related to employee engagement and innovative performance. The findings are consistent with social exchange theory, which suggests organizations can cultivate a climate of reciprocity that elicits positive attitudinal and behavioral outcomes from employees. We further strengthen our argument by investigating the mechanism of how employees' perception of the job characteristics and its mutual interaction with workload impact the indirect relationship between LMX and innovative performance via engagement.

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