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Leader-Member Exchange, Efficacy and Job Performance: A Cognitive Perspective Interpretation

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Abstract

The traditional literature focuses on the research of the direct influence which leadership-member exchange has on the employees' work performance while lacks of in-depth exploration of its internal mechanisms. This essay sets from the perspective of employee cognitive, introduces relative hypothesis of Processing Efficiency Theory and builds a comprehensive model of the influence which leadership-member exchange has on the employees' work performance under the action of internal and external efficacy. After the questionnaire inquiry of 420 employees and their supervisors, the conclusions are: leadership - member exchange has a positive impact on employees' work performance and self-efficacy act as an intermediary between the two. In addition, the mediate function is adjusted by means efficacy.

Key words: Leader- member exchange; Self-efficacy; means efficacy; Job performance

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INTRODUCTION

Leader–member exchange theory was put forward firstly by Grean, Dansereau & Minami(1972), which has apparent advantage in explaining leader effect when compared with traditional balanced leadership theory. The theory thought that there exist differential exchange relationship between leader and member. High quality LMX relationship indicates that there are mutual trust, mutual respect, mutual influence and high quality information exchange and feedback between leader and member. On the other hand, low quality LMX relationship means that the exchange between leader and member is only limited to formal employment agreement (Chen, Lam, & Zhong, 2007). Numerous studies have demonstrated that leader–member exchange can apparently affect employee's job performance (Harris, , Wheeler, & Michele Kacmar, 2009; Law, , Wang, & Hui, 2010; Chan & Mak, 2012). However, those studies mainly focused the interrelationship between leader–member exchange and employee's work performance and lacked of study of their interaction mechanism.

Among the studies of organization, the explanations of interrelationship between leader–member exchange and employee's job performance were mainly based on social exchange theory. In the process of leader–member exchange, as a response to the high quality of the exchange relationship, members will have better performance. However, as to the influencing process of leader behavior, the cognition and emotion of employees are important intermediary factors (Wang et al, 2009). Former studies of LMX relationship lacked of consideration for employee's psychological intervention, which makes the action mechanism indefinite. Starting from this perspective and take employees' cognitive psychological change as an intermediary, this paper can better reveal the cause of employees' behavior and further reveal the internal mechanism on which LMX improves employee performance. According to the internal and external efficiency theory put forwarded by Eden (2001), self-efficacy refers to the confidence of successful completion of the task by using internal resources which reflects the self-knowledge dimension (Eden & Sulimani, 2002). Means efficacy refers to evaluation of effectiveness of available tools to complete tasks (Eden, Ganzach, Flumin-Granat, et al., 2010). It is perceptions of situational factors which can affect employees' work

performance. Therefore, choosing self-efficacy as an mediating variable and means efficacy as a moderator, this paper sets to open up the "black box" between LMX relationship and employee's job performance (Figure 1).

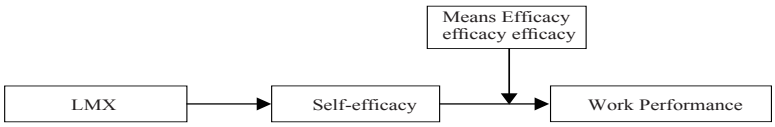

Figure 1
Model and Literature Review

LMX and Work Performance

LMX theory points that leaders and subordinates will develop relationship with different closeness. In general, they form high quality exchange relationship only with a few members of the "circle". Under this circumstance, the effect and support of leaders will surpass formal work specification and employees will have more autonomy and bear more responsibility. On the contrary, low quality of LMX relationship will limit their exchange to formal employment agreement. Scholars analyzed the LMX relationship and employee's work performance and found an apparent effect of LMX on employee's work performance. Erdogan & Enders (2007)thought that employees with high quality LMX relationship tend to pay back with high work performance, so as to keep balance or a fair social exchange (Erdogan & Enders, 2007).Thus, we have the hypothesis 1.

Hypothesis 1: LMX has a positive effect on employee work performance

Internal and External Efficacy

Efficacy is not the evaluation of oneself but the confidence people hold to accomplish tasks in different conditions. Based on this, Eden's (2001) put forward the internal and external efficacy theory, including self-efficacy and means-efficacy. Self-efficacy is internal efficiency awareness and refers to the confidence of successful completion of the task by using internal resources (Eden & Sulimani, 2002). Means efficacy is external efficiency awareness and refers to evaluation of effectiveness of available tools to complete tasks.

Intermediary function of Self-efficacy

As already noted above, high quality LMX send a signal of trust and recognition to employees and is also an important signal of leader investment in employees. Under this circumstance, the sense of obligation is enhanced between leader and employee. In return for the leader, employee tends to work harder and has better work performance. Therefore, LMX has a positive effect on employees' work performance. On the other hand, former studies on influencing mechanism of leader behavior on employee work performance believed that LMX has no direct effect on employee work performance but indirectly through employees' internal psychology and cognitive state. Based on this view, it is reasonable to assume that LMX does not affect employee work performance directly but through the intermediary function of self-efficacy.

Among the studies of LMX, leaders will assign task with different levels to employees. Some employees will get a tougher and more important task, the result is these employees get the chance to develop new skills or get vicarious experience and therefore enhances their self-efficacy. Leaders can encourage employees to undertake tough tasks and can also express their high expectation to employees (Eden, 1990). These send out a signal of trust and recognition to employees undoubtedly. Receiving this signal, employees are inspired and have more courage to face difficult and their self-efficacy is enhanced.

On the other hand, high self-efficacy will increase employees' possibility of setting challenging target, encourage them to work harder and enhance their durability of resisting setbacks and finally promote the improvement of individual work performance. Walumbwa et al (2011) found that workers with higher self-efficacy tend to have higher performance when compared with ones with lower self-efficacy (Walumbwa, Mayer, et al., 2011). It can thus be seen that self-efficacy has positive effect on work performance. Thus, study provides the hypothesis

Hypothesis 2: self-efficacy plays an intermediary role between LMX and work performance.

Regulation Function of Means Efficacy

Among the extending study of self-efficacy, Eden (2001) thought that the concept of self-efficacy was useful but still had limitation. Eden stated that the internal resources of self-efficacy include knowledge, experience, skills, willpower and endurance. However, these internal resources are only one part of individual subjective efficacy. He believed that there existed a subjective external efficacy called means efficacy. Similar to the effect of self-efficacy to work performance, people has a belief in means efficacy, including belief in equipment, staff, procedure and program and so on.

As stated earlier, researches have shown that employees with high level self-efficacy tend to have better work performance. However, there is disparity between willing and final behavior. Whether employees willing or trend to achieve higher performance will come true depends on certain situational factors. Means efficacy reflects employees' perception of organizational support environment. Therefore, our research chooses means efficacy as a moderating variable, believing that it can regulate the relationship between self-efficacy and work performance.

Based on the above points of view, self-efficacy and means efficacy have an interaction effect on employees' work performance. Employees who believe in their own ability and the effectiveness of means will have high performance. The support for individual ability and means can encourage employees to work. Here, we have the hypothesis 3.

Hypothesis 3: Means efficacy has a positive effect on the relationship between self-efficacy and work performance.

Furthermore, as means efficacy can enhance the influence of self-efficacy and self-efficacy affects the relationship between LMX and work performance, it is reasonable to believe that means efficacy can regulate this intermediate effect. That is, means efficacy has moderated mediation (Muller, Judd & Yzerbyt, 2005).

Hypothesis 4: Means efficacy has a positive effect on the intermediate effect of self-efficacy.

1. METHOD

1.1 Sample and Procedure

This study collected paired data. Respondents included employees from 12 companies in China, as well as the direct supervisors. These companies include 5 state-owned enterprises, 3 private enterprises, 3 joint ventures and a foreign enterprise. 420 surveys were returned for an overall response rate of 52%. We removed surveys with missing data for this study's variables; as a result, the final sample totaled 306. The majority of the respondents were men (184 individuals, or 60.10%),see Table1. The average time employees and their supervisor cooperated were 2.96 years.

Table 1
Demographic Characteristics Table

Background variables	Options	Frequency	Percentage
Gender	Man	184	60.10%
	Woman	122	39.90%
Job time	Within one year	101	33.00%
	2-3 years	125	40.85%
	4-6 years	60	19.61%
	7-9 years	15	4.90%
	More than 10 years	5	1.64%
Type of company	State-owned enterprise	5	41.67%
	Private enterprise	3	25.00%
	Joint venture	3	25.00%
	Foreign enterprise	1	8.33%
	Others	0	0.00%
Education	High school diploma	77	25.16%
	Associate degree	103	33.67%
	Bachelor degree	115	37.58%
	Master degree	11	3.59%

1.2 Measures

We used Graen & UhlBien (1995)'s scale of seven items to measure LMX (Schriesheim, Castro, & Cogliser, 1999). The seven items including "My boss is very understanding of my potential," "I know my boss is very satisfied with my work" and so on. Coefficient α of the measure was .84. Self-efficacy is used Ralf Schwarzer, Judith BaBler's scale of seven items (Schwarzer, Bäßler, & Kwiatek, 1997). List items are "If I try to do it, I 'm always able to solve the problem," "If I pay the necessary efforts, I will be able to solve most of the problems." Coefficient α of the measure was .86. Eden and colleagues (2010) developed a scale to measure means efficacy. The scale includes 6 items, such as "My job tools is very good," "My job tools can help me very convenient to serve customers." Coefficient α of the measure was .86. Finally, study used Tsui et al (1997)'s scale to measure subordinates work performance (Tsui, Pearce, Porter, et al., 1997). It has 6 items. List items are "My workload is higher than the average level of the department," "My work quality is higher than the average level of the department". Coefficient α of the measure was .90.All items used in the present study were measured by a 5-point Likert-type scale ("1"=Strongly Disagree; "5"=Strongly Agree).

Control variables: Since employees job performance is assessed by direct superior, their cooperation time may affect the result of performance evaluation. Taking into account the possible impact on the results, we chose the subordinate gender, working hours, company type, levels of education as control variables.

2. RESULTS

2.1 Descriptive Statistical Analysis

Table 1 showed the mean, standard deviation, and correlation coefficients among the variables. As can be seen from the correlation coefficients, self-efficacy and leader - member exchange ($r = 0.20$, $p < 0.01$), employee performance ($r = 0.47$, $p < 0.01$) were significantly correlated. On the other hand, from Table 2, the diagonal AVE of each variable that was greater than the correlation coefficient, which determines, the variables had good discriminant validity.

2.2 Regression Analysis

The study used multiple linear regressions to verify hypotheses 1 and 2. As can be seen from Table 3, after adding control variables, leader - member exchange showed a significant positive correlation with self-efficacy ($\beta = 0.18$, $p < 0.01$; $F = 9.13$, $p < 0.01$). Hypothesis 2 predicted self-efficacy act as an intermediary between LMX and job performance. Referring to Kristopher J. Preacher et al (2007)'s method (Preacher, Rucker, & Hayes, 2007), first regressed LMX and job performance, data analysis showed a positive correlation between the two($\beta = 0.20$, $p < 0.01$; $F = 13.74$, $p < 0.01$), hypotheses 1 was confirmed; then added self-efficacy as mediating variable, regression results showed that: self-efficacy was significantly related with job performance ($\beta = 0.38$, $p < 0.01$; $F = 22.29$, $p < 0.01$), meanwhile the influence of LMX disappeared ($\beta = 0.10$, $p > 0.1$), described self-efficacy played fully intermediary role between LMX and job performance, hypothesis 2 had been confirmed.

Table 2
Mean, Standard Deviation and Correlation Coefficients Among Variables (n = 306)

Variable	M	SD	1	2	3	4	5	6	7	8
Sex	1.35	0.48	0.62							
Jobtime	2.96	0.44	0.08	0.59						
Company	3.36	0.75	0.02	-0.28**	0.60					
Education	3.11	0.51	-0.04	0.06	0.07	0.60				
LMX	3.45	0.64	-0.03	0.09	0.04	0.04	0.62			
Self-efficacy	3.79	0.54	-0.10	0.03	-0.09	0.03	0.20**	0.63		
Means efficacy	3.45	0.70	-0.04	0.01	0.02	0.01	0.28**	0.26**	0.62	
Performance	3.7	0.65	-0.03	0.06	-0.05	0.04	0.23**	0.47**	0.11	0.60

Note: The value of diagonal is AVE, * P <0.05, ** P <0.01

Table 3
LMX, Self-Efficacy and Job Performance Regression Analysis (n = 306)

Variable	Self-efficacy	Job performance	
		Process1	Process2
control variable			
Sex	-0.1	-0.05	-0.01
Job time	0.07	0.03	0.05
Company	-0.05	-0.13	-0.07
Education	0.12	0.02	-0.03
Independent variable			
LMX	0.18**	0.20**	0.1
Intermediation			
Self-efficacy			0.38**
F	9.13	13.74	22.29
R^2	0.13	0.19	0.31
ΔR^2		0.17**	0.30**

Note: * P <0.05, ** P <0.01

Study used regression testing hypotheses 3. In order to reduce the impact of multicollinearity, first centralized independent variable and moderator variable, and then multiplying to get interaction term. Data analysis results were shown in Table 4: interaction term between self-efficacy and means efficacy had significant positive correlation with job performance (β = 0.24, p <0.01; F = 21.00, p <0.01).In addition, study drew figure 2, which can see regulatory mechanisms more clearly.

Table 4
Self-Efficacy, Means Efficacy and Job Performance Regression Analysis (n = 306)

Variable	Job performance		
	Process1	Process2	Process3
control variable			
Sex	0.06	-0.01	-0.01
Job time	0.03	0.06	0.02
Company	-0.12	-0.07	-0.06
Education	0.03	-0.02	-0.03
Independent variable			
Self-efficacy		0.38**	0.34**
means efficacy		0.08	-0.04
Regulating effect			
Self-efficacy * means efficacy			0.24**
F	12.932	21.2	21
R^2	0.147	0.3	0.33
ΔR^2	0.135**	0.28**	0.32**

Note: * P <0.05, ** P <0.01

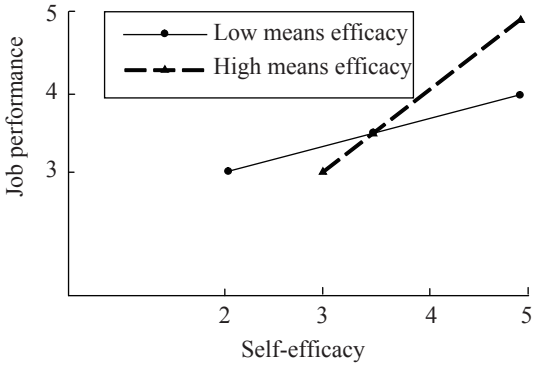

Figure 2
Regulation of Means Efficacy Between Self-Efficacy and Job Performance

The study tested hypothesis 4 using the method proposed by Preacher, Tucker, & Hayes(2007), which was consistent with Yin Jun et al(2012). Based on the point of above scholars, the establishment of the intermediary role in regulation (hypothesis 4) should meet the following four conditions: (1)Leader-member exchanging has a significant impact on the employee's job performance; (2) Means efficacy and self-efficacy interaction (predicting job performance) is significant; (3)Self-efficacy has a significant impact on job performance; (4)When the level of means efficacy is different, the mediating effect of self-efficacy will be different. From the research, conditions (1), (2), (3) were satisfied. Therefore, we only had to test condition (4). The study divided the sample into two groups in accordance with the level of means efficacy, according to the significant test method proposed by Preacher. Study set the means efficacy data which is higher than the mean plus a SD as the first group, and the data which is lower than the mean minus a SD as the second group, and estimated the intermediary role of the two groups respectively. The detailed results were shown in Table 5. The results showed that when the level of means efficacy was high, the mediating effect was stronger and significant (β=0.29, p<0.01), while the level of means efficacy was low, the mediating effect was weak and insignificant (β=-0.09, p>0.1). Therefore, hypothesis 4 was supported.

Table 5
Analysis Results of Moderated Mediation

Means efficacy	Moderated mediation			
	β	SD	Z	P
4.15 (data area of higher than the mean plus a SD)	0.29	0.16	2.18	0.03
2.15 (data area of lower than the mean minus a SD)	0.09	0.06	-0.14	0.45

CONCLUSIONS AND DISCUSSION

Conclusions

The present study aimed to explore the mechanisms that leader-member exchange impacting on job performance, in particular the intermediary role of self-efficacy and the regulation role of means efficacy. Though regression analysis, the proposed four hypotheses in the literature had been all confirmed.

Practical Implications

The results provide some useful implications to management practices. First, how to improve self-efficacy of employee should be taken into leadership training and assessment of an organization. In daily work, a leader should not only pay more attention to exploit the potential of employees and encourage, support and guide them, but also enhance their confidence to complete the task through the expression of expectations, feedbacks, and trust. Second, the internal environment effectiveness of the organization is one of the important factors which affect the employee performance. Therefore, enterprises should improve various regulations, optimize processes, create efficient and orderly business operating environment, in order to promote employees' performance.

Limitations and Future Research

Although research has made some progress, there are some limitations. For example, study used a cross-sectional design. If designed in longitudinal study, there may draw inconsistent conclusions. Thus, in future studies, tracking discussion the causal relationship between leader-member exchange, efficacy and employee job performance is necessary.

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