

The Influence of Leader-Member Exchange and Psychological Empowerment on Followers' Creativity

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Abstract

Only with continuous innovations, enterprises will not be eliminated, and the country will maintain its competitive advantage. However, the innovation in enterprises also depends on followers' innovation. Therefore, how to effectively stimulate followers' creativity becomes the key research of human resource management. This paper discusses the relationship between LMX and followers' creativity from the perspective on motivation, and introduces psychological empowerment as an intermediary variable to study how LMX stimulates or inhibits followers' creativity and then reveal its mechanism. The empirical research on the matching data of "Leader-Member Exchange" shows that followers' creativity will be affected directly by LMX, or indirectly by LMX through psychological empowerment. So, psychological empowerment is situated between LMX and followers' creativity.

Keywords: LMX, Psychological Empowerment, Followers' Creativity

1. Introduction

In the era of economic globalization, intense market competition forces enterprises to innovate constantly for survival and development, and outstanding innovation ability has become the cornerstone for enterprise survival. Followers' creativity, which is followers come up with new and practical ideas for the products, services and management processes of enterprises (Shalley, C. E., Zhou, J., & Oldham, G. R., 2004), is the micro-foundation of enterprise's innovation. Therefore, how to solve the problem of individual creativity has become the focus of various theoretical researches. In academia, there have been many systematic reviews on the influence of leadership factors on followers' creativity. However, most existing researches focus on the relationship between followers' creativity and supportive behavior of the leader, transformational leadership (Gong, Y., Huang, J. C., & Farh, J. L., 2009), empowered leadership (Zhang, X., & Bartol, K., 2010), but only few researches on the interaction between Leader-Member Exchange (LMX) and followers' creativity. Therefore, how and why Leader-Member Exchange (LMX) affects followers' creativity has its own cultural significance, and it needs further in-depth exploration.

This paper follows the general thoughts on leadership of Leader-Member Exchange from the perspective on motivation, brings psychological empowerment into the analytical framework, and uses empirical research to prove the hypotheses.

2. Theoretical Basis & Hypothesis

2.1 LMX & Followers' Creativity

Followers' creativity cannot be enhanced without the information, resources, trust and support from their leaders. Followers in high-quality LMX can receive the resources and support from the leaders much earlier, and the leaders can give them more decision-making power and freedom in innovation-related behaviors. In high-quality LMX, leaders and followers often share the same values and attitudes. Previous studies have shown people who share the same values and attitudes are more likely to develop emotional connections and closeness, followed by supportive behaviors, mutual respect and trust between leaders and followers, and further enhancing communications and cooperation. Leaders will provide reasonable estimates for followers, also help them for practical goal setting, support and encourage them, and followers will work harder to accomplish goals creatively set by leaders. Followers will have a stronger sense of accomplishment, happiness and motivation at work. Thus, their creativity is further stimulated. Previous studies have found followers enhance creativity when the organization is supportive and leaders are good at listening to followers' suggestions and asking them to participate in organizational decision making. Similar studies have also shown that followers' creativity and innovation can be significantly enhanced by interaction between leaders and followers, and leader's support and encouragement. On the contrary, in low-quality LMX, followers may be subject to negative evaluations from leaders, resulting in fear and injustice, thus ruining followers' intrinsic motivation for creativity. All in all, below hypothesis is proposed:

H1: LMX has a significantly positive correlation with followers' creativity.

2.2 Mediating Effect of Psychological Empowerment

Based on LMX theory, creativity theory, measurement standard of psychological empowerment (Spreitzer,1995), in order to improve followers' individual performance and increase the efficiency and outcomes, leaders often delegate authority within a specified timing, which is commonly referred to as "empowering followers". First, in high-quality LMX relationships, leaders often enhance the meaning of work by providing followers with more information about the organization's mission and performance (Spreitzer,1995). Conger and Kanungo (1988) believe that mission information is an important prerequisite for empowerment, because it helps create meaning and a sense of purpose. Second, in a high-quality LMX relationship, the leader expresses confidence in follower's ability and the prospects of high performance. Third, leaders offer followers self-determination and the prospect of autonomy by encouraging them to decide how to conduct their work (Pearce,et al.,2003). In addition, a bigger responsibility will turn into stronger independence consciousness. Finally, LMX encourage followers to participate in decision-making (Manz & Sims, 1987). The process can make followers to better control the current working situation, and enhance the perception that followers' own behaviors can change work results, to finally increase influence. LMX researches have shown that the members with high-quality relationship not only take more responsibilities, but also make a greater contribution (Liden & Graen, 1980). All in all, below hypothesis is proposed:

H2: LMX has a significantly positive correlation with psychological empowerment.

Psychological empowerment is further believed to improve followers' creativity. Psychological empowerment is necessary for creative behavior (Amabile, 1988). First, psychological empowerment is considered to be the direct cause of intrinsic motivation and satisfaction (Thomas &

Velthouse, 1990). Because followers with psychological empowerment treat their work as valuable and meaningful, they are most likely to have a strong intrinsic motivation for their work. Gagne, Senecal and Koestner (1997) proved that there is a positive and significant relationship between meaning and intrinsic motivation. Second, creativity involves trials and error, success and failure, so followers need to try new ways to deal with failure. However, without the freedom and encouragement given by the leader, followers are unlikely to try new ways of working. Third, empowered individuals, with more information and resources, have more confidence and efficiency in their own work. Therefore, they are willing to introduce changes (Spreitzer, 1995), they may use the innovation in their work and expect success (Amabile,1988; Redmond, et al.,1993). All in all, below hypothesis is proposed:

H3: Psychological empowerment has a significantly positive correlation with followers' creativity.

Based on LMX theory, creativity theory, measurement standard of psychological empowerment, a high-quality LMX relationship should give rise to psychological empowerment through four aspects of psychological empowerment, and psychological empowerment in turn affects followers' creativity. LMX researches show that followers with high-quality relationships not only take more responsibility, but also make a greater contribution. This study believes that LMX can be used to influence followers' psychological empowerment to explain the difference in followers' creativity. Empirical studies also prove the relationship between psychological empowerment, LMX and followers' creativity (Zhang & Bartol, 2010; Aryee & Chen, 2006; Harris,et al., 2009).

Based on the above theoretical derivation and research results, the following hypothesis is proposed.

H4: Psychological empowerment plays a mediating role in the relationship between LMX and followers' creativity.

In conclusion, the theoretical model of this study is shown in Figure 1.

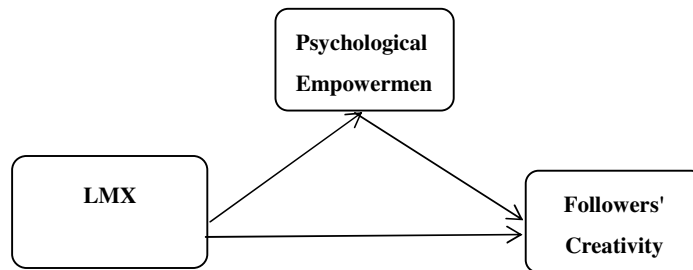


Figure 1 Theoretical Model

3. Research Design

3.1 Questionnaire Survey & Sample Data

The survey samples of this study are from 18 different types of enterprises in 8 regions, including kun Ming, Yu Xi, Da Li, Qu Jing and so on. In order to maintain objectivity in data and eliminate homolog bias, Leader-Member matching method is adopted for questionnaire survey. That is, the leader fills out the creativity questionnaire for their followers, and the followers fill out the questionnaire of LMX and psychological empowerment. The questionnaire was sealed in an

envelope and distributed to the subjects of the corresponding enterprises. The subjects filled out the questionnaire, sealed and put it into the recycling box prepared by the human resources department, and then mailed back by the head of the department. A total of 460 questionnaires were distributed. Removing those with incomplete information and the Leader-Employee ratio less than 1:3, the valid 396 questionnaires were collected with the recovery rate of 86%.

3.2 Measurement of Variables

All scales used here are mature ones used in international literature, all items were quantified by the five-point Likert scale, and the quality of LMX relationship was measured by LMX-7 scale (Scandura, T. A., & Graen, G. B., 1984). Psychological empowerment of followers is measured by using the 12-item scale developed by Spreitzer, G. M. (1995). Followers' creativity was measured by using a scale developed by Zhou, J. & George, J. M. (2001). In order to better verify the hypothesis proposed in this study, we set control variables such as followers' gender, age, educational level, department size, work experience in the proposed model.

4. Data Analysis and Results

4.1 Confirmatory Factor Analysis

In this study, AMOS23.0 was used to conduct confirmatory factor analysis (CFA) on three variables. From Table 1, the data of the three-factor model is fitting better compared to the other two models ($\chi^2=4359.262$, $df=1646$, $RMSEA=0.074$, $CFI=0.833$, $TLI=0.827$). Moreover, the fitting degree is better than that of alternative models such as two-factor model and single-factor model. This indicates that the measurement model of this study fits well, the variables are well-differentiated and all the indicators meet the requirements.

Table 1 Confirmatory Factor Analysis

| | χ^2 | df | $\Delta\chi^2$ | RMSE A | CFI | TLI |
|--------------------------------------|--------------|------|-----------------|-----------|-------|-------|
| Model #1 : Three-Factor Model | 4359.26 2 | 1646 | | 0.074 | 0.833 | 0.827 |
| Model #2 : Two-Factor Model | 6413.04 4 | 1647 | 3302.993* ** | 0.098 | 0.707 | 0.696 |
| Model #3 : Single-Factor Model | 7884.29 0 | 1648 | 4774.239* ** | 0.112 | 0.617 | 0.602 |

4.2 Correlation Analysis

In this research, Pearson's analysis method was used to examine the correlation among variables to prepare for the following regression analysis. From Table 2, we can make the following conclusions: there is a significant positive correlation between LMX and psychological empowerment ($r = 0.495$, $p < 0.01$), and a significant positive correlation between LMX and followers' creativity ($r = 0.412$, $p < 0.01$). Moreover, psychological empowerment is positively correlated with followers' creativity ($r = 0.482$, $p < 0.01$). To some degree, the rationality of the whole model and the relationship between variables were preliminarily verified. However, the correlation analysis did not exclude the influence of control variables, and the single variable could not be accurately verified. Therefore, the next step was to do the regression analysis.

Table 2 Mean-Standard Deviation and Correlation Coefficient Matrix of Each Variable

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------------------|------|------|----------|----------|----------|---------|---------|---------|---------|---|
| 1. Age | 1.95 | 0.99 | 1 | | | | | | | |
| 2. Gender | 1.63 | 0.48 | -0.155** | 1 | | | | | | |
| 3. Educational Background | 2.90 | 0.86 | 0.010 | -0.041 | 1 | | | | | |
| 4. Department Size | 3.05 | 1.44 | 0.150** | -0.116* | 0.139* | 1 | | | | |
| 5. Work Experience | 2.57 | 1.38 | 0.775** | -0.167** | 0.032 | 0.186** | 1 | | | |
| 6. Leader-Member Exchange | 3.87 | 0.83 | 0.115* | -0.059 | -0.251** | 0.043 | 0.220** | 1 | | |
| 7. Psychological Empowerment | 3.91 | 0.71 | 0.137* | -0.017 | -0.216** | 0.030 | 0.278** | 0.495** | 1 | |
| 8. Followers' Creativity | 4.15 | 0.53 | -0.024 | 0.034 | -0.135* | -0.041 | 0.026 | 0.412** | 0.482** | 1 |

** . a significant correlation at the level of.01 (bilateral) ; * . There was a significant correlation at the 0.05 level (bilateral).

4.3 Regression Analysis

4.3.1 Regression Analysis of LMX and Followers' Creativity

This part mainly verifies the impact of LMX on followers' creativity. The analysis results are shown in Table 3. The tolerance of each variable is greater than 0.1, while the VIF value is less than 5, indicating that the multicollinearity between variables can be accepted. The analysis results of Model 2 showed that LMX had a significantly positive impact on followers' creativity ($\beta=0.268$, $p<0.001$), and after adding the independent variable LMX, the degree of the explanatory model increased by 15.4%, and the explanatory effect of the regression equation significantly improved. Therefore, hypothesis H1 was verified.

Table 3 Results of Regression Analysis between LMX and Followers' Creativity

| Variable | Follower's Creativity | | Collinearity Diagnostics | |
|------------------------|-----------------------|-----------|--------------------------|-------|
| | M1 | M2 | Tolerance | VIF |
| Control Variable | | | | |
| Age | -0.060 | -0.026 | 0.395 | 2.532 |
| Gender | 0.032 | 0.048 | 0.961 | 1.040 |
| Educational Background | -0.082* | -0.013 | 0.907 | 1.102 |
| Department Size | -0.009 | -0.015 | 0.940 | 1.064 |
| Work Experience | 0.049 | -0.005 | 0.375 | 2.669 |
| Independent Variable | | | | |
| LMX | | 0.268*** | 0.874 | 1.145 |
| R ² | 0.026 | 0.180 | | |
| ΔR ² | 0.026 | 0.154*** | | |
| F | 1.568 | 10.706*** | | |

Note : ***p<0.001 (Two-Tailed Test) , **p<0.01 (Two-Tailed Test) , *p<0.05 (Two-Tailed Test)

4.3.2 Regression Analysis of LMX and Psychological Empowerment

This part mainly verifies the effect of LMX on psychological empowerment. The analysis results are shown in Table 4. The tolerance of each variable is greater than 0.1, while the VIF value is less than 5, indicating that the multicollinearity between variables can be accepted. The analysis results of Model 2 showed that LMX had a significantly positive impact on psychological empowerment ($\beta=0.658$, $p<0.001$), and after adding the independent variable LMX, the degree of the explanatory model increased by 52.0%, and the explanatory effect of the regression equation significantly improved. Therefore, it can be concluded that LMX is positively correlated with psychological empowerment. Therefore, hypothesis H2 was verified.

Table 4 Results of Regression Analysis between LMX and Psychological Empowerment

| Variable | Psychological Empowerment | | Collinearity Diagnostics | |
|------------------------|---------------------------|-----------|--------------------------|-------|
| | M1 | M2 | Tolerance | VIF |
| Control Variable | | | | |
| Age | -0.146* | -0.063 | 0.395 | 2.532 |
| Gender | 0.026 | 0.064 | 0.961 | 1.040 |
| Educational Background | -0.189*** | -0.019 | 0.907 | 1.102 |
| Department Size | 0.006 | -0.008 | 0.940 | 1.064 |
| Work Experience | 0.227*** | 0.096** | 0.375 | 2.669 |
| Independent Variable | | | | |
| LMX | | 0.658*** | 0.874 | 1.145 |
| R ² | 0.145 | 0.665 | | |
| ΔR ² | 0.145*** | 0.520*** | | |
| F | 9.966*** | 96.972*** | | |

Note : ***p<0.001 (Two-Tailed Test) , **p<0.01 (Two-Tailed Test) , *p<0.05 (Two-Tailed Test)

4.3.3 Hypothesis Testing of the Mediating Role of Psychological Empowerment

This part mainly verifies the mediating effect of psychological empowerment. The analysis results are shown in Table 5. The tolerance of each variable is greater than 0.1, while the VIF value is less than 5, indicating that the multicollinearity between variables can be accepted. The analysis results of Model 2 showed that LMX had a significantly positive impact on psychological empowerment ($\beta = 0.268$, $p < 0.001$), and hypothesis H3 was verified. The results in Model 3 show that psychological empowerment has a significantly positive impact on followers' creativity, after the psychological empowerment as mediating variable was added ($\beta = 0.338$, $p < 0.001$), the effect of LMX on followers, creativity becomes insignificant ($\beta = 0.045$, $p < 0.05$). Meanwhile, the degree of the explanatory model increased by 6.8%, and the explanatory effect of the regression equation significantly improved. Therefore, psychological empowerment plays a completely mediating role between LMX and followers' creativity, and Hypothesis H4 has been verified.

Table 5 Regression Analysis of the Mediating Effect of Psychological Empowerment

| Variable | Followers' Creativity | | | Collinearity Diagnostics | |
|---------------------------|-----------------------|-----------|-----------|--------------------------|-------|
| | M1 | M2 | M3 | Tolerance | VIF |
| Control Variable | | | | | |
| Age | -0.060 | -0.026 | -0.005 | 0.391 | 2.554 |
| Gender | 0.032 | 0.048 | 0.026 | 0.956 | 1.046 |
| Educational Background | -0.082* | -0.013 | -0.007 | 0.906 | 1.104 |
| Department Size | -0.009 | -0.015 | -0.012 | 0.939 | 1.065 |
| Work Experience | 0.049 | -0.005 | -0.037 | 0.361 | 2.774 |
| Independent Variable | | | | | |
| LMX | | 0.268*** | 0.045 | 0.342 | 2.922 |
| Mediating Variable | | | | | |
| psychological empowerment | | | 0.338*** | 0.335 | 2.986 |
| R ² | 0.026 | 0.180 | 0.248 | | |
| ΔR^2 | 0.026 | 0.154*** | 0.068*** | | |
| F | 1.568 | 10.706*** | 13.771*** | | |

Note : *** $p < 0.001$ (Two-Tailed Test), ** $p < 0.01$ (Two-Tailed Test), * $p < 0.05$ (Two-Tailed Test)

In addition, in order to further verify the mediating effect, this study used Bootstrap to test the mediating mechanisms again. It can be concluded from Table 6 that the mediating effect coefficient of psychological empowerment between LMX and followers' creativity is 0.2189, the standard error is 0.0683, and the 95% confidence interval CI [0.089, 0.3545] does not contain 0. Therefore, the mediating effect is significant, further supporting Hypothesis 4.

Table 6 Analysis Table of Mediation Effect using Bootstrap

| | Bootstrapping | | | |
|-----------------------------------------------------|---------------|--------|--------|--------|
| | B | SE | 95% CI | |
| LMX→Psychological Empowerment→Followers' Creativity | 0.2189 | 0.0683 | 0.089 | 0.3545 |

5. Conclusion and Discussion

5.1 Research Conclusion

In order to better understand the relationship between LMX and followers' creativity, this paper studies the mediating mechanism of the influence of LMX on follower creativity by referring to the self-determination theory and taking psychological empowerment as the mediating variable. Through data analysis, the theoretical hypothesis of the study is supported by the empirical results. First of all, the empirical study shows that LMX has a positive impact on followers' creativity, which is consistent with the conclusion of previous studies. Secondly, the results of data analysis support the hypothesis that psychological empowerment mediates the relationship between LMX and followers' creativity.

5.2 Theoretical Contribution

The research on the influence of LMX on followers' creativity has aroused wide interest of researchers, but it is still in the primary stage of research. The conclusion of this study provides a new idea for the influence mechanism of LMX on followers' creativity. Based on self-determination theory, this study verified the intermediary role of psychological empowerment between LMX and followers' creativity. LMX not only directly affect followers' creativity, the relationship between LMX and creativity can also be interpreted as a process of psychological empowerment, followers in the process, through the judgment of LMX quality to determine the insider status in their organization, and take responsibility and obligations as an insider, the organization's recognition and trust further activate their creative thinking, to carry out activities related to innovation. Therefore, this study expands the research on LMX and creativity, and adds the mediating variable of psychological empowerment to explain how LMX affects followers' creativity. This study provides us with a more comprehensive understanding of the motivational effects of LMX, along with previous studies, will further promote the development of innovative research through leadership behaviors that enhances innovation.

5.3 Management Implications

The conclusion of this study has certain practical significance. First, improve the quality of Leader-Member Exchange relationship and enhance the psychological empowerment. Leader-Member Exchange plays a significant role in promoting the psychological empowerment, that is, when the quality of the exchange relationship is high, followers are more likely to feel the psychological empowerment. Specifically speaking, high-quality of the exchange relationship will make followers feel that work is meaningful, and they have the ability and confidence to solve difficulties at work, have greater autonomy to decide how to complete their tasks, and have their own value and influence on the development of the team and the organization. Therefore, a high-quality exchange relationship should be established, in order to improve followers' sense of psychological

empowerment, such as work meaning, self-efficacy, discretionary authority and self-influence. Second, Leader-Member Exchange should promote followers' innovation through psychological empowerment. Psychological empowerment plays an intermediary role between Leader-Member Exchange and followers' creativity, that is, Leader-Member Exchange can positively influence followers' innovation through psychological empowerment. Therefore, when building and maintaining the Leader-Member Exchange relationship, enterprises should pay attention to the empowerment of followers, because high-quality exchange itself will not promote, or even hinder the followers' innovation, so it is necessary to stimulate the innovation behavior of followers through psychological empowerment. Thirdly, the conclusion of this study also suggests that managers should carefully handle the relationship with their subordinates and try to be fair and justice, instead of treating employees differently because of leaders' position. This is because the differences in Leader-Member Exchange relationship will make followers feel unfair as outsiders, reducing the employees' perception of the insider status, and may cause conflicts among team members, damage team innovation efficiency, and reduce the performance of organizational innovation.

5.4 Limitations and Prospects

There are some limitations in this study. First of all, the study design adopts the cross-sectional design. Since the variables in the study are constantly changing dynamically with time, there may be a reverse causality. In the future, longitudinal research or experimental methods can be adopted for the study. Secondly, this study only studies the mechanism of LMX's influence on creativity at the individual level, and future studies can build a cross-level model to study the effect of LMX on team creativity.

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