

The Impact of Servant Leadership on Employees' Innovation: An Empirical Study Based on Hierarchical Regression Analysis

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ABSTRACT

Employees' innovation is a key determinant for companies to achieve competitive advantage and success. However, there is a relative lack of research on the relationship and mechanisms of action between servant leadership and employees' innovation behavior. Therefore, based on the leadership-member exchange theory, this study explores the relationship between servant leadership and employees' innovative behavior and the mediating role of leadership trust from the perspective of the employee-leadership relationship. Data were collected from 346 employees in Guizhou, China. We used SPSS26.0 and Amos24 to perform structural equation modeling and hierarchical regression analysis on the collected data. The results found that servant leadership positively influenced employees' innovation behavior; leadership trust mediated the relationship between servant leadership and employees' innovation behavior.

Keywords: *Employees' innovation; Servant leadership; Leadership trust; Leadership-member exchange theory; Structural equation modeling; Hierarchical regression analysis*

1. INTRODUCTION

With the advent of the knowledge-based economy and the intensification of global competition, the organizational environment is becoming increasingly dynamic and complex, with an increasing degree of uncertainty, placing higher demands on organizational flexibility and innovation, while the responsibilities and roles of employees are facing new challenges. Corporate innovation requires every employee to actively develop their thinking and take the initiative to innovate to respond to the ever-changing market environment, which is vital for companies to achieve a competitive advantage. Employees' innovation is the result of a combination of situational and individual factors. Existing research has explored the impact of leadership styles on employees' innovation, such as transformational leadership, transactional leadership, inclusive leadership, and authentic leadership. In recent years, servant leaders have gradually become the focus of attention in the field of organizational management because of their unique leadership style. Servant leaders emphasize the priority of employees, emphasize the needs and development of employees, and view employees as friends, making it easier to influence employee behavior.

Previous studies have found that mediators such as job satisfaction, employee empowerment, leadership identification, and creative self-efficacy confirm the influence of servant leadership on individual and team innovative behavior, but there is still a paucity of information on the mechanisms of servant leadership's influence on individual innovative behavior. A systematic review of previous studies reveals that few studies have taken a trust relationship perspective. Therefore, this study analyzes how servant leaders promote employees' innovative behaviors and the mediating role of leadership trust in this context from a relational perspective based on leadership-member exchange theory. The theoretical model proposed in this study is shown in Figure 1.

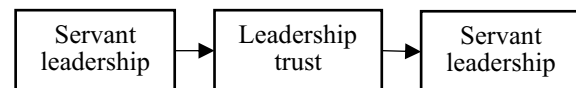


Figure 1: Theoretical model

2. THEORY AND HYPOTHESES

2.1 Servant Leadership and Employees' innovation

Servant leadership is one of the most common types of leadership in Chinese organizations, defined as a leader with a holistic and altruistic view of the organization, focusing on the desires and needs of subordinates, which is a distinctive characteristic that distinguishes it from other types of leadership [2]. Previous research has shown that servant leadership, which is a top-down form of leadership based on the principle of "altruism," plays a key role in improving employees' organizational trust, organizational citizenship, emotional commitment, job satisfaction, and job performance. Due to the servant leader's emphasis on employee relationships, attention to emotional and mood changes, willingness to share power, and willingness to help employees achieve professional success, we conclude that servant leaders promote innovative employee behavior.

Employees' innovation is a series of micro-level change behaviors that employees make spontaneously in response to their environments, such as innovative work structures and work processes. On the one hand, employees' innovation breaks the original equilibrium and brings more innovation opportunities; on the other hand, innovation means that employees will face greater uncertainty and have greater innovation risks. Previous research has shown that employees' interpersonal risk assessment of the external environment, such as the behavior and reactions of their leaders, is an important influencing factor in determining whether they propose an innovation. Leadership-member exchange theory states that leaders' work values become role models for employees to emulate. Besides, leaders' behaviors and attitudes significantly improve employees' behaviors and attitudes [5]. At the same time, when leaders are willing to pay the cost of support and help to their employees, employees who are helped in this way will also show behavior that reciprocates this help. In organizations, servant leaders who put employees first and care about their needs will increase employees' trust in their leaders, and they will be more willing to try new ideas and new ways to deal with problems at work, which is conducive to innovation. Therefore, we propose the following hypothesis:

Hypothesis 1 Servant leaders positively influence employees' innovation.

2.2 Influence of Leadership Trust on Employees' Innovation

Trust is a willingness to reveal one's weaknesses to

others and not worry about being taken advantage of based on positive expectations of others' intentions or behaviors [7]. Related research has found that employees' trust in their leaders can have a significant impact on employees' attitudes and behaviors [3]. In organizational scenarios, the allocation of organizational resources and the rewards and punishments of employees are mostly decided by the leaders due to the large power distance between the top and bottom, and these decisions are usually subjective, with the personal power of the leaders far greater than the influence of the corporate system itself. Therefore, employees are more dependent on their leaders and must rely on them for work resources to complete their jobs. At the same time, employees need to maintain a good relationship with them. With the high level of uncertainty and vulnerability that employees face when innovating, leadership trust becomes critical.

Servant leadership reduces the power distance and submissive pressure in superior-subordinate relationships, thus stimulating employees' identification and internalization mechanisms to show positive attitudes and behaviors [9]. On the one hand, servant leadership focuses on employees' growth and provides resources to support it, which is conducive to enhancing the interaction between leaders and employees, not only so that employees can get the resources they need to do their jobs more efficiently, but also so that they can build good relationships with them. On the other hand, the relationship between servant leaders and their subordinates is a non-utilitarian one, full of affection and respect, which provides psychological support and security for employees and is more likely to inspire their appreciation and trust in their leaders. Servant leadership facilitates the formation of positive leadership-member relationships that can provide employees with a sense of psychological safety in the workplace and meet their psychological needs.

Hypothesis 2 Servant leadership has a significant positive effect on leadership trust.

Trust in the workplace predicts positive employee attitudes and behaviors. If employees trust their leaders, they will be more inclined to trust and affirm the decisions made by their leaders, more likely to recognize the vision and values of the organization, and more willing to put in the effort and actively engage in their work [9]. Trust provides the conditions to stimulate the identification and internalization mechanisms that will positively influence the innovative behavior of employees. On the contrary, if the employees do not trust the leaders, then the employees will resist the work arrangement of the leaders, which is not only unfavorable for the employees to start their work, but also will greatly weaken their enthusiasm for employees' innovation. Since employees' innovative behavior has certain risks and may cause dissatisfaction with leaders, the higher the level of employees' trust in leaders, means that employees

think that leaders will consider problems from their standpoint and support their ideas and behaviors, so the higher the employees' psychological security will be, which will greatly reduce employees' concerns about the risks of innovative behavior. In summary, the following hypotheses are proposed in this study:

Hypothesis 3 Leadership trust has a significant positive effect on employees' innovation.

Trust is an important psychological mechanism that explains leadership behavior and employee responses. According to the leader-member exchange theory, leaders' attitudes and behaviors positively influence employees' willingness to act through the mediating effect of employees' psychology and attitudes. For one thing, in leadership-employee interactions, servant leaders who value employee relationships and pay attention to employee emotional changes can weaken hierarchical relationships, and employees are therefore more likely to have trust in their leaders and other psycho-emotional and attitudinal changes. On the other hand, servant leaders are willing to empower their employees and give them more freedom to work, so that they can feel the support and care of their leaders. This positive emotional communication enhances employees' trust in their leaders, and through the mediating effect of trust, promotes a positive change in their work attitude, which in turn stimulates positive behavioral responses and innovation behavior.

Hypothesis 4 Leadership trust mediates the relationship between servant leadership and employees' innovation.

3. METHOD

3.1 Sample and Procedure

Our sample data was obtained from 8 companies in Guizhou, including manufacturing, retail and financial industries. To reduce common methodological bias, we conducted the questionnaire distribution at 2-time points, one month apart. In the first stage, demographic variables, and servant leadership are reported by employees. In the second stage, leadership trust and employees' innovation

are filled in by employees who have completed the first stage. A total of 431 questionnaires were distributed, and 346 questionnaires were collected after eliminating haphazardly filled out, missing data, and failed matching questionnaires, with a valid questionnaire return rate of 80.3%. The descriptive demographic results of the sample are as follows: gender is predominantly male, with 197 people, accounting for 56.9%; age is mostly 26~35 years old, with 175 people, accounting for 50.6%; education level is largely bachelor's degree, with 163 people, accounting for 47.1%. The working years are mainly 4~10 years, with 183 people, accounting for 52.9%.

3.2 Measures

Servant leadership was measured using a 5-item scale developed by Liden (2015) [4], with example questions such as "My leader can tell if something is wrong with the job". Leadership trust was measured using a 4-item scale developed by Farh (1998) [1], with questions such as "I trust my leader to treat me fairly". According to previous studies, Pieterse and Knippenberg (2010) [6] explored the impact of transformational leadership on employees' innovation which was measured using a Likert scale measurement. We followed this idea by using a six-item scale developed by Scott (1994) [8], for example, "I always seek new technologies, processes, and methods".

4. RESULTS

4.1 Confirmatory Factor Analysis

In this study, validated factor analysis was conducted on the retrieved data using AMOS 24 to verify the discriminant validity among the factors, and the results are shown in Table 1. The results of the validated factor analysis in Table 1 show that the three-factor model ($\chi^2/df=1.891$, $CFI=0.973$, $TLI=0.966$, $RMSEA=0.051$) fits the actual data better than alternative models such as two-factor and one-factor, which indicates that there is sufficient discriminant validity among the three variables used in this study.

Table 1: Results of confirmatory Factor Analysis

Model	χ^2	<i>df</i>	χ^2/df	<i>RMS</i>	<i>CFI</i>	<i>TITLE</i>	<i>IF</i>	<i>GFI</i>
Three-factor model: A, B, C	183.455	97	1.891	0.051	0.973	0.966	0.973	0.937
Two-factor model: A+B, C	479.955	103	4.66	0.103	0.881	0.861	0.881	0.829
One-factor model: A+B+C	1325.67	104	12.747	0.185	0.613	0.553	0.615	0.562

N=346, A=Servant leadership, B=Leadership trust, C=Employees' innovation

4.2 Descriptive Statistical Analysis

Table 2 shows the means, standard deviations, and correlation coefficients for each study variable. Among them, there is a positive correlation between servant

leadership and leadership trust ($r=0.608$, $p<0.01$) and employees' innovation ($r=0.332$, $p<0.01$), and a positive correlation between leadership trust and ($r=0.344$, $p<0.01$).

Table 2: Means, standard deviations, and correlations

Variables	M	SD	1	2	3	4	5	6	7
1. Gender	1.6	0.509	1						
2. Age	1.62	0.697	-0.052	1					
3. Education	3.13	0.445	-0.041	-.123*	1				
4. Tenure	2.6	0.905	-0.003	.541**	-.134*	1			
5. Servant leadership	3.7552	0.66335	0.018	-0.045	-0.077	-0.083	1		
6. Leadership trust	3.9383	0.8364	0	0.026	-0.039	-0.071	.608**	1	
7. Employees' innovation	3.6354	0.85309	0.042	0.038	.142**	-0.03	.332**	.344**	1

N = 346; **p < 0.01, *p < 0.05; Cronbach's α reliabilities are in parentheses on the diagonal

4.3 Hypothesis Testing

Hierarchical regressions were performed with the help of SPSS 26.0, and the results of the main and mediating effects tests were obtained as shown in Table 3. According to model 4, it can be seen that servant leadership has a significant positive effect on employees' innovation ($\beta=0.446$, $p<0.001$), and H1 is verified. Model

2 showed a significant positive effect of servant leadership on leadership trust ($\beta=0.766$, $p<0.001$), and H2 was supported. According to model 5, when leadership trust entered the regression equation it was found that the positive effect of leadership trust on servant leadership remained significant ($\beta=0.221$, $p<0.001$), indicating that leadership trust mediates the relationship between servant leadership and employees' innovation. Therefore, H3 and H4 were supported.

Table 3: Results of hierarchical regression analyses

	Leadership trust		Employees' innovation		
	M1	M2	M3	M4	M5
Gender	0.004	-0.01	0.088	0.08	0.082
Age	0.105	0.109	0.112	0.115	0.091
Education	-0.083	0.018	0.281**	0.341***	0.336**
Tenure	-0.114	-0.063	-0.057	-0.027	-0.013
Servant leadership		0.766***		0.446***	0.277***
Leadership trust					0.221***
R ²	0.013	0.376	0.028	0.147	0.176
ΔR^2	0.013	0.363	0.028	0.119	0.029
F	1.097	40.936	2.488	11.706	12.092

N = 346; *p < 0.05, **p < 0.01, ***p < 0.001

5. DISCUSSION

5.1 Theoretical Implications

This paper has important theoretical implications: First of all, this study constructs the relationship between servant leadership and employees' innovation, and empirically tests and confirms the significant positive relationship between the two. Our findings extend the study of outcome variables of servant leadership and

antecedent variables of employees' innovation. Second, there is limited academic exploration of the role path of servant-leadership in influencing employees' innovative behavior in China, so we further combine the characteristics of servant-leadership in the Chinese context, i.e., leaders lower their posture to serve their employees, change the previous image of superior leadership, and narrow the power distance. Grounded in leadership-membership exchange theory, we explain the role played by leadership trust between servant leadership and employees' innovative behavior and demonstrate the

mediating role of leadership trust, further enriching theoretical and empirical research on servant leadership in China.

5.2 Practical Implications

Through this paper, we have gained some insights into management practices: Firstly, organizational leaders should pay attention to improving personal quality, enhancing the willingness to serve the organization and employees, satisfying the psychological demands of employees, stimulating the intrinsic motivation of employees to promote organizational development, fundamentally motivating them to generate more innovative ideas and innovative behaviors, and stimulating the intrinsic motivation of enterprises to carry out independent innovation. Secondly, in the usual management practices, companies should focus on enhancing the relationship of trust between employees and leaders. As the "backbone" and solid backbone of the organization, the leaders should communicate and exchange more with the employees, and should not be separated from them, but should guide them to discover opportunities and deal with the possible risks together with them.

5.3 Limitations and Future Research

There are some limitations and shortcomings in this paper: (1) The scales of servant leadership, leadership trust, and employees' innovation used in this paper are developed based on the Western context, which may not be suitable for the Chinese context, and the corresponding scales can be revised or developed based on the Chinese context in the future for better research; (2) Other samples or variables, such as skilled personnel and team innovation, can be selected in the future to further explore the impact of servant leadership, enrich the research on servant leadership in the Chinese context, and provide more new ideas for management practice. (3) This study collected data from manufacturing companies in China to conduct validation analysis, which limits the generalizability and applicability of the findings of this paper. Future studies may consider using employee samples from companies in different regions, industries, and countries to further test the generalizability of this study's findings.

6. CONCLUSIONS

Based on the leadership-member exchange theory, this study analyzes and examines the impact of servant leadership on employees' innovative behavior and explores the mediating role of leadership trust. The findings indicate that (1) servant leadership significantly contributes to employees' innovative behavior and (2) leadership trust mediates the relationship between servant leadership and employees' innovation. Due to the above

findings, servant leadership positively promotes employee innovation and leadership trust plays a mediating role. In corporate practice, organizations can advocate the establishment of a servant leadership style, while encouraging managers to listen to and understand the true ideas and needs of their employees. These can help to enhance employees' trust in their leaders and thus be more proactive in innovating their work. To ensure that the theory and practice are aligned, we call on future scholars to test the findings of this study more often in organizations across regions and industries to refine and enrich the positive effects of servant leadership.

In addition, Future scholars can examine more about the effects of servant leaders on other employees' behaviors, such as helping behaviors and voice behaviors. In addition, scholars can explore the trickle-down effect of servant-leadership to expand this area.

REFERENCES

- [1] Farh, J., Tsui, A. S., Xin, K. R., & Cheng, B. S. (1998). The influence of relational demography and guanxi: the Chinese case. *Social Science Electronic Publishing*, 9(4): 471-488.
- [2] Fatima, S., Mueen, A., Zafar. (2018). Servant leadership and meaningfulness at work: The contingency effect of leader ethical sensitivity. *Pakistan Journal of Social Sciences*, 38(1), 12-22.
- [3] Grant, A. M., Gino, F., Hofmann, D. A. (2011). Reversing the extraverted leadership advantage: The role of employee proactivity. *Academy of Management Journal*, 54(3): 528-550.
- [4] Liden, R. C., Wayne, S. J., Meuser, J. D., Hu, J., Wu, J., & Liao, C. (2015). Servant leadership: Validation of a short form of the SL-28. *Leadership Quarterly*, 26(2): 254-269.
- [5] Little, L. M., Gooty, J., Williams M. (2016). The role of leader emotion management in leader-member exchange and follower outcomes. *Leadership Quarterly*, (1): 85-97
- [6] Pieterse, A. N., Knippenberg, D. V., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: the moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4): 609-623.
- [7] Rousseau, D. M., Sitkin, S. B., Burt R. S. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3): 393-404.
- [8] Scott, S. G., Bruce, R. A. (1994). Determinants of innovation behavior: a path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3): 580-607.

- [9] Wu, X., Kwan, H. K., Wu, L. Z., & Ma, J. (2018). The effect of workplace negative gossip on employee proactive behavior in China: The moderating role of traditionality. *Journal of Business Ethics*, 148: 1-15.

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