

Supervisor-subordinate Guanxi and Employee Innovative Behavior: The Moderating Role of Formalization

Wen Xu*, Hang Liu*

Business School, Hohai University, Nanjing, Jiangsu, China

*Corresponding Author.

Abstract:

In the era of increasingly standardized organizational management, how do Chinese supervisor-subordinate guanxi influence employee innovative behavior? Based on social cognitive theory, this study explores the mechanism by which supervisor-subordinate guanxi and formalization interact to influence employee innovative behaviors. The results of 252 questionnaire studies indicated that there are significant positive relationships between supervisor-subordinate guanxi, psychological empowerment, and employee innovative behavior. Moreover, it is expected that psychological empowerment plays a fully mediating role in the relationships between supervisor-subordinate guanxi and employee innovative behavior. Formalization moderates the relationship between the supervisor-subordinate guanxi and psychological empowerment. This study explores the relationship between Chinese supervisor-subordinate guanxi and employee innovative behavior, which enriches the research of localization innovation theory and provides insights for companies to build organic organizations by controlling formalization and exerting the catalytic effect of supervisor-subordinate guanxi on employee innovative behavior through psychological perceptions.

Keywords: *Supervisor-subordinate guanxi, Psychological empowerment, Employee innovative behavior, Formalization.*

I. INTRODUCTION

Today, uncertain factors such as technological change are driving firms to innovate to be more competitive. To adapt to changes in the external environment, many firms are actively seeking strategies. For example, Huawei promotes "eating culture" and encourages employees to eat together to communicate more. As a complex individual behavior, employee innovative behavior is affected by the interaction among individuals at different levels. In the workplace, this interaction mainly shows as supervisor-subordinate guanxi (SSG)[1]. However, the innovation climate is affected by the formal structure of the firm[2]. How to leverage the informal guanxi culture with formal context factors to promote innovative employee behavior has become an urgent problem to be solved. But there is little academic research on this.

Guanxi is a Chinese concept that refers to a high-quality relationship that determines the appropriate behavior and patterns of getting along. SSG is developed from the concept of guanxi and has a significant influence on employee behavior[3]. Employee innovative behavior characterizes by originality and novelty, including the process of idea generation and idea implementation[4]. According to social cognitive theory, organizational context factors dynamically influence employees' psychological perceptions and further affect their behavior. Therefore, we can predict that SSG can contribute to employee innovative behavior.

Most previous studies focused on the concept of leader-member exchange. Related studies are mainly based on social exchange theory and resource conservation theory and regard SSG as a resource[5], arguing that SSG contributes to innovative behavior. Researches on internal mechanism and context factors discuss the mediating mechanism of job satisfaction and organizational commitment[5], as well as the moderating mechanisms of power distance[6] and organizational innovation climate[7]. However, the studies rarely involve social cognitive theory. Few studies have explored the psychological mechanism between SSG and innovative behavior from the perspective of motivation combined with the interaction of formalization.

Based on social cognition theory, SSG cannot directly promote employee innovative behavior, and internal psychological perception plays a conduction role. Therefore, this study selected psychological empowerment as a mediator variable. Formalization implies strict, standardized, and formalized explicit rules. The more formalized the organization, the more stringent the norms. According to organization theory, there is a significant difference between the effect of mechanical structure and organic structure on the level of employee psychological empowerment of employees[8]. The formalization will affect the level of employee psychological empowerment and innovative behavior.

Based on social cognitive theory, this study analyzes the influence of SSG on employee innovative behavior. Secondly, we analyze the mediating role of psychological empowerment between SSG and employee innovative behavior based on innovation theory. Finally, we analyze the influence of formalization on psychological empowerment and employee innovative behavior, which makes the boundary conditions of SSG contributing to employee innovative behavior clearer.

II. RESEARCH HYPOTHESIS

2.1 Supervisor-subordinate Guanxi and Employee Innovative Behavior

Supervisors and subordinates in Chinese organizations interact not only at work but also outside of work. SSG is a dual relationship that promotes exchange between supervisors and subordinates[3]. It has a significant influence on employee innovative behavior. In a high-quality SSG, supervisors are more likely to classify their subordinates as "insiders" and interact more. Insiders will receive more care, such as resource support, information support, trust and fault tolerance. Therefore, SSG is the most important social relationship that employees have. As an implicit standard, it becomes the basis for supervisors to treat their subordinates.

Innovative behavior requires employees to break through existing constraints and reorganize existing resources. Innovation will, knowledge, and skills are also necessary for it[9]. Leading factors of individual innovative behavior include personal characteristics, job characteristics, and organizational context. Because individual behavior has been conceptualized as a continuous and multifaceted interaction between personal characteristics and environment, scholars have gradually shifted their attention from individual predictors to situational factors[10]. SSG is one of the significant situational factors.

According to social cognitive theory, employees, driven by their goals, form expectations and action plans by combining their evaluation of themselves and the environment. Then, they actively influence the environment and strive to achieve their own goals[11]. The influence of SSG on employee innovative behavior mainly reflects in the following aspects: First, good SSG means frequent interpersonal communication. These interactions enable employees to gain more respect and trust from their supervisors, which generate positive perceptions[12]. It helps to stimulate their positive attitude towards their work and firm, and strengthen their willingness to innovate. Second, there are certain risks associated with innovative behavior. Supervisors under a high-quality SSG are more willing to create a work environment with high-level fault tolerance. Subordinates will also feel more autonomous and supported. Again, as time goes on, SSG will evolve into an emotionally familiar or even kinship interaction[13]. At this time, subordinates will receive more resources, rewards and encouragement[12]. Thus, the author proposes the following:

H1. Good SSG has a positive influence on employee innovative behavior.

2.2 Mediating Role of Psychological Empowerment

Spreitzer[14] proposed that empowerment should include individual psychological empowerment, and that psychological empowerment is the complex of psychological state and personal perceptions. It is a positive role orientation with four dimensions: meaning of work, self-efficacy, self-determination, and impact on organizations. According to social cognitive theory, there is a implicit relationship between organizational context and employee perception. In other words, the subsequent changes in employee perception are consistent with the dynamic changes in the situation.

Employees' perceptions of psychological empowerment increase significantly if the organizational context helps to enhance their awareness of work autonomy and decision-making[15]. When SSG is good, supervisors take actions such as information sharing, job support, and decentralization, which help enhance subordinates' perceptions of obtaining the information and resources necessary to their work. It can also strengthen their sense of psychological empowerment[16]. First, the supervisor will give subordinates more challenging tasks, work information, guidance and suggestions. It will improve subordinates' views on the meaning of work. Second, supervisors allow subordinates to initiate or regulate their behavior independently, which effectively increases their self-determination. Finally, subordinates will have higher internal status that expands their influence[17]. Thus, SSG has a positive relationship with psychological empowerment.

Employee innovative behavior is a breakthrough and reorganization of existing factors, which requires the promotion of internal motivation[18]. According to social cognitive theory, when employees perceive trust and empowerment, they will respond positively. Seibert[19] considered psychological empowerment as a vital leading factor of work outcomes (e.g., organizational commitment, job satisfaction, etc.)[20] Singh and Sarkar[20] confirmed the positive effect of four dimensions of psychological empowerment on innovative behavior. Researches have shown that psychological empowerment contributes to management efficiency, innovation, and work inspiration[21]. Employees are more willing to take responsibility and burst into creativity and enthusiasm when they perceive the value and significance of their work[22]. We formalize this argument in the following hypothesis:

H2: Psychological empowerment plays a mediating role between SSG and employee innovative behavior.

2.3 Moderating Role of Formalization

Pugh[23] proposed that formalization refers to the degree of clarity of rules, procedures, and work instructions. Mueller and Lee et al. argue that the more formalized the firm, the weaker the employee perception of organizational organicity[24]. On the one hand, formalization ensures the regularity of the process. But on the other hand, it also seriously limits employee interaction, which reduces the possibility of employees' participation in decision-making, thereby affecting employees' sense of meaning. Therefore, formalization may weaken employees' sense of psychological empowerment.

High-level formalization means most work follows organizational rules, making it difficult for employees to take the initiative. To avoid punishment, supervisors will reduce unnecessary interaction with subordinates[25]. Low-level formalization means employees are relatively autonomous, which is conducive to SSG. Further, SSG interacts with formalization. At the same level of psychological empowerment, a highly formalized organization attach too much importance to behavioral norms, which makes organizations and teams gradually rigid. In this context, SSG is difficult to be accepted by organizations and may hurt employees. Employees cannot participate in decision-making and influence the organization. As a result, employees no longer rely on SSG and lower their expectations for it, weakening the influence of SSG on psychological empowerment. Contrarily, in less formalized organizations, employees are no longer wholly restricted by red tape and are more autonomous[8]. In this situation, employees become more dependent on SSG and expect more rewards, strengthening the effect of SSG on psychological empowerment. Based on this, we propose:

H3: Formalization has a negative moderating effect on the relationship between SSG and psychological empowerment. The more formalized the organization, the weaker the positive impact of SSG on psychological empowerment.

The analysis of the mediating mechanism has described that SSG influences employee innovative behavior through psychological empowerment. Hypothesis 3 shows that the more formalized the organization is, the more stringent the organizational norms are. And the contradiction between SSG and

organization becomes more serious. Therefore, the increase in psychological empowerment caused by SSG is limited, making it difficult to stimulate employee innovative behavior. On the contrary, the less formalized the organization is, the more reasonable the existence of SSG, which can effectively contribute to psychological empowerment and employee innovative behavior. We thus put forward the following hypothesis:

H4: Formalization moderates the mediating effect of psychological empowerment between SSG and employee innovative behavior. The mediating influence is weak when the organization is formalized, and the mediating influence is strong when the organization is not formalized.

We use social cognitive theory as the basic theory for analyzing organizational situations and individual behavior to explore the influence of SSG on employee innovative behavior. Second, we analyze the psychological mechanism between SSG and employee innovative behavior. Finally, we analyze the effect of formalization on employees' psychological empowerment and employee innovative behavior. Fig 1 presents the proposed model.

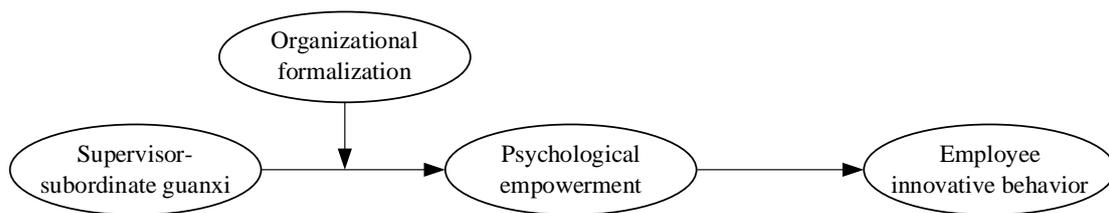


Fig 1: The theoretical research model

III. RESEARCH METHODOLOGY

3.1 Sample and Procedures

Management research focuses on how to achieve optimal allocation of human, material, and financial resources in space and time based on the information available to managers, to maximize the achievement of organizational goals. Such studies require statistical and operational research methods[26]. However, if we add active human factor to the above system, we need further research using psychological, behavioral science, and statistical methods[26]. In addition, normative management research generally consists of three main activities: interpreting theory, determining important facts, and matching facts and theories.

Based on the management research theory above, this study first searches for significant facts using a questionnaire study. Then use Multiple Regression to measure and test our conceptual framework and hypotheses using survey data[27].

We test the validity of the model and research hypotheses using data collected in a questionnaire survey of several firms operating in Nanjing and Suzhou, China. These firms are mainly from the manufacturing, research & development, engineering, and software industries. During the sampling

process, the researchers, with the assistance of HR departments, numbered teams numbering according to team grouping and supervisor-subordinate relationship. Subordinates innovative behavior is evaluated by their supervisor to reduce common method bias[28]. In addition, employees have a time lag in their psychological empowerment status and innovative behavior changes under the influence of superior-subordinate guanxi. Considering this, we used a two-stage longitudinal statistical analysis[27]. During the investigation process, the researchers distributed questionnaires with the cooperation of the human resource departments of each company. To meet the employees' request for confidentiality, researchers collected the questionnaires in a designated meeting room. Employees who participated in the study submitted the questionnaires directly to the researchers, rather than passing by company employees.

To collect enough data, we first contacted our cooperative partners. We then encouraged the top managers of these big firms to recommend suitable test subjects. In our project team, there were five members from our university. Two of them were teachers, who were responsible for designing the survey, providing necessary training, and leading the three students in carrying out the interviews, distributing and collecting questionnaires, and subsequent data analysis.

The collection of the first phase was SSG. In this phase, researchers selected 91 teams and distributed 91 supervisor questionnaires and 387 member questionnaires. We obtained 91 supervisor questionnaires and 387 member questionnaires, representing a response rate of 90.43% and 83.72%. The second phase was conducted after two months, of which the collection was psychological empowerment, formalization, and employee innovative behavior. The subjects selected in this phase are the same as the previous selection. We obtained 81 supervisor questionnaires and 305 member questionnaires, representing a response rate of 89.01% and 78.81%. We excluded questionnaires from respondents who had had changes in team affiliation, answered incompletely, or showed overly pronounced response tendencies. Finally, we obtained 72 supervisor questionnaires and 252 member questionnaires, which are completed and usable, representing a response rate of 79.12% and 65.12%.

Approximately, 63.09% of the team members participating in the survey were male; 44.04% were 26 to 30 years old, 57.93% had a bachelor's degree; 44.04% had worked for three years or less, 78.97% had worked in their current company for three years or less, and 80.95% were from technology or research & development department. 76.39% of the supervisors participating in the survey were male, 83.33% were over 30 years old, and 63.89% had a bachelor's degree. Only two supervisors had worked in their current company for three years or less; 33.33% had worked in their current company for 4 to 6 years, and 65.28% were research & development or technical managers.

3.2 Measurement

The questionnaire items were from well-established scales in foreign journals. We used the translation-retranslation procedure to ensure the quality of the questionnaire. The project team adjusted the item wording according to the Chinese cultural background to make it more localized. The format of the original scales was retained, which ensured the rigor of the scales.

3.2.1 Supervisor-subordinate guanxi

The twelve items in the scale relating to SSG were taken from Chen's study[29]. This concept includes the affective attachment, personal-life inclusion, and deference to the supervisor. Examples of the items are "My supervisor and I always share thoughts, opinions, and feelings toward work and life," "My supervisor would ask me to help him/her deal with some family errands," and "I am willing to obey my supervisor unconditionally." The scale's α reliability value in this study was 0.92. Participants rated the supervisor-subordinate guanxi on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

3.2.2 Psychological empowerment

The construct was measured by four dimensions of psychological empowerment: meaning, competence, self-determination, and impact as developed by Spreitzer[14], with each of the dimensions consisting of three items for a total of twelve. Examples of items include "My job activities are personally meaningful to me," "I am confident about my ability to do my job," "I have significant autonomy in determining how I do my job," and "I have significant influence over what happens in my department." The employees rate their perceptions of psychological empowerment on a Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. The scale's α reliability was 0.90.

3.2.3 Formalization

Formalization was measured based on Schminke's five-item scale[30] (e.g., "The organization has a large number of written rules and policies."). We obtained the responses on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). The α coefficient for this sample was 0.85.

3.2.4 Employee innovative behavior

Innovative behavior was measured with six items adopted from Scott and Bruce's study[31] (e.g., "Promotes and champions ideas to others."). Supervisors' ratings on employee innovative behavior were taken on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Cronbach's α coefficient for this scale was 0.89.

3.2.5 Control variables

To account for the possible alternative explanations, we included the control variables in this study. We controlled sexuality, age, education, work age, and job type as characteristics that could potentially influence innovative behavior.

3.3 Analytical Method

We use Multiple Regression to measure and test our conceptual framework and hypotheses using survey data. We hypothesized the model and used estimates of the parameter values to develop an estimated regression equation between a dependent variable (innovative behavior) and independent

variables (SSG, psychological empowerment, and formalization). Significance tests for the indirect effects are based on bias-corrected confidence intervals derived from 5,000 bootstrapped samples.

IV. ANALYSIS AND RESULTS

4.1 Common Method Variance

We used Harman's single-factor test to measure the common method bias effect and ran an exploratory factor analysis by inserting all continuous items. According to this method, either a general factor will represent most covariance or single factors will emerge from the analysis. The result showed that the largest factor explained 20.12% of the variance, which indicates that common method bias was not a significant problem in this study.

4.2 Reliability and Validity of Measurements

We estimate the model's reliability and validity and test the proposed hypotheses using SPSS 26.0. After the questionnaires were collected, we operationalized composite reliability using Cronbach's alpha. As previously shown, all the Cronbach's alpha values of constructs are greater than 0.85, suggesting that the items reflect the underlying phenomena well. To exam the model, we conducted a confirmatory factor analysis (TABLE I). We used a set of indices including χ^2/df , CFI, TLI, IFI, and RMSEA. The CFA revealed a good fit to the data ($\chi^2/df=1.50$, CFI=0.96, TLI=0.95, IFI0.96 and RMSEA=0.04). As shown in TABLE I, the four-factor model has the fittest results, and its indicators are significantly better than the other three models. It indicated that the four variables represent different constructs, which effectively meet the requirements for constructing the model.

TABLE I. Confirmatory factor analysis results

Model	χ^2	<i>df</i>	χ^2/df	CFI	TLI	IFI	RMSEA
Four-factor model	743.31	497	1.50	0.96	0.95	0.96	0.04
Three-factor model	1154.90	533	2.17	0.89	0.88	0.89	0.07
Two-factor model	1776.19	543	3.27	0.79	0.77	0.79	0.10
Single-factor model	2619.61	553	4.74	0.65	0.62	0.65	0.12

Note: Number of observations (N) is 252. The four-factor model is SSG, psychological empowerment, formalization, and employee innovative behavior; the three-factor model is SSG + psychological empowerment, formalization and employee innovative behavior; the two-factor model is SSG + psychological empowerment + formalization and employee innovative behavior; the single factor model is SSG + psychological empowerment + formalization + employee innovative behavior.

4.3 Descriptive Statistical Analysis

We used SPSS 26.0 for correlation analysis and multiple regression. TABLE II reports the result of descriptive statistics and intercorrelations. As is shown, innovative behavior correlates significantly with SSG, empowerment, and formalization.

TABLE II. Descriptive Statistics and Correlations among Variables

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9
1. Sexuality	0.37	0.48	—								
2. Age	28.60	4.32	-0.11	—							
3. Work age	4.93	4.30	-0.09	0.90**	—						
4. Education	2.79	0.63	-0.10	0.16	-0.07	—					
5. Job type	1.96	2.34	0.31	-0.02	0.03	0.05	—				
6. SSG	4.50	0.90	-0.18	0.09	0.09	0.07	-0.02	—			
7. Empowerment	5.13	0.66	-0.04	-0.02	0.08	-0.09	0.04	0.41**	—		
8. Formalization	4.68	1.08	0.10	0.14*	0.12	0.00	-0.07	-0.12	-0.21**	—	
9. Innovative behavior	5.46	0.76	-0.09	-0.02	0.06	-0.09	-0.01	0.29**	0.67**	-0.22**	—

Notes. Number of observations (N) is 252. *p < 0.05. **p < 0.01. ***p < 0.001; two-tailed tests.

4.4 Hypotheses Test

To begin with, we standardize these variables and calculate the interaction term. We conducted a regression analysis to examine the mediating effects of empowerment (TABLE III). We examined the influence of the control variables on innovative behavior by regressing innovative behavior on these variables (Model 1). Then, we added one independent variable to test the effect of SSG on employee innovative behavior. As shown in TABLE III, the coefficient for SSG is positive and significant (P<0.001), indicating that SSG contributes to employee innovative behavior. Hence, Hypothesis 1 is supported.

We regressed psychological empowerment on SSG and the control variables to test their effects on psychological empowerment (Model 4). Then we regressed innovative behavior on psychological empowerment and the control variables to examine its influence on innovative behavior. The results in Model 3 suggest that psychological empowerment has a significantly positive effect on innovative behavior (P<0.001). We regressed innovative behavior on SSG and psychological empowerment, controlling for sexuality, age, education, work age, and job type. The results in Model 3 show that the influence of SSG on innovative behavior is reduced, not significantly positive. It indicates that psychological empowerment fully mediates the linkage between SSG and innovative behavior. Hence, Hypothesis 2 is supported.

TABLE III Mediation regression models

Variables	Innovative behavior			Empowerment		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Block 1: Control variable						
Sexuality	-0.10	-0.05	-0.06	0.02	0.04	0.03
Age	-0.37	-0.35	-0.07	-0.43	-0.40	-0.42
Education	-0.02	-0.04	-0.02	-0.03	-0.03	0.00
Work age	0.38	0.35	0.07	0.43	0.42	0.44
Job type	0.00	-0.01	-0.02	0.02	0.00	0.02
Block 2: Independent variable						
SSG		0.29***	0.02	0.42***	0.40** *	0.37** *
Empowerment			0.65***			
Formalization					-0.16** *	-0.16* *
SSG × formalization						-0.18* *
Block 3: Model statistics						
R Square	0.04	0.12	0.45	0.22	0.24	0.27
Adjusted R Square	—	0.08	0.33		0.03	0.03
F value	2.04	21.94** *	145.74* **	51.86** *	7.97**	10.14* *

Notes. Number of observations (N) is 252 *p < 0.05. **p < 0.01. ***p < 0.001.

As TABLE III shows, to test the moderating effect of formalization on the relationship between SSG and psychological empowerment, the analysis first includes the control variables and independent variable SSG in the model (Model 4), then adds the moderator variable formalization (Model 5), and finally includes the interaction term (SSG × formalization) (Model 6). As shown in TABLE III, the coefficient for formalization is positive and significant (P<0.01), indicating that a low level of psychological empowerment contributes to firm's innovation performance. As predicted, the coefficient of interaction is negative and significant (P<0.01), indicating that the effect of SSG on psychological empowerment is dependent on formalization. Hence, Hypothesis 3 is supported.

We test the moderated mediation effect using the Process program and Bootstrapping method. We selected three levels of formalization (the mean, one standard deviation above the mean value, and one standard deviation below the mean value) for the analysis. TABLE IV shows the results. The bootstrapping results indicate that the index of moderated mediation is -0.09, with a 95% Confidence Interval not containing zero (-0.155, -0.030). Thus, Hypothesis 4 is supported.

TABLE IV. Regression results for main and mediation effect

Formalization	Effect	Boot SE	Boot LLCI	Boot ULCI
Mean-1S.D.	0.29	0.046	0.210	0.390
Mean	0.20	0.033	0.140	0.268
Mean+1S.D.	0.10	0.029	0.001	0.205
Effect index	-0.09	0.03	-0.155	-0.030

V. CONCLUSION

5.1 Theoretical Contributions

Chinese organizational context reflects a clear relationship orientation. There is a strong link between formal organizational context factors and informal private guanxi. Up to now, there are few studies on the mechanism of Chinese characteristics of SSG on employee innovative behavior. Social cognitive theory focuses on the influence of organizational situational factors on individual behavior, which can effectively explain the mechanism of organizational situational factors on employee behavior through employee psychological perception. First, this study discusses the characteristics of Chinese SSG and explores the psychological process between SSG and employee innovative behavior. The results indicate that developing SSG in Chinese organizations can contribute to employee innovative behavior. Second, this study explores how formalization influences the relationship between SSG and psychological empowerment, and how it interacts with informal relationships, thereby affecting the mediating effect of psychological empowerment between SSG and employee innovative behavior. It reveals the organizational conditions for employee innovation and provides a reference for encouraging employee innovative behavior scientifically. This study presents some local characteristics and theoretical innovation, which can enrich the theory research of SSG, and help organizations understand and motivate employee innovative behavior comprehensively and effectively.

5.2 Managerial Implications

Confucianism has a profound social foundation in China. The Chinese guanxi based on Confucianism will continue to play a vital role in Chinese organizations. While the purpose of developing SSG is positive, the results may not be ideal. Therefore, organizations need to manage employee relations well to motivate the employee innovative behavior. According to the research conclusions above, we can see that: in daily management, managers should pay attention to building a good SSG under the premise of legitimacy and rationality, and play its catalytic role in employee innovative behavior. Firms should avoid the absolute prohibition of developing SSG. The boundaries between work and life of employees in Chinese companies are blurred and the two are closely linked. A properly relaxing organizational environment is effective in breeding good SSG. Employees will thus take active work behaviors such as innovation.

Secondly, managers can construct a dynamic organic organizational structure by controlling the formality of the organization. It can avoid organizational rigidity and strengthen the promotion of SSG on

employee perception and work behavior. Taking the actual situation into account and reducing the formality of the organization can enhance the driving effect of SSG and revitalize the organization. However, managers need to be aware of the "dark side" of SSG to minimize the negative impact of the interaction between SSG and formalization.

Finally, managers should pay attention to employee psychological perception and improve it in various ways. Because of the risk of innovation, individuals with innovative ideas may not take action. It is significant to increase psychological empowerment among employees. Managers can improve it by empowering, implementing gentle and friendly leadership, and creating a better working atmosphere, to promote positive behavior and improve the performance of their employees and organizations.

5.3 Limitations and Future Research Direction

There are still some limitations in this research. First, we paired supervisors with their subordinates, which ensures the quality of research data but leads to insufficient sample size. More sample support is therefore needed. Second, the survey object is concentrated, limiting the universality of the conclusions. Future research could expand the scope of data collection to make findings more general. Finally, this research focuses on the unique guanxi culture in China and discusses the mechanism and boundary conditions of SSG on employee innovative behavior. Chinese culture is broad and profound. The doctrine of the mean thought and so on are also our unique traditional culture necessary to future research. At the same time, it is also worthwhile to include other factors of organizational structure, such as specialization. Research on the influence of these factors on employee innovative behavior through psychological empowerment can promote the development process of localization research.

REFERENCES

- [1] Kenneth S. Law, Wong, Chi-Sum, Wang, Duanxu, et al. Effect of supervisor–subordinate guanxi on supervisory decisions in China: an empirical investigation. *The International Journal of Human Resource Management*, 2000, 11(4).
- [2] Cui Miao, Xiao Mimi, Wang Shujuan. Meta-analysis of organizational innovation climate research. *Nankai management review*, 2019, 22 (01) : 98-110..
- [3] Long Zhang, Deng, Yulin, Wang, Qun. An Exploratory Study of Chinese Motives for Building Supervisor–Subordinate Guanxi. *Journal of Business Ethics*, 2014, 124(4): 659-75.
- [4] Neil Anderson, Potocnik, Kristina, Zhou, Jing. Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. *Journal of Management*, 2014, 40(5): 1297-333.
- [5] Gao Yu, Haiyan, Liu. How Supervisor-Subordinate Guanxi Influence Employee Innovative Behavior: A Moderated Mediation Model. *Psychology research and behavior management*, 2021, 14.
- [6] Wang Hongyu, Zou Chunlong. Research on the influence mechanism of supervisor-subordinate relationship on employee deviant innovation. *East China Economic Management*, 2019, 33 (04) : 37-43.
- [7] Deng Qi, Wan Hua, Wu Zhicheng, et al. Does the power distance between superiors and subordinates have a negative impact on employee advice ? – Role of interpersonal pressure and organizational innovation atmosphere. *Journal of Zhengzhou Institute of Aeronautical Industry Management*, 2019, 37(05): 66-77.

- [8] J. Rhee, Seog, S. D., Bozorov, F., et al. Organizational structure and employees' innovative behavior: the mediating role of empowerment. *Social Behavior and Personality*, 2017, 45(9): 1523-36.
- [9] Katherine J. Klein, Sorra, Joann Speer. The Challenge of Innovation Implementation. *The Academy of Management Review*, 1996, 21(4).
- [10] Yanan Ma, Turel, Ofir. Information technology use in Chinese firms and work-family conflict: The moderating role of guanxi. *Telematics and Informatics*, 2019, 41: 229-38.
- [11] Albert Bandura. SOCIAL COGNITIVE THEORY: An Agentic Perspective. *Annual Review of Psychology*, 2001, 52(1).
- [12] Chao Miao, Qian, Shanshan, Banks, George C., et al. Supervisor-subordinate guanxi: A meta-analytic review and future research agenda. *Human Resource Management Review*, 2020, 30(2).
- [13] Guo Xiaowei, Fan Wei. Development and test of employee supervisor-subordinate relationship scale based on integrated construct in Chinese context. *Management Journal*, 2018, 15(01): 20-9.
- [14] Gretchen M. Spreitzer. Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation. *The Academy of Management Journal*, 1995, 38(5).
- [15] Christine S. Koberg. Antecedents and Outcomes of Empowerment. *Group & Organization Management*, 1999, 24(1).
- [16] R. C. Liden, Wayne, S. J., Sparrowe, R. T. An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, 2000, 85(3): 407-16.
- [17] Peilin Yan. SUPERVISOR-SUBORDINATE GUANXI AND EMPLOYEE VOICE BEHAVIOR: TRUST IN SUPERVISOR AS A MEDIATOR. *Social Behavior and Personality*, 2018, 46(7).
- [18] Wei Feng, Yuan Xin, Di Yang. Cross-level research on the impact of transactional leadership, team empowerment climate and psychological empowerment on subordinate innovation performance. *Managing the world*, 2009, (04): 135-42.
- [19] Scott E. Seibert, Wang, Gang, Courtright, Stephen H. Antecedents and Consequences of Psychological and Team Empowerment in Organizations: A Meta-Analytic Review. *Journal of Applied Psychology*, 2011, 96(5): 981-1003.
- [20] Singh Manjari, Anita, Sarkar. Role of psychological empowerment in the relationship between structural empowerment and innovative behavior. *Management Research Review*, 2019, 42(4).
- [21] Spreitzer G M. Social structural levers for workplace empowerment. *Academy of Management Journal*, 1996, 29(2): 483-501.
- [22] Peter Block. *The empowered manager: Positive political skills at work*. San Francisco: Jossey-Bass, 1987.
- [23] Hickson DJ Pugh Ds, Hinings CR, Turner C. Dimensions of Organization Structure. *Adm Sci Q*, 1968, 13(1): 65-105.
- [24] Bridget H. Mueller, Lee, Jaesub. Leader-Member Exchange and Organizational Communication Satisfaction in Multiple Contexts. *Journal of Business Communication*, 2002, 39(2).
- [25] Deng Yulin, Hong Yangxun, Sun Xiaoliang. Influence of superior-subordinate guanxi in project team on leadership authorization behavior. *Enterprise economy*, 2016, 35(02): 163-8.
- [26] Li Huaizu. *Management research methodology*. 3rd Edition ed. Xi'an: Xi'an Jiaotong University Press, 2017.
- [27] Shen Wei Chen Xiaoping. *Empirical methods in organization and management research*. 3rd Edition ed. Beijing: Peking University Press, 2018.
- [28] Jiang Gan Luo Shengqiang. *Management survey research methodology*. Chongqing: Chongqing University Press, 2018.
- [29] Ying Chen, Friedman, Ray, Yu, Enhai, et al. Supervisor-Subordinate Guanxi: Developing a Three-Dimensional Model and Scale. *Management and Organization Review*, 2009, 5(3).

- [30] Schminke M, L, Ambrose M, S, Cropanzano R. The effect of organizational structure on perceptions of procedural fairness. *The Journal of applied psychology*, 2000, 85(2).
- [31] Susanne G. Scott, Bruce, Reginald A. Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace. *The Academy of Management Journal*, 1994, 37(3).