Influence of the Mechanism of the Community of Shared Future on the Innovation Performance of Knowledge Workers: The Intermediary Role of Extra-Role Behavior

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Abstract: This paper investigates the relationship between the community of shared future, extra-role behavior, and innovation performance. This paper conducts an empirical study based on 334 valid sample data items of 53 technology-based small to medium enterprises (SMEs) in China. The data were subjected to structural equation analysis using SPSS 20.0 software. The results show that the community of shared future positively affects the extra-role behavior of employees and their innovation performance and has a positive impact on knowledge sharing behavior, voice behavior, and helping behavior. Knowledge sharing behavior, voice behavior, and helping behavior all play a mediating role between the community of shared future and employees' innovation performance.

Keywords: community of shared future; knowledge sharing behavior; voice behavior; helping behavior; innovation performance

1. Introduction

As a new type of labor–management relationship, the community of shared future has become a novel theme in the field of corporate management. To motivate employees' enthusiasm, the effect of material stimulation alone is limited, and it is necessary to fundamentally motivate the enthusiasm of employees. It is necessary to cultivate the community of shared future for all employees and enterprises so that all employees regard themselves and the enterprise as a community that spontaneously helps them succeed and realize the internal unity of enterprise and individual development. Therefore, both now and in the future, the community of shared future between enterprises and employees has far-reaching implications for corporate development [1]. According to the history of Western thought, the concept of "community" was first drawn by Aristotle. He believed that people in this world exist in a community, and individuals cannot be separated from the community [2]. Later, the German sociologist Fernand Tonnes distinguished the concept of "community" from the concept of "social" and formed the definition of "community" that we now recognize [3]. Since Chinese President Xi Jinping proposed the "community of shared future" at the 18th National People's Congress, many scholars have paid attention to the value of community theory. In the field of management, many scholars have studied the value and significance of a corporate community of shared future for enterprise development. Especially for technology-based enterprises, innovation is the driving force behind development. Higher innovation performance can bring first-mover advantages, and even directly affect the long-term development of the company [4]. A large part of the motivation for enterprise innovation and sustainable development comes from the value creation activities carried out by knowledge workers in the enterprise [5]. For small and medium-sized enterprises,

especially technology companies, knowledge workers are part of the core competitiveness of enterprise development, and these enterprises rely mainly on knowledge workers for innovation and creation. Social exchange theory holds that there is always social exchange behavior in any organization, and the development of the organization depends to some extent on the social exchange of members. According to social exchange theory, the realization of enterprise innovation performance cannot be separated from the innovation performance of employees. However, most of the research on the factors that influence employee innovation performance focus on rewards and incentives [6], leadership styles [7–10], organizational climate [11], and other external factors. There are also a few studies on internal factors, such as work happiness [11] and other factors that influence employee innovation behavior and performance. However, it is rare to study how the relationship between the company and the employees' perceived enterprise level affects individual innovation performance from the perspective of labor relations. In technology-based small to medium enterprises (SMEs), knowledge workers are the core competitiveness, and the relationship between such key employees and enterprises has become an important factor promoting the development of enterprises. Nowadays, many scholars at home and abroad have realized that the community of shared future between employees and enterprises is an important factor to promote the success of enterprises. However, in the existing research, the community of shared future is rarely introduced as an independent variable or empirically studied as the dependent variable, so this study looks at the subject from the perspective of the labor-management relationship and uses community of shared future as an independent variable in empirical research to explore the employee–enterprise relationship. This study also looks at the influence mechanism of the community of shared future on the innovation performance of employees in science and technology enterprises and its significance to the development of enterprises. Therefore, we consider it necessary to conduct empirical research, and it is the main purpose of this paper. In this paper, we use the community of shared future as an independent variable to explore its mechanism of influence on the innovation performance of employees in science and technology enterprises and its significance to the development of enterprises. Another purpose of this paper is to explore the role of the community of shared future in improving employee innovation performance, and prove that the concept can promote such performance through three kinds of extra-role behaviors (knowledge sharing, suggesting, and helping). The structure of this paper is shown in Figure 1.
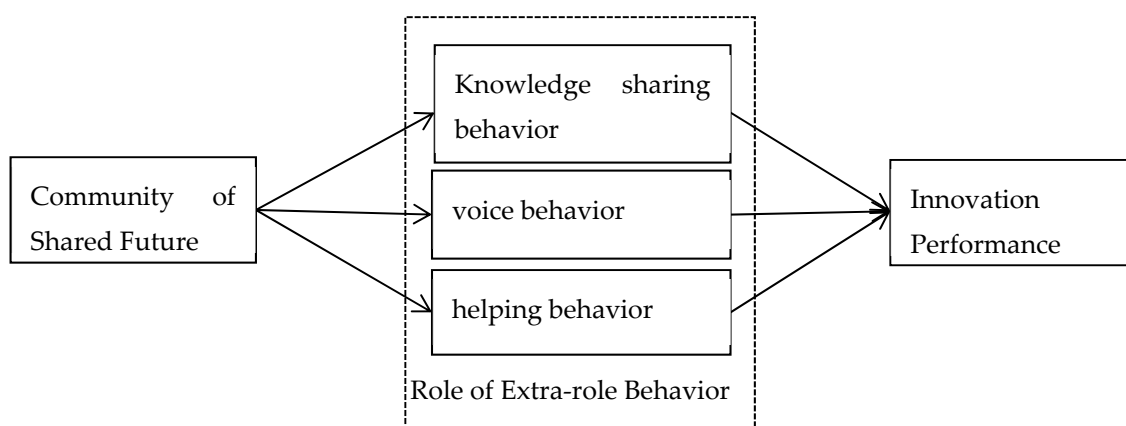

Figure 1. Structure of this paper.

2. Literature Review and Research Hypotheses

2.1. Definition of a Community of Shared Future

The concept of the ancient community roughly describes the relationship between people and groups or organizations from two angles, one based on blood and the other on geographical bonds. The establishment of modern society is based on the steps taken by the ancient community. In modern

society, the connotation of "community" is continuously developed, breaking through the traditional concepts of kinship and regions, and has produced many forms of organization such as political, learning, economic, ethnic, and scientific communities.

The idea of "community" has a long history and has undergone a long process of evolution. Before the concept of "community of shared future" came into being, there existed the idea of "community", which was first proposed by Aristotle in the history of Western thought [2]. Aristotle first put forward the "city-state community", and then the modern British philosopher Hobbes and the French enlightenment scholar Rousseau mentioned the "contractual community". Then, Kant, a German classical philosopher, believed that there was an "ethical community", after which Hegel proposed a "national community". After that, utopian socialists in Britain and France put forward the utopian community. Finally, Marx put forward the idea of "real community" [12].

Marx pointed out that "the essence of human beings is the real social connection of human beings" [13] "the essence of human beings is not an abstract thing inherent in a single person, but in its reality, it is the sum of all social relations" [14]. Marx divides the community into "natural community", "abstract community", and "real community" based on the reality and historical trend of human social development. Marx generalized the initial social form of human development as a natural community. Natural community is destroyed with the rise of commodity economy, and replaced by abstract community. At this time, social ties are no longer blood ties, but interests. The real community means that everyone has a comprehensive and free development. It is the unremitting pursuit of Marx throughout his life.

On the basis of generalizing and abstracting the actual situation of labor conflicts in the major Western capitalist countries such as Britain, France, and Germany in the mid-19th century, Marx and Engels put forward the theory of labor relations, which is the germination of the development of the community of shared future [15].

At the end of the 19th century and the beginning of the 20th century, under the background of the development of science and technology and the emergence of large monopoly enterprises, Taylor summarized the principles of scientific management from experiments. The essence of scientific management is labor-capital cooperation [15].

From the late 1920s to the early 1930s, the world economy plunged into an unprecedented Great Depression. In this context, Elton Mayo and Fred Rottersberg reflected on Taylor's scientific management and conducted relevant experimental studies. They concluded that workers not only have material needs, but also internal spiritual needs [15].

However, the classic development of the concept occurred in Japan after the Second World War, through the "lifetime employment system" and "working sequence system," to create a community of shared future within enterprises. Japanese companies support employees' lives. Employees have a strong sense of belonging and dependence on the company. They regard the company as a "home" and promote the traditional values and collectivism spirit of "harmony is noble," forming a sense of unity.

According to the book Build to Last by Jim Collins and Jerry I. Porras, "What really keeps the business going is the value of breathing with the business deeply rooted in the hearts of employees." Additionally Thomas Peters and Robert Waterman clearly put forward in their book Pursuing Excellence: "The most important task of a CEO is to shape and maintain the value consensus of the whole organization, that is, the unified values."

Zhu Huiye and Cui Jiaying [16] of China put forward in Value Management: "The vitality of enterprises lie in the enthusiasm, initiative and creativity of all employees." Although material stimulation can also play a role in a certain period of time, in order to mobilize the enthusiasm of workers fundamentally and permanently, we must rely on all employees. Enterprises need to cultivate the collective consciousness and common values of all employees who love the enterprise, breathe with the enterprise, and share their destiny, so as to realize the integration of employees and enterprises. The collective consciousness and common values mentioned here embody the development concept of "the community of shared future".

Bush [17] believes that companies should be employee-centric so that employees perceive that the companies value their needs and goals, make them feel that they are part of the organization, can be integrated into the organization, and are long-term partners rather than short-term employees. Therefore, this paper suggests that the corporate community of shared future should include the target community. Schein [18] believes that new employees can interact with groups or organizations to understand organizational values and culture and be encouraged to internalize those values as their own, from outsiders to insiders. This can give employees a sense of identity. Chatman [19] emphasizes that new employees understand organizational culture and form shared values. In a study of the partial test of the organizational identity reconstruction model by Meal [20], the basic connotation of the organization is that individuals feel that they belong to the organization and share a relationship with it. It is part of human identity to define one's own process, which also contains the idea of a community of shared future. Later, Meal [21] proposed that individuals tend to think of themselves and their groups or organizations as intertwined, sharing common strengths and weaknesses, successes and failures, and having a common goal. Therefore, this paper suggests that the community of shared future should include a spiritual community. In China, Guo [22] pointed out that the relationship between labor and enterprise should be a community relationship. Labor and management should build a relationship with clear levels of hierarchy and clear rights and responsibilities. Therefore, this paper suggests that the community of shared future should include the dimension of interest community.

In this paper, we propose to build a community of shared future between a company and its employees. This is different from the shared value of Porter and Kramer. In the ideas they put forward, shared value exists between enterprises and society. This means that enterprises should promote the economic and social development of their communities while enhancing their creativity. However, in this paper, we believe that companies and employees should become a community, and should believe that their destiny and future are linked. In this way, employees will have a greater sense of ownership. Employees believe that their behavior will directly affect their fate and the fate of the enterprise, so they will be more proactive from the perspective of the enterprise. This relationship between employees and enterprises is what we call the "community of shared future."

Based on the above research on the corporate community of shared future domestically and abroad, this paper defines the concept as a common development goal between a company and its employees, forming a consensus, sharing corporate risks under the leadership of shared values and spiritual concepts, striving for benefit, creating value together, and implementing shared values. Therefore, this paper divides the corporate community of shared future into three dimensions: Target community, spiritual community, and interest community.

2.2. Corporate Community of Shared Future and Innovation Performance

Innovation performance refers to the original ideas, methods, and procedures that are generated by employees for their career development and to enhance their self-competitive advantages. The theory of social identity holds that an individual's identity in the group can stimulate a sense of belonging to the group. On the one hand, according to this theory, when employees identify with the organization they work for, they will psychologically consider themselves and the organization as the community of shared future. At this time, employees no longer think of themselves. The behavior is negligible, but the willingness to solve the problem from the perspective of the organization will lead to a sense of responsibility for the organization, thus stimulating them to actively explore and innovate for the future development of the organization. On the other hand, according to the theory of social exchange, when employees have a strong sense of belonging, they will be motivated to make the organization work better and make the social exchange within the organization not only for material benefit but also for cultural identity and higher levels of exchange, of knowledge and ideas for innovation, and more knowledge and input of innovative ideas can have a positive impact on improving employee innovation performance. Therefore, this paper proposes the following hypothesis:

Hypothesis 1 (H1). *The community of shared future positively affects the innovation performance of employees.*

2.3. Community of Shared Future and Extra-Role Behavior of Employees

There are two types of role behaviors: Within the role, based on the labor contract and job responsibilities, and spontaneous extra-role behavior. Extra-role behavior refers to enhanced behavior of the active, organizational-friendly role. It is beneficial to behavior outside the scope of the organization's development work, but it does not belong to the scope of responsibility. It has a significant positive impact on the organization.

Knowledge sharing is the creative process of mutual exchange of knowledge and information between individuals. On the one hand, employees with a strong sense of community of shared future feel that they are part of the organization. According to the theory of social exchange, employees will be willing to transfer knowledge to support the enterprise, thus generating knowledge-sharing behavior. On the other hand, employees with a sense of community of shared future will have a strong sense of belonging and mission. This can improve organizational citizenship behavior and employee commitment to a certain extent, thus improving job performance and behavior outside the role. Not only that, when employees have a strong sense of community of shared future, they will highly associate organizational achievements with personal achievements. They will consider issues from an organizational perspective, strive to achieve organizational goals, and integrate and exchange information. This has a positive impact and further promotes the sharing of knowledge and information. Therefore, this paper proposes the following hypothesis:

Hypothesis 2a (H2a). *The community of shared future positively affects employee knowledge-sharing behavior.*

A suggestive act is a positive role outside the behavior of a member who actively proposes constructive suggestions to improve the organization's work or status quo. Research by Hui [23] shows that internal identity cognition has a positive influence on employees' extra-character behavior. The community of destiny will give employees a greater sense of belonging, as well as internal identity perception. Therefore, this study speculates that the community perception of destiny can enable employees to behave outside their role as people. On the one hand, employees with such a perception will internalize the organization's goals as their own, and behave so as to achieve them. On the other hand, employees with a sense of community of destiny have a better sense of belonging to the organization and believe that the organization's development and their own is the same, the progress of the organization can improve, and the competitiveness of the organization can improve their own competition. Therefore, employees are willing to actively offer constructive opinions and ideas for the good of the organization and enhance its competitiveness, thus offering more suggestions. Therefore, this paper proposes the following hypothesis:

Hypothesis 2b (H2b). *The community of shared future positively affects employees' voice behavior.*

Helping behavior refers to voluntary behavior in the organization that is beneficial to other members or groups. Its effective implementation not only facilitates the establishment and maintenance of interpersonal harmony, but also promotes organizational efficiency [24]. First, when employees generate a sense of community of shared future, they will see the organization's goals as part of their own goals and values, then they will spontaneously be willing to help other members, and be more willing to cooperate with others at the same time. Second, employees with a strong sense of community of shared future will have an emotional commitment and loyalty to the organization. Meyer [25] found that emotional and normative loyalty in organizations is positively related to helping behavior, so this paper speculates that perception of the community of shared future will positively affect an employee's helping behavior. Third, according to the theory of social exchange, employees who have a sense of emotional belonging to the organization are likely to maintain good behavior. When team members

encounter work-related problems, employees with a sense of community of shared future will actively help, creating helping behavior. Therefore, this paper proposes the following hypothesis:

Hypothesis 2c (H2c). *The community of shared future positively affects employees' helping behavior.*

2.4. The Intermediary Role of Extra-Role Behavior between the Community of Shared Future and Innovation Performance

Innovation activities are a process of investing in knowledge and obtaining the output. It is often difficult to succeed only with the knowledge possessed by employees themselves. Therefore, they need to be able to continuously update and absorb new knowledge in order to carry out innovation activities. Knowledge-sharing is a process in which individuals transmit and transfer their knowledge to a group. Employees who share knowledge also absorb knowledge shared by others in the organization. The knowledge they possess has both intersection and complementarity. In this process, employees will continuously update their knowledge, which will promote the creation of new knowledge and more valuable and novel ideas to improve their innovation performance. According to the theory of social exchange, knowledge-sharing behavior is a kind of social exchange, which is conducive to increasing the total amount of knowledge. Employees share knowledge with their colleagues, and their interaction will be improved, and on this basis, knowledge shared by the other party will be obtained [26]. In turn, this is conducive to the emergence of innovative behavior and further enhances individual innovation performance. Furthermore, employees who have a sense of community of shared future will consider themselves and their organization to be a community. They believe in helping the organization grow by sharing and contributing their knowledge without fear, as it will not cause others to overtake them because they have gained more knowledge. Therefore, this paper proposes the following hypothesis:

Hypothesis 3a (H3a). *Knowledge-sharing behavior has a mediating effect between the community of shared future and innovation performance.*

Research on the relationship between voice behavior and innovation performance at the individual level is relatively rare. The research results of Feldman [27] verify that an employee's behavior can not only promote the performance of his/her role but also his/her innovative ability and thinking. Liang and Farch [28] explored voice behavior in the context of Chinese culture, divided the dimensions from the perspective of psychology, and divided suggestions into improvement and criticism. Improvement suggestions are new ideas that employees use to enhance or improve the performance of their organization or workforce. For individual employees with a sense of community of shared future, improvement suggestions can motivate them to think positively at work and propose innovative, beneficial ideas. Criticism is when employees, outside of their work, discover unfavorable development problems in the organization, and propose innovative improvements or solutions to these problems, in order to avoid the obstruction of development. Therefore, whether it is improvement or criticism, it will motivate employees to generate innovative behavior and improve their innovation performance. However, only when employees truly regard the enterprise as their own community of shared future will they believe that the development of the enterprise is related to their own development and be able to make appropriate suggestions. Therefore, this paper proposes the following hypothesis:

Hypothesis 3b (H3b). *Voice behavior has a mediating effect between the community of shared future and innovation performance.*

Helping behavior refers to volunteering to help others in the workplace [29]. First of all, in the process of helping in the organization, employees will receive a positive emotional effect, reducing negative emotions and emotional exhaustion at work, thus enhancing positive awareness of their

work, forming a virtuous circle and triggering proactive behavior. The emergence of innovative ideas enhances individual innovation performance. Second, some studies have found that helpers need more capability than help-seekers. Therefore, helping people can encourage employees to work harder, learn new knowledge, and help others to expand their understanding of the tasks. In the process, employees will gain knowledge and generate more innovative ideas and practices to improve their innovation performance. Finally, according to the theory of social exchange, employees can get a certain benefit from helping others. This kind of reward is often invisible, such as being more popular, being proactive, and fulfilling individual psychological needs. It is easier to get help from others, so mutual helping behavior among employees can promote a good atmosphere for the organization and improve the sense of team cohesion, and a harmonious organizational atmosphere can enhance employee vitality, creativity, and innovative practices, thus promoting individual values and increasing innovation performance. In general, employees may think that helping others will waste their resources. Only in a group with a sense of community of shared future will employees eliminate this way of thinking and believe that the organization is linked to their own development. Helping others is helping the organization. Therefore, they will voluntarily give ideas to other members of the organization to help them solve work problems or difficulties. Therefore, this paper proposes the following hypothesis:

Hypothesis 3c (H3c). *Helping behavior has a mediating effect between the community of shared future and innovation performance.*

3. Methodology

3.1. Research Sample Selection and Data Collection

The research involves 53 "science and technology little giants" enterprises in Shanghai, Jiangsu, and Henan. On 29 October 2018, China Science and Technology Development Strategy Research Institute released the "China Regional Science and Technology Innovation Evaluation Report 2018". The report sets up first-level indicators from five aspects: Science and technology innovation environment, investment in science and technology activities, high-tech industrialization, and science and technology to promote economic and social development. Twelve secondary indicators and 39 third-level indicators were selected to form an indicator system. The analysis and comparison of scientific and technological innovation levels across the country and 31 provinces, municipalities, and districts were carried out. Shanghai ranked first, Jiangsu ranked fifth, and Henan ranked 21st. In another report named "China Urban Science and Technology Innovation Development Report 2018" released by Capital Science and Technology Development Strategy Research Institute 289 cities including 36 provincial capitals and sub-provincial cities and 253 prefecture-level cities were ranked from the four dimensions of innovation resources, innovation environment, innovation service and innovation performance. In this ranking, Shanghai ranked third, Nanjing and Suzhou in Jiangsu Province were ranked fifth and seventh, respectively and there are no cities in Henan Province that were in the top ten. These two reports fully demonstrate that the three regions of Shanghai, Jiangsu, and Henan are at different levels of technological development.

According to the two reports, Beijing, Shanghai, Guangzhou, and Shenzhen are in the first echelon of scientific and technological innovation in China, from which we chose Shanghai. In the second echelon provinces, we chose Jiangsu. In the last echelon of provinces, we chose Henan. The three locations we selected represent the high, medium, and low levels of science and technology in China. In this paper, the sample of enterprises we choose has the following characteristics: Firstly, all enterprises are private enterprises; secondly, enterprises are high-tech enterprises; thirdly, enterprises are independent innovation enterprises; fourthly, enterprises have 50–200 employees. Our sample includes five industries: Instrument manufacturing, computer industry, pharmaceutical industry, electronic equipment manufacturing, and communication industry.

According to the list of Shanghai Science and Technology Little Giants Project in 2018, 93 enterprises in Shanghai have been certified as "Science and Technology Little Giants". We randomly selected 27 of them to conduct a survey, 25 of them received our on-site questionnaire survey and two of them received our online questionnaire survey. The enterprises surveyed accounted for 29.03%. According to the list of Jiangsu Province in 2018, there are 60 enterprises that have been certified as "Science and Technology Little Giants". We randomly selected 16 of them for investigation. Fifteen of them accepted our on-site questionnaire survey and one enterprise accepted our online questionnaire survey. The enterprises surveyed accounted for 26.67%. According to the publication of Henan Province's list in 2018, a total of 30 enterprises were certified as "Science and Technology little Giants". We randomly selected 10 of them for investigation. Eight of them received our on-site questionnaire survey, and two enterprises received our online questionnaire survey. The enterprises surveyed accounted for 33.33%.

According to the list of "science and technology little giants" published by local governments, these enterprises were contacted. The questionnaire was distributed in hard copy and online. The survey was conducted in combination with the interview. First, we contacted the manager of the human resources department of the relevant enterprise by telephone to obtain permission and then we went to the company to conduct the interview. After conducting the interview and obtaining permission of the person in charge of the company, we distributed and collected the paper questionnaires. All questionnaires were distributed and collected on-site. Some enterprises requested online questionnaires, and the interviews for those enterprises were conducted by e-mail and telephone. A total of 450 questionnaires were distributed and 437 questionnaires were collected. After invalid questionnaires, including missing values and obvious negligence, were eliminated, a total of 334 valid samples were obtained, with a validity rate of 74.22%. Among the respondents, 54.5 were men and 45.5% were women. In terms of age, 90.4% were 30 years of age or below, 6.0% were 31–40, 2.4% were 41–50, and 1.2% were 51–60. In terms of education level, 6.9% had a high school degree or below, 7.5% had a junior college degree, 60.8% had a bachelor's degree, 24% had a master's degree, and 0.9% had a doctor's degree or above. In terms of organizational experience, 89.2% had five years or less of organizational experience, 5.7% had 5–10 years, 2.4% had 10–15 years, 1.5% had 15–20 years, and 1.2% had 20 years or more. In this study, the procedures of translation, back translation, and revision were adopted. Through multiple English–Chinese translations, the language was modified to adapt to local terms, and finally, a questionnaire was formed.

3.2. Measurement of Variables

Variables in this study were measured using a five-point Likert scale: One means "strongly disagree," or lowest degree, and five means "strongly agree," or highest degree. The variables included the community of shared future, employee knowledge sharing behavior, voice behavior, helping behavior, innovation performance, etc.

Community of shared future: There is no mature scale to measure the community of shared future. In this study, the target dimension of this variable refers to employees internalizing the goals of the organization as their own goals. This research used the goal acceptance scale developed by Oldham [30] to measure the target community, which contains three items, such as "I treat the task assigned by my superiors as the goal I set." In this study, the spiritual dimension of community of shared future refers to the shared values of employees and organizations. The measurement scale adopted the value matching scale proposed by Cable and Derue [31], with three items in total; for example, "What I value in daily life is very similar to the value system of my unit." The dimension of the interests of the community of shared future refers to the correlation between the employees' and the enterprise's interests. Since there is no mature scale, this study is based on Wu's [32] doctoral thesis on enterprise stakeholder management strategy to measure reasonable salary, welfare and treatment, long-term employment, employees' rights, training and development opportunities, information exchange and communication, participation in management and enforcement, and enterprise and employee benefits coordination, for a total of five items, such as "What do you think if you are a long-term employee of

the enterprise?" The Cronbach alpha coefficient of the community of shared future scale in this study was 0.912, which has good reliability.

Knowledge sharing: This variable was measured using a two-dimensional scale developed by Bock [33], and eight items were selected after translation, screening, and revision. Four items for knowledge sharing were used, such as "I am willing to exchange technical opinions with colleagues," and four items for tacit knowledge sharing, such as, "I am willing to share my unique views on problems with colleagues." The Cronbach alpha coefficient of the scale was 0.834.

Voice behavior: In this study, Liang and Farch [28], who have been studied by many domestic scholars, prepared a two-dimensional structured voice behavior scale based on Chinese culture, including, for example, "I will actively put forward reasonable suggestions to improve the enterprise (or department) to achieve the goals." Critical voice behavior consists of six items, such as "I will actively report incoordination problems at work to leaders of the enterprise (or department)." The Cronbach alpha coefficient of the scale was 0.875.

Helping behavior: The seven-item scale developed by Van Dyne and Lepine [29] was adopted in this study, including items such as "I actively help new employees in the team." In this study, the reliability of the scale was 0.937.

Innovation performance: This paper adopts the innovation performance evaluation scale developed by Han [34] based on the innovation performance measurement scale developed by Janssen and Van Yperen (2004), which has been widely used by domestic scholars. The scale divides employee innovation performance into three dimensions (innovation behavior, innovation result, and innovation intention), with a total of eight items; for example, "I was praised by my superiors for coming up with innovative ideas." The reliability coefficient of the scale was 0.944.

Control variables: Prior research [34] shows that variables such as gender, education level, age, organizational experience, and others usually affect employee innovation performance, so we took the above variables as the control variables of this study. We used a dummy variable to represent gender, with male being one and female being zero. Education was divided into seven levels: Primary school or below, middle school, high/secondary/vocational school, junior college, bachelor's degree, master's degree, doctor's degree or above. Age and organizational experience were measured in years.

4. Empirical Analysis and Results

4.1. Variable Discriminant Validity Test

Since the data of all variables in this study were obtained from the individual level, the discriminant validity was tested by confirmatory factor analysis. In this paper, Amos 21.0 software was used to conduct confirmatory factor analysis on the data; five models were constructed: Five-factor, four-factor, three-factor, two-factor, and single-factor; and the goodness of fit of each model was compared one by one. The results are shown in Table 1, and the fit of the five-factor model (chi-square/df = 2.870; IFI (Incremental Fit Index)= 0.937; TLI(Tucker-Lewis Index) = 0.931; CFI (Comparative Fit Index)= 0.937; RMSEA(Root Mean Square Error of Approximation)= 0.075), which is significantly better than the other models, indicates that the five variables involved in this study have good discriminant validity and indeed represent five different constructs. Meanwhile, the fitting indices of the single-factor model were poor (chi-square/df = 9.134; IFI = 0.648; TLI = 0.534; CFI = 0.648; RMSEA = 0.157), indicating that there was no serious common methodological bias in the data obtained in this study.

Table 1. Results of confirmatory factor analysis.

MODEL	χ^2/df	IFI	TLI	CFI	RMSEA
Five-factor (CSF, KSB, VB, HB, IP)	2.87	0.937	0.931	0.937	0.075
Four-factor (CSF, KSB+HB, HB, IP)	5.140	0.857	0.846	0.856	0.111
Three-factor (CSF, KSB+VB+HB, IP)	5.432	0.846	0.836	0.846	0.115
Two-factor (CSF + IP, KSB+VB+HB)	5.732	0.835	0.825	0.835	0.119
One-factor (CSF+KSB+VB+HB+IP)	9.134	0.648	0.534	0.648	0.157

CSF, community of shared future; KSB, knowledge-sharing behavior; VB, voice behavior; HB, helping behavior; IP, innovation performance.

4.2. Descriptive Statistics and Correlation Analysis

Descriptive statistics of variables in this paper include mean value, standard deviation, and correlation coefficient between variables (as shown in Table 2). As can be seen from Table 2, employees' perception of the community of shared future is significantly positively correlated with their innovation performance (r = 0.82, $p < 0.01$), and H1 is preliminarily verified. It can also be seen from other correlation coefficients that there is a significant correlation between employees' perception of the community of shared future and other main research variables.

Table 2. Descriptive statistical analysis and correlation coefficient matrix.

	M	SD	1	2	3	4	5	6	7	8
Sex	0.54	0.49								
Age	1.36	0.80	−0.07							
Education	5.01	0.90	0.02	−0.30 **						
Working years	1.62	0.96	−0.13 *	0.66 **	−0.30 **					
Community of shared future	3.58	0.97	−0.10	0–0.21 **	0.10	−0.09				
Knowledge-sharing behavior	3.86	1.01	−0.03	−0.23 **	0.14 **	−0.14 **	0.86 **			
Voice behavior	3.48	0.97	−0.05	−0.17 **	0.07	−0.06	0.86 **	0.80 **		
Helping behavior	3.72	1.0	−0.05	−0.24 **	0.12 *	−0.12 *	0.88 **	0.89 **	0.87 **	
Innovation performance	3.58	1.0	−0.06	−0.22 **	0.12 *	−0.11 *	0.87 **	0.82 **	0.90 **	0.89 **

Note: * $p < 0.05$, ** $p < 0.01$.

4.3. Hypothesis TEST

The main effect of the relationship between employees' perception of a community of shared future and their innovation performance was tested (Hypothesis 1). This paper used SPSS 20.0 to test the hypothesis, and the results are shown in Table 3. According to Model 8, employees' perception of the community of shared future has a significant positive impact on their innovation performance (beta = 0.869, $p < 0.001$), and Hypothesis 1 is verified.

Table 3. Linear regression results.

	Knowledge Sharing Behavior (KSB)		Voice Behavior (VB)		Helping Behavior (HB)			Innovation Performance (IP)			
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M7**	**M8**	**M9**	**M10**	**M11**
CV											
Sex	0.051	0.047	0.064	0.035	0.065	0.034	0.080	0.018	0.006	0.003	0.001
Age	0.235 ***	−0.013	−0.223 **	0.004	−0.281 ***	−0.054	−0.247 ***	−0.022	−0.019	−0.025	0.008
Edu	0.087	0.043	0.031	−0.014	0.064	0.019	0.064	0.019	0.008	0.028	0.009
Years	0.030	−0.035	0.087	0.020	0.073	0.006	0.055	−0.011	−0.002	−0.023	−0.015
IV											
CSF		0.858 ***		0.874 ***		0.873 ***		0.869 ***	0.636 ***	0.349 ***	0.376 ***
KSB									0.271 ***		
VB										0.595 ***	
HB											0.564 ***
R^2	0.055	0.750	0.027	0.749	0.061	0.781	0.051	0.764	0.781	0.852	0.833
ΔR^2		0.695 ***		0.722 ***		0.720 ***		0.713 ***	0.017 ***	0.088 ***	0.069* **
F	5.85 ***	200.40 ***	3.311 *	199.559 ***	6.369 ***	238.059 ***	5.476 ***	216.152 ***	199.306 ***	320.577 ***	277.512 ***
Estimation Error	0.990	0.509	0.967	0.491	0.975	0.471	0.978	0.488	0.469	0.386	0.410

Notes: CV, control variable; IV, independent variable; EDU, education; Years, years of working. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The relationship between employees' perception of the community of shared future and extra-role behaviors was tested (Hypotheses 2a–2c). In order to verify H2a–H2c, we took employees' knowledge-sharing behavior, voice behavior, and helping behavior as dependent variables, and included age, gender, and other control variables in the model, obtaining M1, M3, and M5, respectively. Then, we introduced employees' perception of a community of shared future into the regression model, obtaining M2, M4, and M6, respectively. We know from M1 and M2 that the community of shared future has a significant positive impact on employees' knowledge-sharing behavior (beta = 0.858, $p < 0.001$, ΔR^2 significantly not 0), therefore Hypothesis 2a is verified. We know from M3 and M4 that the community of shared future has a significant positive impact on employee voice behavior (beta = 0.874, $p < 0.001$, ΔR^2 significantly not 0), therefore Hypothesis 2b is verified. We know from M5 and M6 that the community of shared future has a significant positive impact on employee helping behavior (beta = 0.873, $p < 0.001$, ΔR^2 significantly not 0), therefore Hypothesis 2c is verified. According to this explanation, we can conclude that Hypotheses 2a–2c are confirmed.

Multiple mediating effects were tested (Hypotheses 3a–3c). In M9, we put the community of shared future and knowledge sharing behavior into a regression model with innovation performance as the dependent variable, and we got the community of shared future and innovation performance regression coefficient beta = 0.636, while the knowledge sharing behavior and innovation performance regression coefficient beta = 0.271, $p < 0.001$, delta R^2 is not significantly zero, therefore we assume that employees' knowledge sharing behavior plays a mediating role between their perception of a community of shared future and innovation performance, and Hypothesis 3a is verified. In M10, we put the community of shared future and voice behavior into the regression model with innovation performance as the dependent variable, and we got the community of shared future and innovation performance regression coefficient beta = 0.349, voice behavior and innovation performance regression coefficient beta = 0.595, and $p < 0.001$, delta R^2 is not significantly zero, therefore we assume that voice behavior plays a mediating role between the community of shared future and innovation performance, and Hypothesis 3b is verified. In M11, we put the community of shared future and mutual helping behavior into the regression model with innovation performance as the dependent variable, and we get the community of shared future and innovation performance regression coefficient beta = 0.376, helping behavior and innovation performance regression coefficient beta = 0.564, and $p < 0.001$, delta R^2 is not significantly zero, therefore we assume that helping behavior plays a mediating role between the community of shared future and innovation performance, and Hypothesis 3c is verified. According to this explanation, we can conclude that Hypothesis 3a–3c are verified.

5. Conclusions, Implications, and Recommendations

5.1. Conclusions

Based on social identity theory and social exchange theory, this paper discussed the influence mechanism of employees' perception of the community of shared future on their innovation performance. It was found that this perception positively affects innovation performance. At the same time, three extra-role behaviors (knowledge sharing, voice, and helping behaviors) play intermediary roles between perception of the community of shared future and innovation performance.

5.2. Implications

This study enriches the theoretical research on the enterprise community of shared future in the field of management. Since Chinese Chairman Xi Jinping, at the 18th National People's Congress, introduced the concept of community of shared future for mankind, this has become a hot topic in academic research; however, most studies on the theory only exist in political science and Marxist philosophy. In the field of management, most scholars just focus on the enterprise management theory value, while the concept of community of shared future receives less attention and is mostly applied in qualitative research and rarely in empirical studies. This paper chose giant science and

technology enterprises as the research object, applying the community of shared future research in enterprise management practice, and promoting the innovation performance of employees based on social identity theory and social exchange theory. Enterprises could discuss with staff the sense of community of shared future and how to affect employee extra-role behavior, which affects their innovation performance, enriching the management theory of enterprise community of shared future.

This study enriches the research results of employee innovation performance. The research confirms that employees' perception of the community of shared future will affect their innovation performance. There has been much research on employee innovation performance, starting from the organizational level, such as research on leadership style, organizational innovation atmosphere, reward incentives, etc., and from the individual level, such as the satisfaction of employees' psychological needs, happiness at work, etc. From the perspective of labor relations, this paper studies the community of shared future, that is, how employees' perceived employment relationship with enterprises affect their innovation performance. The research proves that employees' perception of the community of shared future can have a significant positive impact on their innovation performance. At the same time, it is found that this perception can stimulate extra-role behaviors that have a positive impact on innovation performance, thus enriching the existing research on employee innovation performance.

5.3. Management Recommendations

It is important to understand the significance of the community of shared future for enterprise development and improvement of employee innovation performance, build a community of shared future between enterprises and employees, and together promote the sustainable development of enterprises. This paper considers that a community of shared future is manifested as a cooperative relationship between employees and enterprises, rather than a simple employment relationship. Establishing a community of shared future should be carried out in three dimensions. The first is the target community. Kluger [35] considers that employees need to have a higher degree of acceptance and internalization of enterprise goals, thus we suggest that enterprises should establish their own community of shared future, which allows employees to consider enterprise goals as personal goals; thus realizing that enterprise development is related to individual development. Regarding the spiritual community, Chen [36] states that when employees have a spiritual identity and sense of belonging to an enterprise, they can place themselves within the enterprise's community of shared future, which could stimulate the organization's future development and innovation. Riketta [37] indicated that when group norms and values blend into the personal values of the staff, they will show more extra-role behavior; therefore, we suggest that enterprises pay attention to establishing a spiritual community. Third is the community of interests. Enterprises should build a community with employees so that business owners and entrepreneurs become a community of interests. A fair distribution of incentives should be used to create harmony among shareholders.

It is important to understand the mediating role of extra-role behaviors between a community of shared future and employee innovation performance. This study found that employees' knowledge sharing, voice, and helping behaviors have a significant mediating role between the community of shared future and innovation performance, and suggests that enterprises should improve innovation performance by motivating employees to work hard and meet company goals, as well as establish a community of shared future that could inspire employees beyond extra-role behavior, motivating their initiative behavior and creativity and improving individual innovation performance, therefore improving enterprise innovation.

6. Limitations and Future Directions

There are some limitations of the study. First, the research mainly adopted cross-section data, observing employees' perceptions of the community of shared future and their innovation performance in a short period of time, even though the community of shared future is formed by long-term interactions between enterprises and employees. In the future, longitudinal research should be adopted

to measure these variables at different time nodes, which could give a better explanation for the relationships between variables.

Second, although this study conducted confirmatory factor analysis, there is a homologous variance problem as a result of using a self-assessment method in the data sources, so future studies could adopt team mutual matching to improve the research methods and obtain more diverse data sources.

Third, this paper mainly studied the multiple mediating effects of three extra-role behaviors between a community of shared future and innovation performance, without considering moderating variables. In future studies, moderating variables could be used to further investigate some factors that could moderate the relationship between a community of shared future and innovation performance.

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