



**RESEARCH ON THE INFLUENCE OF EMPLOYEE SOCIAL NETWORK ON
INDIVIDUAL PERFORMANCE**

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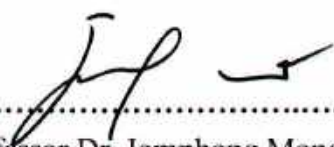


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**Thematic Certificate
To
LIANG CHENG**

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ABSTRACT


Title: Research on the Influence of Employee Social Network on Individual Performance

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The sustained and stable development of the Chinese economy has promoted the rapid growth of Chinese enterprises, but also makes the enterprise face a more complex environment. The question would be how to improve employee's performance and enhance enterprise core competitiveness which would lead to the key problems for enterprises to cope with fierce competition, realization of the enterprise strategy goals and sustainable development.

The factor that affects employee performance was the internal social network of an enterprise. In the internal social network of an enterprise, employees were the easiest to establish a self-centered relationship. In the context of Chinese culture, organizing "relationships" had become a necessary condition to complete the task. A good relationship network can provide the necessary resources to make employees form a positive and optimistic attitude to better achieve their goals. Therefore, for companies, the positive role of psychological capital was a very important point, because the internal social network of the company has an impact on employee performance. The purpose of this paper was to study the mechanism by which the internal social network of employees increased the level of psychological capital and thereby affected the performance of individual employees, through the combination of theoretical analysis and empirical research, we explored the role process of employee

social network scale, heterogeneity, **density**, etc. on employee task performance and relationship performance. It was **hoped** that it would help improve the individual performance of employees and provide reference conclusions for the organization's human resources management activities.

This paper analyzed the connotations and constituent elements of the internal social network of employees, psychological capital, and individual performance of employees on the basis of a comprehensive review of relevant theories and research literature at home and abroad; Through in-depth study of the relationship between the three, from the perspective of psychological capital to exploring the internal mechanism of employee social network on employee performance of individual mechanisms, and then put forward relevant assumptions, build a theoretical model of this article; SPSS17.0 was used to perform trust level analysis, validity analysis, correlation analysis and regression analysis on the questionnaire recovery data, test hypotheses and modify the model. In this way, the mechanism of the employee's internal social network on employee's psychological capital and performance was clearly revealed.

The following conclusions were deduced: 1) The various dimensions of enterprise internal social networks have a significantly positive impact on employee performance. The larger network scale and higher network density and network heterogeneity, the higher the employee performance; 2) The various dimensions of psychological capital had a positive impact on employee performance. Employees' psychological capital of self-efficacy, optimism dimension all had a significant positive impact on their performance; 3) Psychological capital was the intermediary variable of internal social network and employee performance. Network scale, heterogeneity and density were achieved through the indirect influence of psychological capital on its performance. The intermediary role of psychological capital in corporate internal social networks can further improve employee performance.

Keywords: Internal social employee network, Psychological capital, Employee task performance

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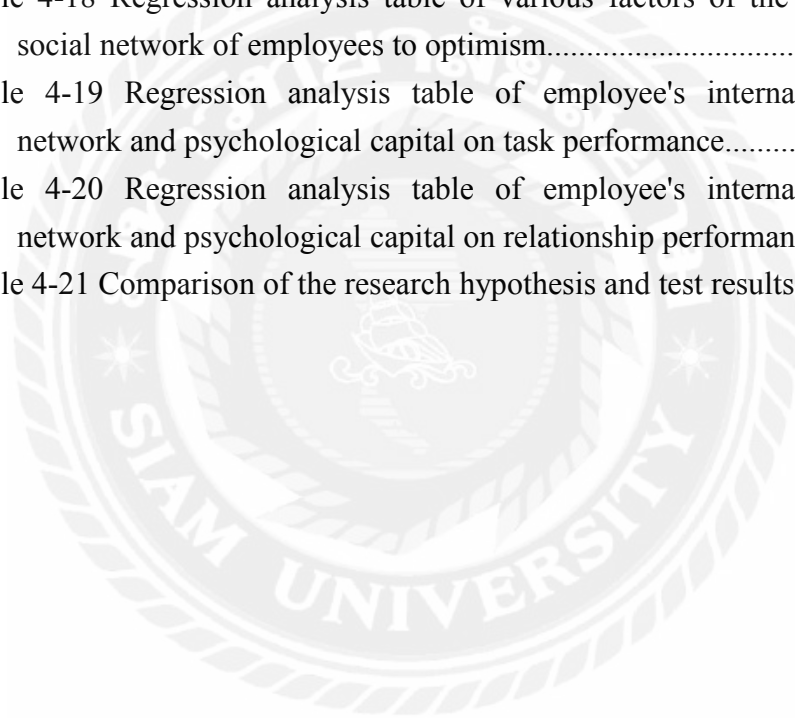
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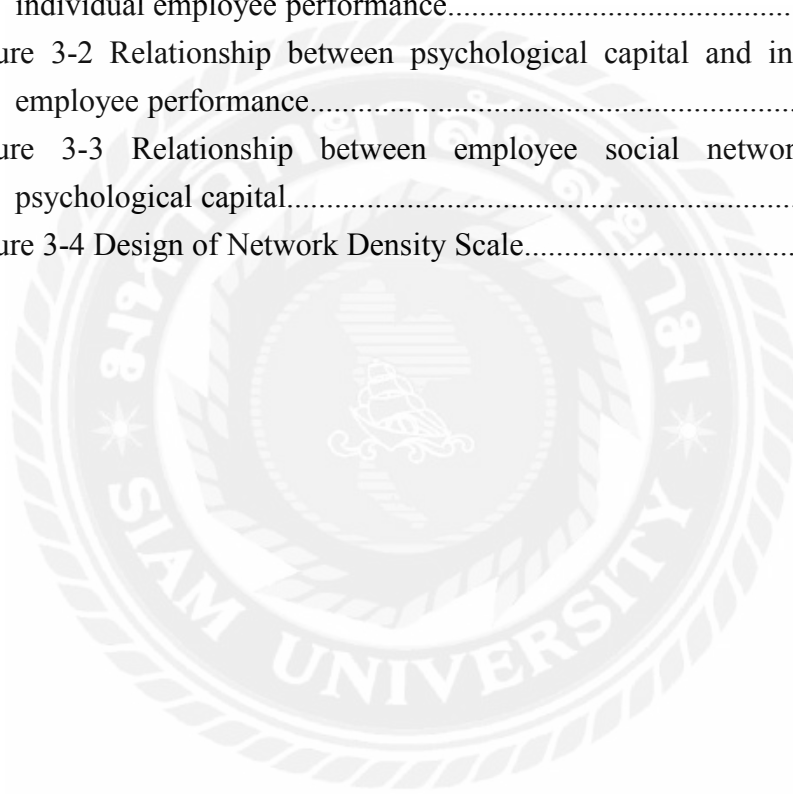
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1 INTRODUCTION

1.1 Background

With the advent of the knowledge economy and the information age, the current rapid economic development and the in-depth development of economic globalization, companies in various countries are increasingly showing a "flowering everywhere" situation, which is conducive to the cooperation between countries, but at the same time makes it between countries The competition is more fierce, coupled with the increasingly changing international situation, the competitive environment of enterprises is more complicated.

Faced with such a fierce competition environment, the internal social network of employees in the context of "relationship" culture has increasingly attracted the attention of scholars. The oriental culture that values interpersonal relationships has led individuals to be more loyal to the norms and beliefs within the group (Chai & Lee, 2008). Employee 's concept of "inner group" is stronger, and there is a combination of working and non-working relationships within the organization to form an enterprise. The phenomenon of internal employee social networks. At the same time, many companies seek to be bigger and stronger first. The scale of the enterprise is constantly expanding, the number of employees is increasing, the division of departments is getting finer and finer, and the relationship between employees and departments is becoming more and more complicated. This situation is largely Affects the communication between employees, thereby promoting the improvement of employees' individual performance. The above-mentioned characteristics of domestic culture make the formation of internal social networks of employees in China's enterprises of great significance, but domestic management practices have relatively neglected this point, as well as the promotion effect of internal social networks of employees on their endogenous competitive advantages. Therefore, taking the internal social network of employees formed among employees as the focus of research is conducive to a deeper understanding of the process of improving the individual performance of employees.

For modern enterprises, employee relations are an important factor that affects corporate performance. The important aspect of the relationship network's impact on performance is reflected in the company's employee social network's confidence in employees' completion of tasks, hard work attitude, and optimism to face difficulties. On the positive role, that is shown as a positive impact on employees' psychological capital. High-quality social networks in an enterprise play an important role in fostering a positive and optimistic work attitude for employees. For example, the larger the network size, the more people can help an employee when they encounter difficulties.

Psychological capital is an employee's positive internal state, which is expressed as an individual's positive and optimistic state. Psychological capital is a key factor for a company's sustainable competitive advantage. It cannot be imitated by other competitors and can be improved through acquired training. For individuals, the improvement of psychological capital can improve personal abilities and improve employees' work performance.

The current research has some preliminary discussions on the mechanism of internal employee social networks affecting employee performance, but the specific mechanism, especially the intermediary role of psychological capital, is insufficient. Therefore, on the basis of reviewing relevant theories and empirical research, this article studies the relationship between individual employee performance and internal social network of employees based on psychological capital, with a view to discovering how internal employee social networks affect individual employee performance, whether it is directly or indirectly Influence, whether psychological capital plays an intermediary role between the two.

1.2 Research contents

(1) Introduce psychological capital as an intermediary variable, and strive to incorporate employee psychological factors into the study of the impact of internal employee social networks on individual employee performance, providing a new research perspective for internal employee social networks and individual employee performance. The impact of the internal social network of employees on performance is one of the focus topics of academia, but current research focuses more on the

intermediary role of employee resource acquisition, absorption capacity, learning ability, etc. Less analysis. This is a useful supplement to psychological capital. It is an effective way to analyze employees' active work mentality by examining employees' interpersonal relationships within the organization.

(2) Exploring the positive effect of internal employee social networks on psychological capital provides a new path for analyzing the influencing factors of psychological capital. The current research of scholars focuses more on the utility of psychological capital. There is a relative lack of research on the antecedent variables of psychological capital. This article explores the impact of the internal social network of employees on psychological capital, which is not only a useful supplement to the research on the influencing factors of psychological capital, but also It provides an idea for enterprises to improve the psychological capital level of employees, that is, to analyze the effective ways of employees' work attitudes by examining the interpersonal relationships of employees in the enterprise.

(3) Based on the perspective of psychological capital, it explores the differential impact of social network scale, heterogeneity, and density on employee task performance and relationship performance, and strives to enrich and deepen the research on the relationship between employee performance and social network.

1.3 Significance of research

(1) Theoretical significance

Deepen the understanding of the relationship between employees of Chinese companies. The relationship between individuals in an enterprise mainly refers to the relationship between employees, that is, employee relationships. The collection of employee relations constitutes an internal employee social network. Through the integration and expansion of previous related scales, the internal employee social network scale was developed to deepen the understanding of the internal social network of employees. Based on social network analysis, relevant research on the relationship between corporate employees in China For reference.

Enriched the research on the structure and influencing factors of psychological capital. Psychological capital is an emerging theory, and there are many debates about

its composition and influencing factors. Starting from the local environment in China, this article discusses the impact of the internal social network of employees on psychological capital, which is of great significance to the improvement of psychological capital theoretical system and localization research.

Deepen the research on the influence of the social networks on employee performance. Previous studies on social networks and individual employee performance have mostly focused on external social networks of enterprises. A few studies on the relationship between internal employee social networks and individual employee performance have lacked attention and discussion on the psychological factors of enterprise employees. This article explores the impact of internal social networks of employees on the individual performance of employees from the perspective of psychological capital. It is the deepening of the research on the relationship between social networks and individual performance of employees and provides new theoretical analysis ideas for improving individual performance of employees.

(2) Practical significance

Help employees improve their personal social networks. "Relationship" has always occupied a relatively important position in Chinese society. "Relationship Vulgarism" and "Relationship Universalism" are two more common views, and they exist widely in Chinese enterprises. But in fact, the connotation of the relationship does not stop there. In addition to the instrumental connotation, the relationship also includes obligations, etiquette, emotions, etc. By studying the connotation and effectiveness of the internal social network of employees in the enterprise, it is helpful for employees to rationally and comprehensively understand the relationship with colleagues, and to show rational behavior in interpersonal interactions, thus integrating into the corporate environment.

It is helpful for enterprises to recognize the effect of psychological capital on competitive advantage. By studying the impact of employee psychological capital on employees' individual performance, this paper enables enterprise managers to recognize the role of employees' internal psychological state, and guides managers to develop employees' psychological potential through training and development, improve the quality of enterprise employees, and provide management for enterprise

employees. And provide new ideas for improving competitive advantage.

Contribute to the improvement of individual performance of enterprise employees. This paper studies the research on the relationship between the internal social network of employees, psychological capital and individual performance of employees, and establishes an influential mechanism between the internal social network of employees, psychological capital, and individual performance of employees. Social networks, the development of employee psychological capital, and other aspects of improving employee performance provide a viable path so that enterprise management has a more clear purpose.



2 LITERATURE REVIEW

2.1 Summary of research on the social network of employees in enterprises

2.1.1 Sources of social networks

Psychology and anthropology began to propose the concept of social networks in the 1930s, which laid the theoretical foundation for the future research of social networks. Georg Simmel, a German classical sociologist, was the earliest scholar to put social structure as a network. Most of Simmel's research focused on the form of social relations, thinking that the essence of society is the process of communication between people.

Radcliffe Brown first proposed the definition of "social network". He defined social networks as the configuration of the relationship between people. As a clear concept, social network analysis was proposed by the British "Manchester School", which believed that social networks were a structure in the 1950s and 1960s. Anthropologists John Barnes, Elizabeth Bott, Clyde Mitchell, and Max Gluckman were the main representatives of this school at that time.

The "New Harvard School", which emerged after the 1970s, upgraded social network analysis to social structure analysis. Harrison C. White, a representative of this school, pointed out: "So far the concept of social network has not yet formed a unified understanding." Later, Granovetter studied the role of "relationship" in the job search process, and sociologists began to explore social network theory. In the 1970s, Granovetter (1973) applied the "embeddedness" theory to network research, which attracted scholars' attention to social network research and led the social network research to gradually mature.

Since then, scholars have continuously updated their research theories on social networks. From now on, the main results include Granovetter's "Strong Relation Advantage and Weak Relation Strength Theory", "Social Capital Theory" (Bourdieu and Coleman), and "Structure Hole Theory" (Ronald S. Burt). At present, the research of social network mainly focuses on the following aspects: one is the analysis of social

network theory, the scholars' research has enriched the concept of the social network; the second is to improve the social network analysis techniques, the development of science and technology makes computer technology applied to the network. In the analysis, the modeling research technology has been widely used; third, the application scope of social network analysis has been continuously expanded. In recent years, social network analysis has been continuously applied to research, and its role has become increasingly larger.

2.1.2 The concept of the internal social network of employees

Michell (1969) gave a systematic overview of social network analysis and proposed "whole network" and "self-centered network" to analyze the characteristics of the network. Coleman (1988) believes that for the purpose of realizing benefits, individuals and other individuals form a possessive relationship through interactions. These relationships are part of social networks and include their own interpersonal resources. Some scholars pointed out that whether to establish or maintain a perfect interpersonal network relationship is an important indicator to distinguish successful entrepreneurs from failed entrepreneurs.

Adler and Kwon (2002) have sorted out the research results of previous scholars and gained a new understanding of social network theory. "Relationships" form social networks. Thoreili (1986) believes that the social network is a transaction relationship between the market and the hierarchical organization formed by the development of members within a particular organization. The purpose of each member is to obtain complimentary resources, share knowledge, and pursue each member and where The overall interests of the group are consistent. Williamson (1985) believes that social networks refer to forms of contract, authorization, and mutual trust between two independent organizations between market transactions and organizational levels. Mattson (1986) believes that there is a division of labor in the economic development profession. Under the background of division of labor, people can better obtain resources and services from each other and maintain mutual competition and complementarity through communication, dependence, and coordination. The purpose of the relationship.

Domestic research on social networks has also made great progress. With the

deepening of scholars' research, different subject areas have begun to pay attention to social network theory. Domestic research is not limited to the research results of Western scholars, but also has unique insights into the concept and analysis of social networks. Domestic scholars believe that network analysis is also a study of social structure. The source of social networks is mainly social capital. Social networks are formed as companies strengthen connections with other departments and personnel in the process of acquiring social capital. Scholars also have different studies on the concept and influence of social capital. Zhang Qizi (1999) believes that the social capital of an enterprise has a significant impact on its operating results. Yanjie Bian et al. (2004) of the Hong Kong University of Science and Technology (2004) believe that social capital is the ability of enterprises to obtain scarce resources through various aspects in various fields such as politics, economy, and society. This has also deepened the understanding of corporate social capital, indicating that companies are not individual individuals, and their economic and political connections are the focus of research. Luo Jiade gave a detailed overview of social network analysis methods and pointed out that the communication and communication between members of the organization can generate trust and influence among members (Zhao Yandong, Luo Jiade, 2005).

By sorting out the concept of the social network, the meaning of social network can be summarized into three aspects: one is the individual in the network, that is, the node; the second is the relationship, which is the connection between the nodes, including feelings, blood, friendship, etc The third is our research on social networks, which is mainly aimed at individual connections. This connection will form strong or weak connections due to different degrees.

2.1.3 Social network patterns

Krackhardt & Hanson (1993) believe that social networks mainly include the following three types:

(1) Consultation network: This kind of network is formed when employees encounter problems at work and ask others or provide consultation for others. This network is a social network formed when employees encounter difficulties in their work and will consult others for help. Through this network, it is possible to determine

who has technical or professional skills in the organization. People who are consulted by others on the network will have rich experience, the right to make decisions, and the allocation of resources, which are beyond the reach of others.

(2) Emotional network: Refers to the relationship network formed by employees based on the exchange of emotions.

(3) Intelligence network: Refers to the network formed by employees in the process of transmitting information to others around them after receiving intelligence.

Ibarra (1993) believes that network relationship forms can be divided into five forms: communication network, suggestion network, support network, influence network and friendship network; Sparrowe, et al. (2001) believe that social network relationship forms include consulting network and obstruction network. The formation of the consulting network is mainly when employees are asking for advice from others in order to complete their work goals. In the process of consultation, employees also share information and resources. Obstructing the network is a negative network for employees. It can interfere with or even destroy an individual's work, thereby causing the individual to have emotional fluctuations or outbursts of temper. Therefore, hindering the network is not conducive to the work of individual employees.

Through research on social networks by foreign scholars, it is found that instrumental networks and emotional networks are the main forms of social networks, and their performance forms are consulting networks and friendship networks. These two network forms are the main research objects of scholars. The specific network forms of social networks are now organized and organized as shown in Table 2-1.

Table 2-1 Division of network forms

Researcher	years	Distinguish standard	dimension	Research dimension
Granovetter	1985	Joint strength		Strong and weak ties, the specific measurement contents are: Relationship length, frequency of interaction, intimacy, reciprocal

			relationship
Tichy & Birety	1979	Different characteristics of network contact objects	Formal networks (universities, governments, professional institutions, capital sources), non-Formal network (friends, family, colleagues, similar companies)
Monae & Eisenbera	1987	Purpose of the relationship	Expressing emotion networks, information exchange networks, trying to exert influence networks Networks, physical and service exchange networks
Krackhardt	1993	Purpose of the relationship	Consultation network (formed on the exchange of work-related issues) Emotional network (formed based on emotional needs for private communication) Intelligence network (formed based on trust and leaking information to each other)
Sparroweetal	2001	Purpose of the relationship	Consultation network (formed to complete work and share information with each other), Obstruct the network (because of the refusal to cooperate, threat, deliberate Destruction and other unfavorable behaviors)
Balkundi	2009	Purpose of the relationship	Friendship Network and Consulting Network

2.1.4 Analysis indicators of social network

(1) Network density

Network density is an important indicator of network research and analysis, and the degree of interaction between employees can be seen by studying the level of density. Social network density is the strength of the relationship between members to communicate, social network density can reflect the strength of organizational relationships. Through a lot of interaction, members will get a lot of capital and information, which explains how much social capital the organization has received (Luo, 2005). Reagans & Zuckerman (2001) believe that network density can only play a regulatory role within a certain range of limits. The impact of network density is mainly reflected in two aspects of individual performance and organizational efficiency. Organizations with a higher network density also have higher individual performance. This is because more communication among network members enables employees to complete their work better, which lays the foundation for improving employee performance. In addition, organizations with high network density will have higher efficiencies. This is because individuals achieve a large amount of information exchange and sharing in the process of contact, and these connections also increase organizational efficiency accordingly. The higher the network density, the higher the degree of interaction among members of the enterprise.

The enterprise with the highest density indicates that there is communication and communication among all members of the enterprise, as shown in Figure 2-1. A low network means that there is little communication among members of the enterprise, as shown in Figure 2-2.

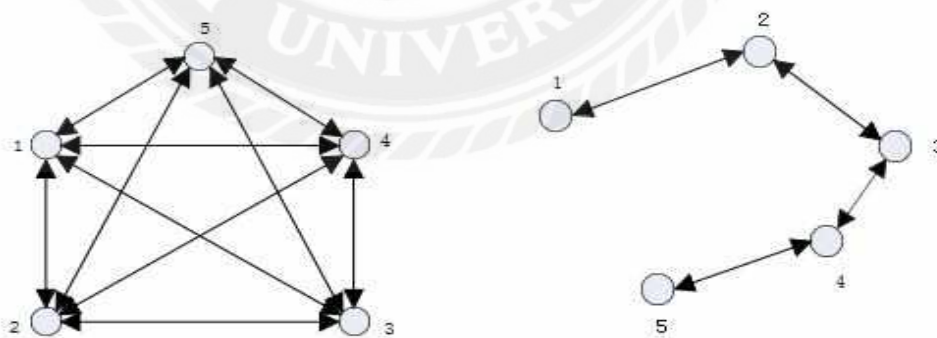


Figure 2-1 High-density social network Figure 2-2 Low-density social network

(2) Network scale

The network scale is the most direct dimension to measure the internal social

network of employees in an enterprise. It refers to the number of connections between employees as the main body and others. Studies in sociology have shown that the larger the scale of the network, the greater the likelihood of obtaining support. Scholars Weflman and Wortley (1990) found through research that the larger the scale of the network, the greater the number of network members who provide employees with emotional support, goods, services, and companionship support, and the higher the proportion of network members who can provide support. Therefore, if the employee has a large-scale social network, it means that he not only has many potential supporters in the network but also that each member is more likely to provide help. In the same way, for the study of internal social networks of employees in a company, a large network size means that employees have more extensive social contacts, provide more resources for employees, and the resources are diversified. Therefore, the scale of the network heralds the breadth of employees' access to resources from social networks (Aldrieh & Reese, 1993; Hansen, 1995; Hoang & Antoneis, 2003).

(3) Network heterogeneity

The degree of network heterogeneity is another commonly used indicator for measuring the internal social network of employees in an enterprise. It indicates the degree of difference in individual characteristics, occupational characteristics, and educational level among members of the internal social network of employees. In the measurement, the organization demographic method is generally used to study the individual characteristics of employees' social network members (Yoo, 2003) to explore the impact of different traits on the individual components of the network on employee performance.

The reason for studying the heterogeneity of employees' internal social networks is mainly derived from the weak joint thought of Granovetter (1973). The heterogeneity index of employee's social networks within an enterprise is a proxy index for measuring the strength of employees' social joint relationship.

. If the organization's centrality is high, the organization's interaction is actually very centralized. The graph with the highest degree of centrality in the group is the star shape, as shown in Figure 2-3, and Figure 2-4 shows the low degree of centrality.

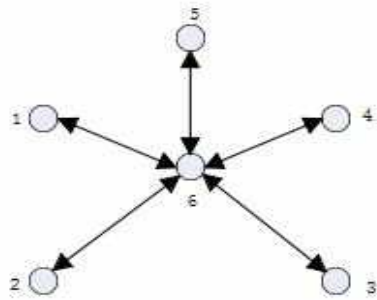


Figure 2-3 Star-shaped social network

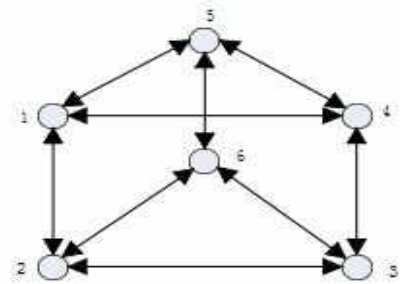


Figure 2-4 Low-centrality network

2.1.5 Influencing factors of social network

(1) Factors affecting social networks

Social networks can be divided into inter-individual social networks, inter-team social networks, and inter-organizational social networks. The antecedents are also summarized from these three aspects. Individuals, similarities, personality traits, and different environments will produce different social networks; and within the organization, due to different organizational goals and situations, it will also cause the organization The differences in social networks in China; and in the process of teams, interpersonal and functional connections are the main reasons that make the networks different. As shown in table2-2.

Table 2-2 Influencing factors of social network antecedents

	Influence factor	Researcher
Individual	Actor similarity	McPherson, Smith-Lovin, & Cook, 2001; Mehra, Kilduff, & Brass, 1998; Ibarra, 1993; Carley, 1991; Tsui & O'Reilly, 1989;
	Personality traits	Mehra, Kilduff, & Brass, 2001; Klein, Lim, Saltz, & Mayer, 2004; Casciaro, 1998
	Approach and	Borgatti & Cross, 2003; Burkhardt & Brass, 1990;

	organization	Fulk & Steinfield, 1990; Papa, 1990; Shrader, Lincoln, & Hoffman 1989
	Environmental factor	Shah, 2000; Monge & Eisenberg, 1987; Danowski & Edison-Swift, 1985
Team	Interpersonal connection	Kilduff & Tsai, 2003; Knoke, 2001; Burt, 1992; Bonacich, 1991; Coleman, 1990; Uzzi, 1996;
	Functional link	Schulz, 2001; Tsai, 2000
Organization	Motivation	Gulati, Nohria, & Zaheer, 2000; Ebers, 1997; Alter & Hage, 1993; Williamson, 1991; Oliver, 1990; Galaskiewicz, 1995
	Learn	Ahuja, 2000
	Trust	Beckman, Haunschild, & Phillips, 2004; Keister, 2001; Rosenkopf, Metiu, & George, 2001; Chung, Singh, & Lee, 2001
	Specification and monitoring	Kogut, 2000; Ostrom, 1998; Gulati, 1995; Putnam, 1993; Larson, 1992; Coleman, 1990; Ostrom, 1990; Coleman, 1988; Granovetter, 1985
	Fair	Chung, Singh, & Lee, 2000; Gulati & Gargiulo, 1999; Han & Brieger's, 1999; Podolny, 1993; Ring & Van de Ven, 1992; Ostrom, 1990
	Situation	Marquis, 2003; Doz, Olk, & Ring, 2000; Dyer

		& Nobeoka, 2000; Keister, 2000; Kogut, 2000; Provan, 2000; McEvily & Zaheer, 1999
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(2) Social network utility

The research on the effectiveness of social networks includes the impact on individuals, the team, and the organization. The research object of the individual social networks is the influence of the individual's interpersonal social network on its behavior; the influence of team social network is mainly manifested in aspects such as team performance, growth and knowledge sharing; And organizational trust. As shown in Table 2-3.

Table 2-3 Influencing factors of social network results

	Influence factor	Researcher
Individual	Power position	Brass, 1984
	Job search	Bian, 1997
	promotion	Burt, 1992
	Performance	Burt, 1992; Sparrowe, Liden, Wayne, et al., 2001
	Job satisfaction	Hodson, 1997
	Organizational identity	Ibarra, Andrews, 1993
	Team	Team performance
Team growth		Balkundi, Barsness, Michael, 2009;

		Balkundi, Harrison, 2006
	Team innovation	Brion, Chauvet, Geraudel, et al., 2007
	Team effectiveness	Bona O., 2007;
	Knowledge Sharing	Hansen, Mors, Lovas, 2005
Organizational	Business Performance	Saxenian, 1991; Leana & Van Buren, 1999; Collins, Clark, 2003
	Organizational innovation	Gabbay, Zukerman, 1998; Bolino, Turnley, Bloodgood, 2002
	Interorganizational trust	Ring, Van De Ven, 1994
	Knowledge transfer	Nahapiet, Ghoshal, 1998

2.2 Summary of psychological capital research

2.2.1 The concept of psychological capital

"Capital" first appeared in the field of economics and financial management. In these two areas, capital is a factor of production and is a resource used for material production and generating income. After the emergence of human capital theory and its recognition, the concept of capital expanded from traditional material capital to human capital, and the word "capital" also slowly emerged in the field of human resources. The content of capital at that time mainly included human capital and other social capital, intellectual capital, and cultural capital. Previous human capital research did not include people's mental health, but as employees continue to have mental health problems and have a strong influence on corporate human capital investment income, researchers have begun to study this aspect of mental health. Thus put forward the concept of psychological capital. Domestic research on psychological capital started late, so the concept and structure of psychological capital are under

exploration, and there is no precise definition of its definition. However, research on employee psychological capital has become a focus in the field of human resource management.

In several major studies abroad, some scholars' definitions have been recognized. Goldsmith et al. (1998) believe that psychological capital is a relatively stable psychological tendency or characteristic formed by individuals in early life, and is a combination of individuals' work, ethics, self and life ideas, cognition and attitude, mainly including self-esteem and control points Two dimensions. Hosen et al. (2003) believe that psychological capital is a durable and relatively stable internal psychological infrastructure, which is obtained by individuals through investment such as learning, including personality qualities and tendencies, self-monitoring, The four aspects of knowledgeability and effective emotional communication. Avolio et al. (2004) believe that psychological capital refers to the synthesis of positive mental states that help predict individual work efficiency and work happiness index. It has both statefulness and can be developed through intervention measures; it is also characteristic and relatively stable. Moreover, status and traits are actually two extremes on the same dimension, mainly including hope, optimism, self-efficacy, resilience, and positive attribution. Letcher et al. (2004) believe that psychological capital is equivalent to the personality traits in the “big five personalities”. Cole (2006) believes that psychological capital is a personality trait that can affect individual behavior and output. Luthans et al. (2005) believe that psychological capital is a psychological element based on the general enthusiasm of individuals in organizational behavior, specifically expressed as a positive psychological state, and psychological capital can give individuals a competitive advantage through targeted investment and development. The researches of all scholars are now listed in Table 2-4.

Table 2-4 Concept of psychological capital

Conceptual orientation	Basic concept	Year	Scholar	Definition
Trait theory	Psychological capital	1997	Goldsmith	Is a relatively stable psychological tendency or characteristic formed by an individual in early life

	exists as an intrinsic characteristic of an individual	2003	Hosen	It is an internal psychological foundation structure with durability and relative stability
		2004	Letcher	Equivalent to the personality traits in the "big five personalities"
		2006	Cole	Is a personality trait that affects individual behavior and output
State theory	Psychological capital is a positive mental state	2004	Luthans	Is the core psychological element of the individual's general enthusiasm
		2007		It is a positive mental state that the individual shows in the process of growth and development
		2007	Jiang Jianwu, Zhong Lifeng, Wei Rong	It is an intangible asset of the organization. It can be changed through experience and can be developed through training. It has the capitalization characteristics of capital appreciation, competitiveness, mobility, relative independence, and openness
Comprehensive Theory	Psychological capital is a kind of psychological quality with both traits and status	2004	Avolio	A combination of positive mental states that help predict individual work efficiency and work happiness index
		2003	Bandura	Research on self-efficacy
		2000	Snyder	Research on Hope
		2004	Carver	Optimistic research on reality

In China, Ke Jianglin, Sun Jianmin, and Li Yongrui (2009) believe that in the context of Chinese organizations, psychological capital is a positive mentality or

ability that can be measured, developed, and can promote work performance improvement in the process of individual transactions. In the study of psychological capital by domestic scholars, Jiang Jianwu (2007), Zhong Lifeng (2007), Wei Rong (2008, 2010) and other scholars who believe that psychological capital is a "class state" think that psychological capital is an organization It is an intangible asset that changes by adding experience in the later period and develops through employee training. It has capitalization characteristics such as capital appreciation and competitiveness. It is also a performance of the company 's investment results. It can measure whether the company 's investment in psychological capital has reached The desired goal.

At present, the most widely adopted is the definition of Luthans, Youssef, and Avolio (2007): psychological capital is an individual's positive psychological state, with the following four characteristics:

(1)Self-efficacy, self-motivation, actions, and success The ability to have firm confidence;

(2)Optimism, if there is a good result, the individual will think that this is an internal reason and has persistence;

(3)Hope is a state of positive motivation, which is based on the relationship between the agent and the path The sense of success resulting from the interaction;

(4)Resilience, a characteristic of actively adapting and rapidly recovering in major danger or difficult situations. This article also adopts the view of Luthans.

2.2.2 The dimension of psychological capital

Through previous research, it is found that there is also a difference in the research and development of psychological capital structure scale because there is no unified view on the definition of the current psychological capital concept. At present, the connotation of psychological capital is still at the stage of in-depth research, while the elements of psychological capital are at the stage of discussion. At present, the research on psychological capital structure is generally qualitative research, less empirical research. With the deepening of research, other constituent elements may be added. By sorting out the previous literature, the division of psychological capital dimensions is now shown in Table 2-5.

Table 2-5 Dimensional division of psychological capital

Dimension	Year	Representative	Element
Two-dimensional theory	1997	Goldsmith & Darity	Includes two elements of self-esteem and control points
	2009	Ke Jianglin, Sun Jianmin, Li Yongrui	Including transactional psychological capital and interpersonal psychological capital
	2008	Wei Rong, Huang Zhibin	Explicit psychological capital and potential psychological capital
Three-dimensional theory	2003,2004	Luthans, Jensen	Psychological capital includes three dimensions of hope, optimism and tenacity
	2007	Zhong Lifeng	
Four-dimensional theory	2006,2007	Luthans, Youssef, Avolio	Self-confidence (self-efficacy), hope, optimism, and tenacity
	2009	Zhao Xiping, Yang Xiaoping	
	2010	Zhang Kuo, Zhang Sai, Dong Yinghong	
	2009	Hui Qingshan	Calmness, hope, optimism, confidence
Five-dimensional theory	2004	Page	Hope, optimism, confidence, tenacity, and integrity
Six-dimensional theory	2008	Tian Xizhou	Self-confidence, hope, optimism, tenacity, happiness, emotional intelligence

2.2.3 Influencing factors of psychological capital

The factors influencing the results of psychological capital are mainly expressed in three aspects: attitude, behavior, and performance. As shown in Table 2-6.

Table 2-6 Summary of results of psychological capital

Effect result	Specific variable	Scholar
Attitude	Job Satisfaction	Larson and Luthans (2006)
		Luthans, Avolio, Avey, et al. (2007)
	Organizational commitment	Luthans, Norman ,Avolio et al. (2008)
		Zhong Lifeng (2007)
	Work engagement	Avey, Wernsing, Luthans (2008)
	Happiness	Youssef , Luthans (2007)
Avey, Luthans, Smith et al. (2010)		
Behavior	Organizational citizenship	Avey, Luthans Youssef(2010)
		Norman, Avey , Nimnic et al. (2010)
		Zhong Lifeng (2007)
	Work non-compliance	Avey, Wernsing, and Luthans (2008)
		Norman, Avey and Nimnicht et al. (2010)
Performance	Individual employee performance	Youssef and Luthans (2007)
		Luthans, Norman and Avolio et al. (2008)
		Zhong Lifeng (2007)
	Startup performance	Hmieleski and Carr (2008)
	High-tech enterprise	Peterson, Walumbwa, Byron, et

	performance	al. (2008)
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2.3 Summary of research on individual employee performance

2.3.1 The concept of individual employee performance

For a long time, scholars have been paying close attention to the issue of performance, but they have different opinions on the basic definition of performance, and there is no unified view yet. Based on which perspective to define performance, it determines various issues such as performance evaluation standards, evaluation index system, and the means to improve performance. Therefore, before analyzing the performance of enterprise employees, we must systematically sort out and analyze the existing performance research.

Stoma (1980) defines performance as the degree to which an organization achieves its goals; Morhrnan (1989) believes that performance is the result of employee behavior; Schneider (1991) believes that performance is the result of individual or organizational behavior; Campell (1993) believes that performance and Behaviors are interlinked in nature, to a certain extent, the actual actions that people can see by others. Yang Jie, Fang Liluo, and Ling Wenling (2001) believe that performance is the unification of time, method, and result; Bemardetal (1995) believes that performance is the different work activities and outputs of employees at a specific time. Borman and Motowidlo believe that performance behavior will affect the efficiency of individuals or organizations regardless of whether they are positive or negative; the result is that performance changes the state and conditions of people or things, and the process of achieving organizational goals Have a certain impact.

Spangenberg pointed out three levels of performance: organization, team, and individual. Because this article studies the impact of internal employee social networks on individual employee performance, the definition of individual employee performance is defined as the individual level. At present, there are three main views of individual employee performance: result performance perspective (employee individual performance is the result of completing the task), behavior performance perspective (employee individual performance is the behavior in the process of completing the task) and value performance perspective (employee individual

performance is the employee's characteristics The value that capability brings to the organization). This article draws on the explanations of Borman and Motowidlo and believes that individual employee performance is defined as a joint fusion of results and behaviors.

While academics are conducting theoretical research, the development of the knowledge economy has changed the requirements of companies for employees. Under this background, a series of new performance perspectives have emerged. Hesketh & Allworth (1997) proposed to increase the adaptive performance of employees to cope with environmental changes; Zhang Tiqin (2002) proposed the concept of deferred performance from the perspective of knowledge and ability, that is, the performance of employees should also pay attention to the future, and employees obtain through learning The knowledge and experience are of great significance to employees' future performance and organizational development.

Table 2-7 Definition of performance

Conceptual orientation	Basic concept	Years	Scholar	Definition
Result view	Result performance refers to the work results of employees	1995	Bernardette	Within a specific period of time, the output records generated by a specific job function or activity. The performance of a job is generally equivalent to the sum (or average) of the performance of a key function or basic job function
Behavioral view	Behavioral performance refers to behaviors generated by employees that have a positive meaning	1991	Ilgen, Schneider	What an individual or system does
		1990	Murphy	A set of actions related to the goals of the organizational unit in which
		1993	Campbell	

	for the realization of organizational goals			the organization or individual works. Is consistent with the organizational goals in which a person works, and brought by the employees in the organization, scalable actions, behaviors and output results
Competence view	Assess the ability of knowledge workers	1973	Mc Clelland	The concept of competence (competency) was proposed, and then a "workability assessment method" was developed, focusing on identifying the key talents leading to an excellent performance from "high-performance workers"
			Macbell Consulting	Special emphasis on the key to competence for knowledge workers

2.3.2 The dimension of individual employee performance

With the deepening of scholars' research on the concept of performance, research on the performance dimension has also been carried out. The main dimensional views are two-dimensional view-task performance and relationship performance; three-dimensional view-task performance, relationship performance, adaptive performance; four-dimensional view-task performance, interpersonal performance, adaptive performance, and effort performance; Multi-dimensional perspective. Among them, task performance and relationship performance are classic two-dimensional performance views, and this view is also adopted in this paper. As shown in Table 2-8.

Table 2-8 Individual employee performance structure

Dimension	Years	Representative	Element
Two-dimensional theory	1993	Borman, Motowidlo	Task performance and relationship performance
		Rotundo, Sackett	Task performance and non-task performance
Three-dimensional theory	1978	Katz, Kahn	Join the organization; meet or exceed the performance required by the organization; Willing to undertake tasks outside the regulations
	1999	Allworth& Hestech	Task performance, relationship performance, and adaptive performance
Four-dimensional theory	2005	Wen Zhiyi	Task performance, interpersonal performance, adaptation performance, effort performance
	2007	Han Yi	Task performance (technical core), relationship performance (citizen climate), Learning performance (learning process), innovation performance (innovative behavior)
Multidimensional	1993	Campbell	Job-specific task performance, non-job-specific task performance, writing, and verbal communication, management, effort, discipline, convenience for groups and colleagues, supervision and leadership
	1983	Podsakoff	Helps behavior, organizational obedience, individual initiative,

			athlete spirit, organizational loyalty, civic ethics, and self-development
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As can be seen from the above table, the development of individual employee performance dimensions can be roughly summarized into five stages, the first is the citizen performance stage, this stage believes that citizens are beneficial to the organization, and their behavior will also affect the organization; second is Borman's proposal Two-dimensional performance, thinking that performance is composed of task performance and relationship performance; again, a high-dimensional performance stage, which refines various dimensions; then a three-dimensional performance stage, thinking that performance is "task-relationship-innovation three Aspect; the last is the four-dimensional performance structure, which includes four aspects: task, relationship, learning, and innovation.

This article draws on Borman and Motowidlo's two-dimensional performance views, namely task performance and relationship performance. Task performance measures the employee's contribution to the organization according to the provisions of the job description. At present, most scholars regard task performance as the focus of performance research, because task performance is based on the work specification, which reflects the core technology of employees' work, and also provides the foundation for the completion of core technology. According to relevant research by scholars, task performance is based on work results to measure the abilities and skills of employees in the process of completing work tasks. Relationship performance is the enthusiasm and effort shown by employees in the course of their work. It will manifest themselves as willing to undertake some tasks that are not their own, and will actively help others, comply with organizational regulations, and take organizational goals as personal goals. Van Scoter and Motowidlo believe that relationship performance includes two dimensions: interpersonal promotion and work dedication. Other scholars believe that the characteristic dimensions of relationship performance are summarized as follows: dealing with work pressure, work or job responsibility, organizational improvement suggestions, constructive suggestions, and persuading others to accept suggestions and guidance.

2.3.3 Factors affecting individual employee performance

There are three types of factors influencing individual employee performance: organizational factors, job characteristic factors, and employee factors. The specific factors are shown in Table 2-9.

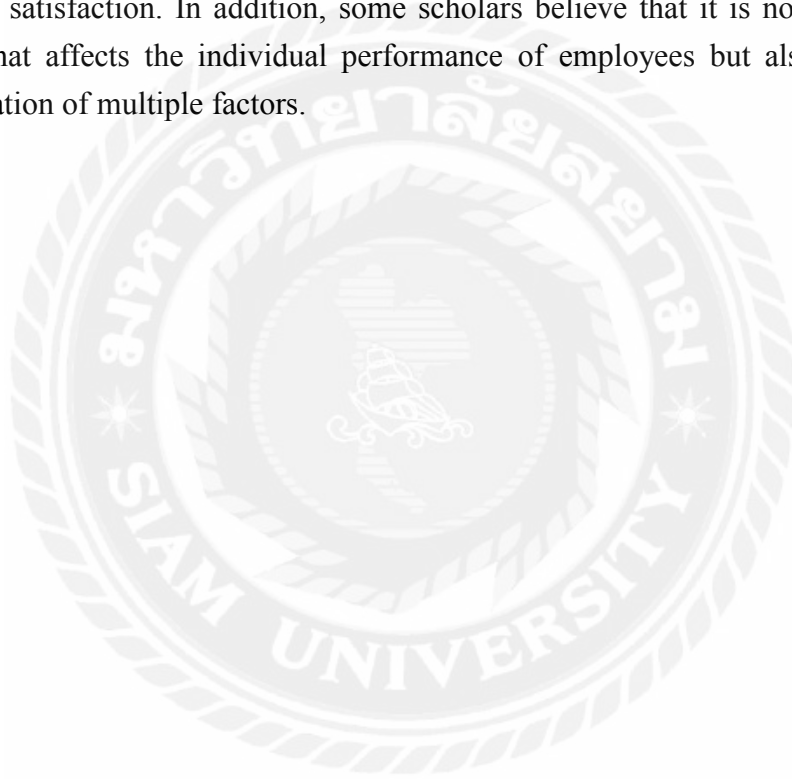
Table 2-9 Influencing factors of performance

Antecedents	Years	Representative	Specific variable
Organizational factors	1998	Moormanetal	Organizational loyalty, organizational support
	1997	Borman, Motowidlo	
	2001	Ling Wenzhen	
	2006	Chen Zhixia, Liao Jianqiao	
	2007	Han Yi	Organizational commitment
	1986	Pfeffer	Organizational structure
Personal reason	1984	Weiss, Adier	Personal qualities
	1984	Hunter	Personal cognitive ability
Job characteristic factor	1999,2002	Miller, Avis, etc.	Job responsibility
	2001	Beaty	Work situation
	1995	Goodman	External satisfaction
Interaction theory	1983	Schneider	Matching personal characteristics with organizational structure
Three-factor interaction model	1982	Blumberg, Pringle	Job performance is a function of potential, willingness and opportunity factors

(1) Organizational factors can be divided into internal and external environmental factors. Internal factors are mainly the location and layout of the workplace, the nature of work, etc.; external factors include national politics, economic development, family factors, etc.

(2) Personal factors of employees include personal characteristics and personal cognitive abilities. Employees 'workability refers to the organic combination of employees' knowledge, intelligence, physical fitness, skills, experience, and other contents. Among them, employees' work attitude also plays an important role, including responsibility, dedication, learning spirit, and obedience to the overall situation.

(3) Factors related to work mainly include job responsibility, work situation, and external satisfaction. In addition, some scholars believe that it is not only a specific factor that affects the individual performance of employees but also an interactive combination of multiple factors.



3 RESEARCH METHODS

(1) Literature research method. Fully study the literature related to the internal social network of employees, individual performance of employees and psychological capital theory, understand the research status and deficiencies of related theories, clarify the research direction of this article, and lay the foundation for exploring the relationship between the research variables.

(2) Quantitative research method. Compilation and distribution of questionnaires, by collecting 117 valid questionnaires, to analyze the mechanism of the internal social network of employees on the individual performance of employees and explore the mediating effect of psychological capital in the impact process. Use the data collected by the questionnaire to conduct sample information statistics, reliability and validity analysis, correlation analysis, and regression analysis to verify the hypothesis of the relationship between the employee's internal social network, psychological capital, and individual employee performance. The influence mechanism of individual performance.

3.1 Literature research method

3.1.1 Analysis of elements of the internal social network, psychological capital and individual performance of employees

1. Analysis of elements of the internal social network of employees.

To select the indicators of the employee's social network structure within the organization, the research dimension of the social network should first be clarified. Research by foreign scholars generally combines the structural characteristics of employees' social networks with social network forms to analyze the impact of employees' social networks on individual performance in organizations. The purpose of this study is how to improve the individual performance of employees. It is a study of network individuals. Therefore, this paper selects the three most commonly used and most important indicators in the analysis of egocentric networks-network scale,

network heterogeneity, and network density as Measurement index.

(1) The scale of the social networks refers to the number of employees who have communication and can help employees solve problems in a certain way during the organization process. Employees' social network members are composed of employees in different work departments and with different academic qualifications. The large scale of the social network means that employees have more choices when choosing helpers.

Steier and Greenwood (1986) used the number of employees in the department, the staff in the finance department, and the staff in the sales department to measure the size of employees' internal social networks. Baron and Markman (1986) used the number of subjects with direct or extended relationships with employees as an indicator of the scale of social networks.

From the above research results, based on their respective research purposes, the indicators chosen by scholars are not the same, but the basis of the selection is basically the number of individual connections with employees. According to the research purpose of this article, the following three indicators are finally determined as the research object: the staff of the department that employees can contact; the staff of other departments that employees can contact (including the Finance Department, Sales Department, Administration Department, R & D Department, etc.) ; Senior management personnel, such as chairman, general manager, etc.

The research on network scale generally adopts the "positioning method", but it cannot specifically grasp the specific information of the respondents' social networks, and it is difficult to determine the density of corporate social networks (Zhao Yandong, Luo Jiade, 2005). law".

(2) The heterogeneity of social networks refers to the differences in demographic characteristics and perceptions, values, and experiences among members of organizations. Liu Jia and Xu Yan (2006) define network heterogeneity as the difference in individual characteristics of employees' social network members, that is, the differences in social background members' academic background, professional knowledge, work department, and values. According to Hambrick, Cho & Chen

(1996), the heterogeneity of employees' social networks is mainly manifested in differences in age, education level, and profession.

By sorting out the literature and finding that the organization is highly heterogeneous, it is possible to conduct a comprehensive analysis of the problem from different angles and improve individual employee performance. The analysis of network heterogeneity in this article mainly includes the investigation of the education level of the network members and the differences in the work departments.

(3) Network density is mainly the degree of interaction between members of the network, that is, the average degree of interaction between members of the organization. The strength of the organization relationship is usually measured by the network density. The more interactions among network members in an organization, the more resources, and information that are often exchanged, just explaining the amount of social capital formed in the organization (Luo, 2005). Reagans & Zuckerman (2001) found that a certain degree of density within the organization is necessary for good coordination.

A high network density means that any member of the social network has more 1 connections with other members, and a low density means that each member has less interconnection. A high value of the organization's network density indicates a high degree of interaction among members, and the resulting exchanges and communications will increase accordingly.

2. Analysis of elements of psychological capital.

Employee's higher psychological capital shows that employees' enthusiasm towards work attitude, think they can use their good psychological capital to get rid of difficulties in the face of difficulties, their expectations of themselves are positive, so it is easier to complete tasks successfully and promote performance Improvement.

This paper draws on the research results of Luthans et al. (2007), that is, psychological capital is a positive psychological state that individuals show during their growth and development, including four dimensions of self-efficacy, hope, optimism, and resilience. Psychological capital emphasizes the inherent positive

power and excellent quality of individual psychology and is an individual characteristic of the state category, which can be improved through later development, cultivation, and management. This section will introduce these four mental states one by one.

(1) Self-efficacy is mainly expressed in the confidence in achieving success. According to the definition of Bandura (1986), self-efficacy is the judgment of an individual on his own ability and belief to complete a specific activity. Stajkovic and Luthans (1998) believe that self-efficacy is the belief that employees fulfill their potential and achieve success when they complete their tasks. Schwartzberg defines self-efficacy as the self-confidence of an individual in the face of an unfamiliar environment or an environment unfavorable to himself. The focus of high self-efficacy is on those opportunities that are worth pursuing, and believe that the obstacles can be overcome. They have the confidence to get rid of the pressure, have a strong ability to resist setbacks, and have their own attachment to ideals. These make the success rate Get bigger; people with low self-efficacy believe that they will fail, and in this case, they will feel the pressure.

The employees of modern enterprises generally have a long education period, have a good theoretical basis and professional knowledge, they have a high spiritual pursuit, and the need for self-realization makes them dislike routine work and prefer to take on challenging work; Able to discover difficulties encountered in time and conduct a careful analysis to find solutions to problems; they show high expectations and strong self-esteem in their work. Therefore, higher self-efficacy is an important feature of modern enterprise employees.

(2) Hope, will, and way. Luthans believes that if employees are full of hope in the organization, they will pay more effort than the organization requires. However, the support of the organization is not available in the work. Although the individual is full of hope, they will feel that their efforts have not brought the results they want and have a gap. Snyder (1991) defined hope as a "positive motivational state". In short, hope includes a combination of motivation, ways, and goals. Related research also shows that if employees have a high level of hope, then employees have strong confidence in completing work tasks, then they can use other methods to complete tasks when they encounter difficulties.

At present, employees of enterprises generally set realistic and challenging jobs for themselves, and find a path in the process of completing the work. When encountering unsuccessful things in work or life, they will hope that the colleagues around them will lend a helping hand and continue to inspire their own hearts to try to find a solution to the problem. Therefore, a higher level of hope is another important feature of modern enterprise employees.

(3) Optimism is a powerful motivation for individual positive behavior. He is a positive attribution method. Optimists attribute the positive aspects to themselves, which are considered to be long-lasting and universal; while the negative aspects are caused by external factors, are short-lived, and remain positive and optimistic about the future. Optimists summarize the events in their lives within their control, which will promote future activities. Optimists believe that when you encounter difficulties and setbacks in your work or life, you cannot face it negatively, and you will certainly be able to find opportunities to successfully complete the task. Peterson (2002) believes that employees with a high level of optimism will not treat difficulties negatively, but instead will adapt themselves to the complicated tasks at work by adopting different methods. The formation of optimism mainly depends on the cultivation of acquired life. If you want to become an optimistic person, you need to have an objective understanding of the self, the world, and your own future. Through some training in behavioral therapy and cognitive therapy, you must learn to change your attitude towards yourself and your perception of things. By turning fear into a goal, introspectively seeking truth from facts, summing up past successes and failures, listing your strengths and weaknesses, or seeking help from friends, this is a process of preparing mentally and psychologically.

(4) Resilience refers to the ability of employees to recover from difficulties. Luthans (2002) believes that resilience "is a positive psychological ability, and the ability of employees with high resilience to recover from difficulties and frustrations." Masten and Reed (1990) believe that resilience is a phenomenon when serious difficulties are encountered. Even in danger, the process of recovery of individuals with high toughness. According to the definition of scholars, this article defines resilience as the ability of an individual. This ability can help employees recover from difficulties and frustrations, and face the reality earlier.

Gis et al (1992) believe that the improvement of individual employee performance is an individual employee-led behavior, so the inner state of employees appears particularly important. Ford (1996) research found that when employees get more useful information in the process of work, they will have a higher sense of self-efficacy, and at the same time, their awareness of their own abilities will be improved, which ultimately leads to improved performance. For people with high self-efficacy, the difficulties encountered at work will enable them to realize their deep potential and believe that their success is the result of their efforts. McNatt et al (2008) pointed out that employees with a positive attitude to work actively invest time and energy in their work; employees with high self-efficacy set challenging and realistic goals for themselves. Youssef's (2004) research shows that employee optimism has a positive relationship with their performance, job satisfaction, and organizational commitment. Optimistic employees will actively explain things at work and make full use of all available opportunities in the environment to develop and improve their skills and abilities, so they will have more opportunities in the future. In addition, through the study of "class status", it is found that the self-efficacy and optimism of psychological capital are obviously the characteristics of "class status", which will continue to improve through later development and training, and can also be reflected in the establishment of employee social networks within the enterprise. It plays an important role in the formation and cultivation of psychological capital.

Through combing and summarizing the literature related to psychological capital, it is found that the two dimensions of self-efficacy and optimism are not only typical "class status" features, which can be improved through later training, but also have a significant impact on employee performance. Therefore, this article selects two dimensions of psychological capital: self-efficacy and optimism to analyze the relationship between psychological capital and the internal social network of employees and individual performance of employees.

2. Analysis of constituent elements of individual employee performance.

Borman & Motowidlo's two-dimensional structure of individual employee performance, including task performance and relationship performance, which not only integrates the employee's individual performance behavior and results in view,

but also deepens social, psychological, organizational and other aspects of the scene and work Efficacy link between itself.

(1) Task performance is directly related to work output. How employees' work results are the most direct indicators of task performance. Employees' workability, proficiency, and professional knowledge all affect the level of employees' task performance.

(2) Relationship performance refers to the performance related to other people around it. Although relationship performance cannot directly improve the core competitiveness of the organization, it can strengthen the communication and communication between employees in the organization and regulate interpersonal and department to some extent Or organizational development. In an organization with high relationship performance, employees help each other, take the initiative to undertake work tasks, and form a harmonious and harmonious working atmosphere. In this case, employees will work hard and actively complete the tasks, which ultimately leads to the realization of the organization's goals.

3.1.2 Relationship between internal social network, psychological capital and individual performance of employees

1.Relationship between internal employee social networks and individual employee performance.

A good social network is conducive to the improvement of individual employee performance. Organizational employees and their relationships constitute an organizational employee's social network. The employee's relationship in the organization is also one of the basic conditions for employees to complete their tasks. Enterprise employees can obtain performance capabilities and methods through various social network relationships. In the process of solving problems and completing tasks with network members, employees can learn from each other, share the knowledge they have, and form new connections with new members.

A social network with a large network size increases the likelihood that employees will better complete their tasks. The larger the network size, the greater the

number of employees who can communicate with each other in the organization. ability. The social network with high network density pays more attention to the mutual communication and cooperation of organization members. This mutual cooperation is different from the work network. It is spontaneous rather than specified by the work tasks of the organization members. This has an important role in improving the individual performance of employees. In addition, when the network density value of the group is higher, the interaction degree of members is also higher, and the information exchange and information sharing among employees will increase, which can help employees complete their tasks. The higher the heterogeneity of the social network, the greater the difference in personnel, indicating that employees can not only get the support of the staff of the department, but also the support of the external department and even the leadership. Chinese scholar Luo Jiade (2007) believes that a more suitable network density will lead to higher organizational performance.

Scholars at home and abroad have paid attention to the impact on the internal social network of employees and the performance of individual employees, but there is no unified definition of the internal social network of employees, and there are different views on the division of individual employee performance dimensions. Therefore, the current research shows a variety of characteristics: on the one hand, the definition and measurement of the influencing variable of the employee's internal social network are different, on the other hand, the selection of the index of the affected variable of individual employee performance is different. By combing the literature, the existing research is divided into two aspects, namely, the relationship performance of employees and the impact on employee task performance.

2.Relationship between psychological capital and employee performance.

The higher psychological capital of employees will prompt employees to achieve a higher level of performance. From the current research at home and abroad, all dimensions of psychological capital will have a positive impact on individual employee performance. Luthans et al. (2004) selected 422 Chinese employees and studied the impact of their psychological capital on job performance. The research results show that employees' psychological capital and its constituent dimensions are positively correlated with the work performance evaluated by their immediate

superiors, and also point out that psychological capital as a whole has a more significant impact on employee performance than a single dimension. The 2006 research results of the Gallup Leadership Institute (Gall or Leadership Institute) at Nebraska—Lincoln University in the United States show that psychological capital has a significant positive impact on employees' work performance; strengthening psychological capital training and training can improve employees Work performance level. Seligman (2002) conducted analysis and research on insurance sales representatives and found that optimistic sales representatives sold more life insurance and their retention rate was higher. Optimism was significantly positively related to the performance of insurance sales representatives. Carr (2004) found that optimistic employees can actively explain the events at work, and these positive emotions can expand their attention, improve new ideas, and show more creativity.

There have also been some domestic researches on the relationship between mental capital and employee performance. For example, Zhong Lifeng (2007) found that psychological capital, including three dimensions of self-efficacy, optimism, and tenacity, has a positive impact on individual work performance. Tian Xizhou (2008) comprehensively analyzed and analyzed the structural dimensions and influencing factors of psychological capital in the context of China, and the influence of psychological capital on the reception attitude and behavior of employees in the hospitality industry. Hui Qingshan (2009) conducted an empirical study on the content of the psychological capital of local employees based on the Chinese cultural background. The content includes the content structure of the psychological capital of Chinese employees, the intermediary analysis between the psychological capital and the attitude and behavior variables, psychological capital Moderating effects between attitude and behavior variables, and psychological capital differences in different demographic and histological characteristics. Cai Jinxiong (2006) studied the psychological capital factors of school leaders and pointed out that factors such as self-efficacy, hope, and optimism will have a positive impact on work performance and attitudes. Ding Chengli (2009) confirmed that psychological capital can significantly predict all levels of job involvement and job performance, and between psychological capital and job performance, job involvement plays a part in the intermediary role.

3.Relationship between the internal social network of employees and

psychological capital.

There is also a close relationship between the internal social network of employees and psychological capital. Many scholars support that psychological capital can be improved through acquired training, and strengthening social network maintenance is only one aspect. Many scholars have pointed out that positive psychological capital represents an individual's positive prediction of the surrounding environment and the possibility of future success. This stems from the individual's unremitting efforts. Its "class status" feature indicates that psychological capital can be developed through targeted training. Despite the resistance and upward restrictions, for most individuals, psychological capital still has the potential to develop. In view of the fact that the development in this area has been supported by most scholars, most of the later studies tended to "class state" view. For example, Avey et al. (2008) and Luthans et al. (2008) believe that short-term training can improve and develop psychological capital, and human resource managers can provide a more effective way to help employees build psychological resources to resist stress. , So that psychological capital is improved, and then the individual performance of employees is improved. In China, Jiang Jianwu (2007), Zhong Lifeng (2007), and Wei Rong (2008, 2010) support the view of "class status". They believe that psychological capital is an intangible asset that can be changed through experience and developed through training. It can promote the realization of benign sustainable economic benefits for enterprises. At the same time, enterprises can find effective ways to improve the quantity and quality of employees' psychological capital (Wang Yanfei, 2007).

Ho, Rousseau, and Levesque (2006) pointed out in "Employee's Social Network Position and Psychological Contract" that the position of employees within the organization's social network has a positive impact on the employee's psychological contract. Although the psychological contract studies the expectations of individuals and organizations for each other, it also includes employees' positive and optimistic expectations of the organization, which is consistent with the positive psychological state of psychological capital. This shows that the internal social network of employees can affect their psychological perception and state, and psychological capital is a positive psychological state that can be improved through training. Therefore, strengthening social networks can improve the quality of psychological

capital.

The larger the scale of the employee's social network within the enterprise, the greater the number of people who communicate with it within the enterprise, which will increase the employee's "sense of achievement" and increase the employee's confidence in completing the task, because the employee believes that other members will help themselves complete the task, Can maintain a positive and optimistic attitude even in difficult situations, and has a certain impact on the improvement of psychological capital.

The greater the heterogeneity of the employee's social network within the enterprise, the greater the difference between the members of the social network, which is also the difference in education or the difference in the work department, or even the difference in the status of the member in the enterprise. The greater the difference, the more employees get The more you will help. If the employee encounters difficulties at work, he can seek help from the personnel of the personnel department, finance department, and sales department, which will make the employee have a good psychological state.

The strengthening of network density is mainly reflected in the strength of communication between network members. If each member of the network communicates closely with other members, the "quality" of this social network will continue to improve. Employees will have better psychological capital at this time, and they will be more willing to complete work tasks.

As can be seen from the above, scholars regard psychological capital as important core competitiveness, which can be cultivated through later project training or interpersonal relationships, etc., and through the strengthening of employees' social networks in the enterprise, the amount and amount of psychological capital can be increased. quality.

3.1.3 The impact of internal employee social networks on individual employee performance

1. Mechanism analysis of employee internal social network affecting employee

performance.

A better internal employee social network is conducive to the improvement of individual employee performance levels, which is mainly reflected in the promotion effect of network size, network heterogeneity, and network density on individual employee performance. If employees perceive a series of positive influences of their surroundings on their own help within the enterprise, it will help them better complete their tasks and achieve their goals. They will tend to continue to maintain the social network of employees within the enterprise and expand the scale of the social network within the enterprise. , Strengthen communication with other personnel, etc. Therefore, this paper selects the network scale, network heterogeneity, and network density of employees' internal social networks as research indicators.

The size of the network has a certain effect on individual employee performance. To complete the work tasks, employees often need the resources, information, support, and assistance provided by other members. The larger the scale of the network, the more resources and information channels employees get. Through communication with other members of the network, employees can be helped in completing tasks. And through communication, it will also strengthen the feelings between members, which can not only help employees complete their work tasks, but also improve the relationship performance of employees.

Network heterogeneity also has a certain effect on employee performance. Cross and Cummings (2004) through empirical analysis found that the individual performance of employees in different companies will be affected by the characteristics of the company and the heterogeneity of the social network. Sparrowe et al. (2001) found through research that the degree of difference in information networks can help employees accumulate work knowledge and experience, thereby improving individual performance levels.

Network density refers to the intensity of communication between members of a social network. It helps employees improve individual performance by strengthening communication within the network. In domestic research, Jiang Chunyan, Zhao Shuming et al. (2006) proposed that differences in the density of social networks in organizations make the results of the organizational performance vary.

Recent studies have also shown that the analysis of social network theory has also been applied to the impact on performance. Chen Rongde (2004) found through empirical research that the increase in network centrality and network density has a positive effect on employee behavior. Liu Lou (2008) also found that network centrality has an important impact on the improvement of employees' individual performance. By sorting out the relevant literature, it can be found that the size of the social network, network heterogeneity, and network density has an important impact on individual employee performance and even the overall performance of the enterprise.

2.Relevant assumptions about the internal social network of employees in the enterprise affecting the individual performance of employees.

The network size, network heterogeneity, and network density in the internal social network of employees affect the performance of individual employees. Therefore, this paper believes that the relationship between the internal social network of employees and the individual performance of employees is shown in Figure 3-1. And make assumptions:

H1: Internal social network of employees has a positive impact on individual employee performance, H1a: Internal social network of employees has a positive impact on employee task performance, H1a1: Network size has a positive impact on employee performance, H1a2: Network heterogeneity has a positive effect on employee task performance, H1a3: Network density has a positive effect on employee task performance, H1b: Internal employee social network has a positive effect on employee relationship performance, H1b1: Network size has a positive effect on employee relationship performance, H1b2: Network heterogeneity has a positive effect on employee relationship performance, H1b3: Network density has a positive effect on employee relationship performance.

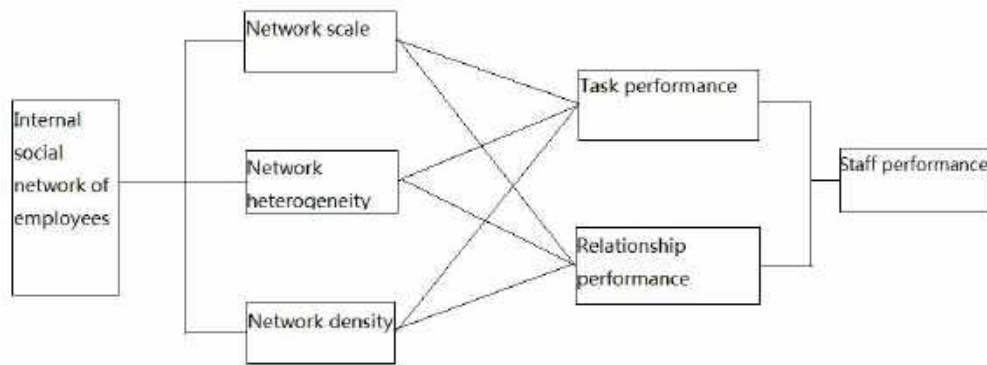


Figure 3-1 Relationship between internal employee social networks and individual employee performance

3.1.4 The effect of psychological capital on employee performance

1. Mechanism analysis of psychological capital influencing employees' individual performance.

In recent years, many scholars have discussed the relationship between psychological capital and individual employee performance and confirmed that the overall psychological capital and various dimensions have a positive impact on individual employee performance.

People with high self-efficacy have correspondingly higher performance levels. Meta-Analytical Investigation Analysis of 114 studies shows that self-efficacy has a positive effect on performance. People with a high sense of self-efficacy like to challenge, experience pressure in difficult situations, and do not give up easily. They can actively improve themselves and carry out efficient work, even if they are not supported for a long time.

People with an optimistic spirit will actively face difficulties, have a tenacious spirit, and work hard to complete their tasks. Youssef's (2004) research shows that employee optimism has a positive relationship with their performance, job satisfaction, and organizational commitment. Optimistic employees will actively solve things at work, make full use of all available opportunities in the environment to develop and upgrade their skills and abilities so that they have more opportunities in the future.

From the above literature, it can be seen that the positive impact of psychological capital on individual employee performance has been recognized by most scholars, especially self-efficacy and optimism have a significant impact on individual employee performance. The research of psychological capital in this paper includes two dimensions of self-efficacy and optimism, and individual employee performance includes two dimensions of task performance and relationship performance.

2.Related assumptions that psychological capital affects employee performance.

In summary, the self-efficacy and optimism of psychological capital affect the individual performance of employees to varying degrees. Therefore, this article believes that the relationship between psychological capital and employee performance is shown in the figure, and proposes the following assumptions:

H2: Psychological capital has a positive effect on individual employee performance, H2a: Psychological capital has a positive effect on employee task performance, H2a1: Self-efficacy has a positive effect on employee task performance, H2a2: Optimism has a positive effect on employee task performance, H2b: psychological capital has a positive effect on employee relationship performance, H2b1: self-efficacy has a positive effect on employee relationship performance, H2b2: optimism and employee have a positive effect on relationship performance.

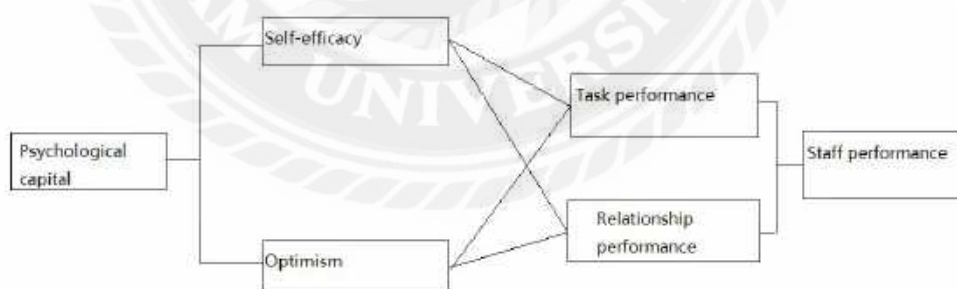


Figure 3-2 Relationship between psychological capital and individual employee performance

3.1.5 The impact of internal employee social networks on psychological capital

1.Mechanism analysis of the internal social network of employees affecting psychological capital.

The scale of social networks, network heterogeneity, and network density have a certain impact on employees' positive and optimistic psychological attitudes. Many scholars have pointed out that positive psychological capital represents an individual's positive prediction of the surrounding environment and the possibility of future success. This stems from the individual's unremitting efforts. Its "class status" feature indicates that psychological capital can be trained and targeted. Despite the development of resistance and upward restrictions, for most individuals, psychological capital is very likely to be improved. Avey et al. (2008) and Luthans et al. (2008) believe that short-term training can improve individual psychological capital, and human resource managers can provide a more effective method to help employees build healthy psychology to resist stress.

The internal social network of employees in the enterprise will affect the development of their positive psychology. Avolio (2005) believes that the relationship between employees in an organization has an important impact on the individual's physical health. When employees have a good relationship network, their good psychology will produce a positive state. The psychological capital of employees with poor interpersonal relationships will be severely suppressed or even destroyed so that their work behavior will also be affected. For example, if employees encounter work difficulties within the organization but no one can ask for advice; they cannot find the right person to have lunch with themselves during lunchtime; there are no objects to complain about troublesome trivial matters in life; after a long time, employees' level of psychological capital has declined, and individual employee performance cannot be improved in a timely manner, which will ultimately affect the improvement of organizational competitiveness.

Through the research and analysis of social network methods, scholars have confirmed that social networks have a certain impact on individual behaviors in interpersonal communication and optimism. Through research, Wang Peng found that the strength of the social network will affect the difference in citizen behavior. Settoon & Mossholder (2002) pointed out that the employee network density has a certain influence on interpersonal citizen behavior in the organization. Zhu Qingzhong (2003) believes that in the consulting network, employees with a higher degree of network centrality are more optimistic than other employees, and they can always maintain a

positive and optimistic attitude at work. Through theoretical or empirical research on scholars, it can be inferred that the social network analysis indicators of employees within the company have a positive impact on individual psychological capital.

2.Related assumptions about the internal social network of employees affecting psychological capital.

The dimension of employees 'internal social network has a certain influence on employees' psychological capital. This study believes that the relationship between internal social networks of employees and psychological capital is shown in Figure 3-3, and proposes hypotheses:

H3: Internal social network of employees has a positive impact on psychological capital, H3a: Internal social network of employees has a positive impact on self-efficacy, H3a1: Network size has a positive impact on self-efficacy, H3a2: Network heterogeneity has an effect on self Effectiveness has a positive effect, H3a2: Network density has a positive effect on self-efficacy, H3b: Internal employee social network has a positive effect on optimism, H3b1: Network size has a positive effect on optimism, H3b2: Network heterogeneity Optimism has a positive effect, H3b2: Network density has a positive effect on optimism.

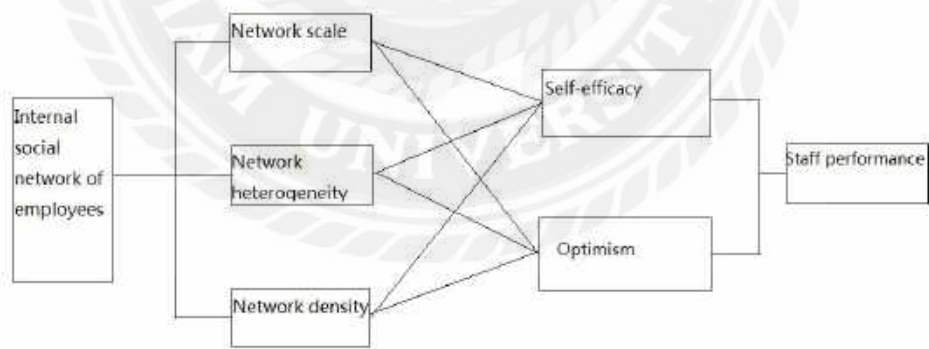


Figure 3-3 Relationship between employee social networks and psychological capital

3.1.6 The mechanism and hypothesis of the intermediate effect of psychological capital

By combing the relevant literature, it can be preliminarily presumed that there is a positive correlation between the employee's internal social network, psychological

capital, and individual employee performance, and psychological capital may play a certain intermediary role.

Through an empirical study, Huang Yirong (2010) believes that the internal social network of the public sector can increase the enthusiasm of employees to work, thereby promoting the improvement of their performance. Peng Jianping (2011) found through research that employees' social network location, especially employees in the network center, believes that they have a certain influence in the organization and is more willing to help others complete tasks and improve employee relationship performance. Has an important impact.

Domestic scholars Jiang Jianwu (2007), Zhong Lifeng (2007), Wei Rong (2008, 2010) believe that psychological capital is an intangible asset, which can be changed through experience, can be developed through training, and can also be improved through the strengthening of network relationships in the organization. The value of psychological capital. Ho, Rousseau and Levesque (2006) clearly pointed out in the "Employee's Social Network Location and Psychological Contract" that the employee's social network location within the organization has a positive impact on the employee's psychological contract.

After sorting out the domestic and foreign scholars' questions about the internal social network of employees, psychological capital, and individual performance of employees, it is found that there are few studies linking the three, and there is almost no research using psychological capital as an intermediary variable. Psychological capital will be improved due to the expansion of network scale, network heterogeneity, and network density enhancement, giving employees the confidence to complete their tasks and a good working attitude. Employees will be positive and optimistic in facing difficulties and quickly recover from setbacks. At the same time, the strengthening of psychological capital will also affect the improvement of employees' individual performance, which is not only reflected in the improvement of task performance but also in the employees are more willing to communicate with others and provide help when network members encounter difficulties, which will promote employee relations Performance improvement.

To sum up, this study believes that the larger the employee's social network

scale within the enterprise, the higher the network density, and the greater the network heterogeneity, the higher the level of each dimension of their psychological capital, which ultimately makes the individual employee's performance. Increase; conversely, as the scale of employees' social networks within the enterprise is smaller, the network density is lower, and the network heterogeneity is smaller, the level of each dimension of their psychological capital will be reduced accordingly so that the employee's task performance and relationship performance cannot be improved. The hypothesis is as follows:

H4: Psychological capital has an intermediary effect between the internal social network of employees and the individual performance of employees

H4a: Psychological capital has an intermediary effect between the employee's internal social network and the employee's task performance

H4b: Psychological capital has an intermediary effect between the internal employee social network and employee relationship performance

Table 3-1 Summary of relevant research hypotheses

H1 Enterprise Internal employee social network has a positive impact on individual employee performance	H1a The size of the employee's social network within the company has a positive impact on employee performance	H1a1 network size has a positive impact on employee task performance
		H1a2 network heterogeneity has a positive effect on employee task performance
		H1a2 network density has a positive effect on employee task performance
	H1b Employee social network within the company has a positive impact on employee relationship performance	H1b1 network size has a positive impact on employee relationship performance
		H1b2 network heterogeneity has a positive effect on employee relationship performance
		H1b3 network density has a positive effect on employee relationship performance
H2 Psychology Capital has a positive impact on individual	H2a psychological capital has a positive impact on employee task performance	H2a1 Self-efficacy has a positive effect on employee task performance
		H2a2 optimism has a positive effect on employee task performance

employee performance	H2b psychological capital has a positive effect on employee relationship performance	H2b1 Self-efficacy has a positive effect on employee relationship performance
		H2b2 optimism has a positive impact on employee relationship performance
H3 Enterprise Internal employee social network has a positive impact on psychological capital	H3a Employee social network has a positive impact on self-efficacy	H3a1 network size has a positive effect on self-efficacy
		H3a2 network heterogeneity has a positive effect on self-efficacy
		H3a3 network density has a positive effect on self-efficacy
	H3b Internal social network of employees has a positive impact on optimism	H3b1 network size has a positive impact on optimism
		H3b2 network heterogeneity has a positive impact on optimism
		H3b3 network density has a positive effect on optimism
H4 Psychological capital has an intermediary effect between the internal social network of employees and the individual performance of employees	H4a self-efficacy has an intermediary effect between internal employee social networks and individual employee performance	
	H4b optimism has an intermediary effect between the internal social network of employees and the individual performance of employees	

3.2 Scale design and variable measurement

3.2.1 Design of internal employee social network scale

The main problem to be studied in this article is the relationship between the employee's internal social network and individual performance in the company. It is

necessary to measure the employee's internal social network in the company. Its research focuses on the individual level of employees, that is, the study of "self-centered network".

(1) Structural dimension

In this paper, the employee's "ego-centric network" (ego-centric network) is measured using the "naming method" method, requiring each respondent to write out the members' surnames, personal information, and the familiarity of these members in the social network. , So as to measure the social network of employees within the enterprise. The measurement dimensions are network scale, network density, and network heterogeneity.

Network scale. According to foreign research, the core discussion network for employees is generally between 3-5. In the local context, Bian Yanjie (2004) set the scale of the relationship network to be larger than the limited 3-5 people. According to the different conclusions of scholars and the local context, this article leaves 7 empty network scale items in the questionnaire. When the respondent fills in the members who have close communication with himself, the number filled in can be less than 7.

Network heterogeneity. After the respondent writes down the network members who have close communication with themselves, it is required to continue to write out the education level and work department of the members to measure the difference of their network members. Generally speaking, the help provided by network members in different departments to employees also comes from various aspects. The specific calculation method uses the heterogeneity index (IQV), which is the ratio between the actually observed variation in the sample population and the maximum possible variation of the dependent variable. The IQV index of this study follows the calculation methods of Agresti and Agresti (1977) and Yoo (2003):

$$IQV = \frac{1 - \sum_i P_i^2}{1 - \frac{1}{k}}$$

Among them, "Pi" is the ratio of species i appearing in observations, and "k" is the total number of categories appearing in observations.

Network density. For the measurement of entrepreneurial network density, the questionnaire uses a 4-level scale to evaluate the degree of mutual familiarity among network members (CGSS, 2003). "1" means not knowing, "4" means very familiar (Geng Xin, 2008) [58]. The calculation formula used Mizruchi and Steams (2001):

$$D_i = \frac{\sum S_{jk}}{2(N^2 - N)}$$

Among them, "Di" represents the density of the employee's self-centered network, "Sjk" represents the close relationship between the employee's network member "j" and the member "k"; "N" represents the employee's social network size, that is, the number of network members; and 2 (N2-N) is the employee's society The product of the maximum number of possible connections (N2-N) / 2 between members in the network and the highest evaluation scale 4 of relationship.

(2) Questionnaire design

1). Design of the questionnaire for the scale of employees' social networks within the enterprise

As shown in Table 3-2, the respondent is requested to make an organization member code table, that is, the random number (A to G) of the names of members frequently contacted in the organization, make a code table, and write under the corresponding letters If the person's last name is the same as the last name, use numbers to distinguish them, such as Zhang 1 and Zhang 2.

Table 3-2 Network scale design

Example	A	B	C	D	E	F	G
M							
Li							

2).Design of the questionnaire on the heterogeneity of employees' social networks within the enterprise

As shown in Table 3-3, the respondent is requested to write the positions and academic qualifications of A to G.-2.

Table 3-3 Design of network heterogeneity scale

	A	B	C	D	E	F	G
Job title Employees in this department—1; direct leaders—2; The staff of Administration Department-3; Staff of Finance Department-4; Employees of Sales Department—5; Chairman and General Manager—6; Department manager—7; Engineer—8; Technical staff—9;							
Education High school, technical secondary school, technical school or below—1; Specialist-2 Undergraduate-3; Graduate and above-4							

3).Design of the questionnaire on the social network density of employees within the enterprise

As shown in Figure 3-4, the respondent is asked to describe the familiarity between A-G. The degree of familiarity is coded: 1- do n't know; 2- not too familiar; 3- relatively familiar;

Legend: If the degree of familiarity between C and D is "4-very familiar", fill in the code in the corresponding space, "4".

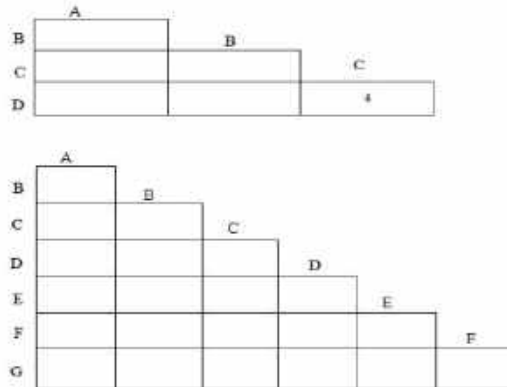


Figure 3-4 Design of Network Density Scale

3.2.2 Design of psychological capital scale

This paper draws on the research results of Luthans et al. (2005, 2007), combined with the needs of this research, adopts two dimensions of psychological capital self-efficacy and optimism, using 4 items (B1-B4) to measure the self-efficiency dimension, 4 items (B5-B8) Measure the optimistic dimension. Scoring on a 5-point scale, 1 point means “very disagree”, 2 points means “disagree”, 3 points means “unsure”, 4 points means “agree”, 5 points means “strongly agree”, psychological capital The items listed are shown in Table 3-4.

Table 3-4 Psychological capital design scale

Factor	Secondary nominal variable	Item
Psychological capital	Self-efficacy	B1. I like to keep setting higher goals for myself
		B2. I think about how to do better work every day
		B3. I hope to be able to undertake challenging tasks
		B4. My friend said that I am an aspiring person
	Optimism	B5. I am a person who never gives up until the end
		B6. I can see everything and

		be happy almost every day
		B7. An unpleasant thing happened, I will quickly adjust my emotions
		B8. I believe I can do my job

3.2.3 Design of individual employee performance scale

Individual employee performance mainly includes task performance and relationship performance, task performance includes task efficiency and task innovation, and relationship performance includes work dedication and interpersonal promotion. This questionnaire includes two dimensions: task performance and relationship performance. Among them, the task performance dimension has 4 items (C1-C4) and the relationship performance dimension has 3 items (C5-C7). Scoring on a 5-point scale, 1 point means “very disagree”, 2 points means “disagree”, 3 points means “unsure”, 4 points means “agree”, 5 points means “strongly agree”, individual employee The performance items are shown in Table 3-5.

Table 3-5 Employee individual performance design scale

Factor	Secondary variable	nominal	Item
Individual employee performance	Task performance		C1. Able to complete work tasks in accordance with performance evaluation standards
			C2. Through learning, find new ways to do things and solve problems
			C3. I often plan and arrange the progress of my work
			C4. I often expect to be assigned or assigned a challenging job
	Relationship performance		C5. Actively help colleagues to complete tasks that are not related to their work

		C6. Try to resolve interpersonal conflicts and maintain the harmony of interpersonal relationships
		C7. I often maintain cooperation with other colleagues in the team

3.2.4 Data collection

Considering that the variables in this article are difficult to obtain through publicly available second-hand data collection, this article uses the questionnaire survey method to obtain the data required for empirical analysis. In order to further the needs of statistical analysis and ensure the reliability of the research conclusions, this article requires that the data obtained must be true.

After determining the range of employees to be surveyed, this article uses personal relationships to distribute questionnaires to corporate personnel to collect data. Before distributing the questionnaire, first, understand some basic conditions such as the size of the surveyed enterprise and the industry to which it belongs, select the enterprise suitable for the survey, and entrust friends, classmates, relatives, and friends to issue the questionnaire on behalf of it. Before distributing the questionnaire, the client was introduced to the purpose of the questionnaire survey, and the requirements of the interviewee, the precautions during the questionnaire filling process, and the questionnaire recovery time were clarified. For respondents from other cities, the questionnaire is distributed by post or e-mail. Two days after the questionnaire is issued, the employee is contacted by phone to confirm that the employee has received the questionnaire, to answer the question of the respondent, and to agree on the deadline for recovery. If there is no response after a week, then call again to ask about the status of the answer.

4 DATA ANALYSIS

4.1 Data analysis

4.1.1 Basic description of sample

A total of 140 questionnaires were distributed this time, and 128 were returned, with a recovery rate of 91.4%. There are 117 valid questionnaires, and the effective questionnaire recovery rate is 84%. The composition of questionnaire distribution and recovery is shown in Table 4-1.

Table 4-1 Composition of questionnaire distribution and recovery

Survey method	Questionnaires issued	Questionnaire recovery	Recovery rate	Questionnaire validity	Effective recovery rate
Site investigation	35	35	100%	33	94.3%
Electronically	70	62	88.5%	57	92%
Mailing method	35	31	86.7%	27	87.1%
Total	140	128	91.4%	117	84%

The demographic variables of the research sample are shown in Table 4-2. In terms of gender, men account for 47% and women 53%. In terms of age, 26-35 years old accounted for 54.7%; under 25 years old accounted for 30.77%; 36-45 years old accounted for 11.11%; 46-55 years old accounted for 3.42%. This shows that the research object of this study is mainly young and middle-aged. In terms of educational level, undergraduates accounted for 64.94%, specialists accounted for 23.1%, and master's degrees and above accounted for 5.98%. In terms of working hours, the majority of the work is 3-5 years, accounting for 41.88%; the second is less than 2 years, accounting for 37.6%; the second is the working-age of 6-10 years, the number of people accounts for 12.82%; the work of more than 11 years accounts for 7.7%

Table 4-2 Demographic variables

Demographic variables		Number of samples	Percentage
Gender	Male	55	47%
	Female	62	53%
Age	Under 25	36	30.77%
	26-35	64	54.7%
	36-45	13	11.11%
	46-55	4	3.42%
Education level	High school, technical secondary school, technical school or below	7	5.98%
	College	27	23.1%
	Undergraduate	76	64.94%
	Master degree and above	7	5.98%
Position	Entry-level employee	73	62.4%
	Technical and engineering application middle and senior personnel	33	28.2%
	Senior management personnel	11	9.4%
	Intermediate and senior professionals in research and design	0	0%
Work-age	Under 2 years	44	37.6%
	3-5 years	49	41.88%
	6-10 years	15	12.82%

	11 years and above	9	7.7%
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4.1.2 Questionnaire validity and reliability analysis

(1) Validity analysis

"Validity" refers to effectiveness, which refers to the measurement tool or means that can accurately measure the degree of things to be measured. The higher the validity, the higher the degree of agreement between the results we measured, and the true meaning contained in the investigation content; otherwise, the lower. Validity is divided into three types: Content Validity, Criterion Validity, and Construct Validity, while Content Validity and Structural Validity are currently the two most widely used types.

Content validity (Content Validity), also known as surface validity or logical validity, refers to whether the designed item can represent the content or theme to be measured. Structural validity (Construct Validity) refers to the degree of correspondence between a certain structure reflected in the measurement results and the measured values. The factor analysis rule is the method used for structural validity. In the view of some scholars, the most ideal method for validity analysis is to use factor analysis to measure the structural validity of the scale or the entire questionnaire. Kerlinger (1986) believes that factor analysis is a more effective method to detect the convergent validity of the scale. It can well judge whether there is a strong correlation between different measurement items of the same variable and merge it into several fewer factors, thus simplifying The basic structure of the data lays the foundation for the relevant analysis and regression analysis research below.

Each measurement item in this article adopts the direct measurement method, it is difficult to find the data of the same period as the auxiliary measurement standard, so the validity and validity analysis is not performed. The content validity is to check the extent to which the scale can measure the research topic. This article refers to the mature research scales of previous scholars and refers to the advice of the tutor to revise the items. Therefore, the scale items used in this article have certain content validity. This article intends to use factor analysis to test the validity of construction. According to the empirical judgment method, the premise of factor analysis is that the

sample data KMO value is greater than or equal to 0.70, the factor load factor of each item is greater than 0.5, and Bartlett's Test value (Bartlett's Test) is significantly different from 0 (Ma Qingguo, 2002).

A. Social Network Scale

Since the social network scale is a semi-open questionnaire, few researchers have conducted reliability and validity tests. Because the obtained data is calculated by a specific formula, the result represents the nature of a certain aspect of the social network. This is the actual data calculated, and the variable at this time is already an explicit variable.

Regarding the reliability of the social network scale, Chen Gonghai (2008) pointed out in his doctoral thesis that the social network scale can guarantee the reliability of research because the collected data is about the actual relationship between employees, not "Views" of relationships; and are integrated through the responses of respondents. Liu Jun (2006) also pointed out that the reliability of observation data and archives is high. Luo Jiade (2005) also pointed out that the reliability of the social network scale is mainly guaranteed by relying on the behavior of the measurement items and embedding the situation as much as possible. Therefore, the current standardized social network measurement questionnaire was used in this study. Before the questionnaire was issued, in-depth interviews were conducted with the interviewed employees. On this basis, the situational embedding of the questionnaire was ensured, thereby ensuring the reliability of the questionnaire.

Luo Jiade's (2005) study pointed out the guarantee conditions for the validity of the social network scale. When collecting information, give as clear a definition as possible to the data you want to measure. And through cross-comparison of the questionnaire topics, delete the invalid questionnaire, and ensure that there is no central person missing, delete the invalid network with the standard of 80% response rate, thus ensuring the validity of the questionnaire.

B. Psychological capital scale

An exploratory factor analysis of psychological capital was performed. The sample sufficiency test showed that the KMO value was 0.801, the Bartlett sphere chi-square test value was 224.446, and the significance level was 0.000, indicating

that the data collected by psychological capital is suitable for factor analysis.

Table 4-3 Psychological capital variance explanation table

Factor	Eigenvalues			Extract the square load of the sum			A square load of rotation sum		
	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)
1	3.235	40.439	40.439	3.235	40.439	40.439	2.428	30.347	30.347
2	1.105	13.810	54.249	1.105	13.810	54.249	1.912	23.902	54.249
3	0.943	11.785	66.035						
4	0.696	8.695	74.729						
5	0.624	7.803	82.532						
6	0.609	7.613	90.146						
7	0.447	5.585	95.730						
8	0.342	4.270	100.00						

As shown in Table 4-3, there are two factors with eigenvalues greater than 1, explaining 54.249% of the total variation. Then conduct factor analysis, extract common factors, and perform factor rotation. The results are shown in Table 4-9.

Table 4-4 Exploratory factor analysis of psychological capital

	Factor	
	1	2
Self-efficacy 4	0.810	0.229
Self-efficacy 3	0.703	0.205

Self-efficacy 2	0.667	0.207
Self-efficacy 1	0.515	0.453
Optimism 1	0.709	0.205
Optimism 2	0.099	0.865
Optimism 3	0.184	0.829
Optimism 4	0.150	0.769

It can be seen from Table 4-4 that through factor analysis, two factors have been identified. Factor one includes four items: self-efficacy 4, self-efficacy 2, self-efficacy 3, and self-efficacy 1. Factor two includes optimism 3., Optimistic 2, Optimistic 3 items. This conforms to the concept of the two-dimensional structure of psychological capital. Optimistic 1 The score of this item is too low to delete directly. After deleting the items, conduct factor analysis. The KMO value is 0.771, the Bartlett sphere chi-square test value is 175.321, and the significance level is 0.000, indicating that the data is suitable for factor analysis.

As shown in Table 4-5, after deleting the item of optimism 1, the exploratory factor analysis was continued. Two factors were identified, and the cumulative percentage changed from 54.249% to 56.043%. After deleting this item, the validity of the psychological capital scale is improved.

Table 4-5 Psychological capital variance explanation table

Factor	Eigenvalues			Extract the square load of the sum			A square load of rotation sum		
	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)
1	2.858	40.828	40.828	2.858	40.828	40.828	2.096	29.946	29.946
2	1.065	15.215	56.043	1.065	15.215	56.043	1.827	26.097	56.043
3	0.930	13.284	69.327						
4	0.696	9.936	79.263						
5	0.611	8.728	87.992						
6	0.450	6.422	94.414						
7	0.391	5.586	100.000						

Table 4-6 Exploratory factor analysis of psychological capital

	Factor	
	1	2
Self-efficacy 4	0.801	0.227
Self-efficacy 3	0.738	0.035
Self-efficacy 2	0.737	0.161
Self-efficacy 1	0.547	0.435
Optimism 3	0.157	0.835
Optimism 2	0.194	0.819
Optimism 1	0.073	0.438

As can be seen from Tables 4-5 and 4-6, after exploratory factor analysis of psychological capital, two factors are obtained. The characteristic value of the first factor is 2.858, which can explain 40.828% of the total variation. The items it contains

are self-efficacy 4. Self-efficacy 2. Self-efficiency 3. Self-efficacy 1. There are four items, the main content includes setting high goals, taking on challenging tasks, aspiring, and how to do the job well. The characteristic value of the second factor is 1.065, which can explain 56.043% of the total variation. The items it contains are optimism 3, optimism 2, optimism 4, and three items. The main contents include being open to everything, being able to adjust emotions as soon as possible, and being competent for the job.

C. Individual employee performance scale

An exploratory factor analysis was conducted on the individual employee performance scale. The sample sufficiency test showed that the KMO value was 0.717, the Bartlett sphere chi-square test value was 177.889, and the significance level was 0.000, indicating that the data is suitable for factor analysis.

As shown in Table 4-7, there are two factors with a characteristic value greater than 1 among various factors of individual employee performance, which explain 56.349% of the total variation. Then perform factor analysis, extract common factors, and perform factor rotation. The results are shown in Table 4-7.

Table 4-7 Explanation table of the variance of individual employee performance

Factor	Eigenvalues			Extract the square load of the sum			A square load of rotation sum		
	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)
1	2.769	39.555	39.555	2.769	39.555	39.555	2.043	29.179	29.179
2	1.176	16.794	56.349	1.176	16.794	56.349	1.902	27.171	56.349
3	0.906	12.942	69.292						
4	0.752	10.743	80.035						
5	0.600	8.571	88.606						

6	0.460	6.565	95.172						
7	0.338	4.828	100.00						

It can be seen from Tables 4-7 and 4-8 that two factors have been identified, among which factor one contains four items: task performance 1, task performance 3, task performance 2, and task performance 4; factor two contains There are two items for relationship performance 2 and relationship performance 3. This is in line with the idea of a two-dimensional structure of individual employee performance. Relationship performance 1 The score of this item is too low to delete directly. After deleting the items, conduct another factor analysis to verify the validity of the scale. The sample sufficiency test shows that the KMO value is 0.787, the Bartlett sphere chi-square test value is 120.189, and the significance level is 0.000, indicating that the data is suitable for factor analysis.

Table 4-8 Exploratory factor analysis of individual employee performance

	Factor	
	1	2
Task performance1	0.777	-0.198
Task performance2	0.634	0.310
Task performance3	0.587	0.265
Task performance4	0.573	0.160
Relationship performance1	0.571	0.479
Relationship performance2	0.145	0.849
Relationship performance3	0.126	0.849

Table 4-9 Explanation table of the variance of individual employee performance

Factor	Eigenvalues			Extract the square load of the sum			A square load of rotation sum		
	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)	Total	Variance(%)	Accumulation(%)

1	2. 33 0	38.839	38.839	2. 33 0	38.839	38.839	1. 79 0	29.828	29.828
2	1. 17 5	19.582	58.421	1. 17 5	19.582	58.421	1. 17 6	28.593	58.421
3	0. 87 4	14.572	72.993						
4	0. 67 3	11.213	84.206						
5	0. 57 3	9.548	93.755						
6	0. 37 5	6.245	100.000						

Table 4-10 Exploratory factor analysis of individual employee performance

	Factor	
	1	2
Task performance1	0.754	-0.211
Task performance2	0.602	2.77
Task performance3	0.683	0.340
Relationship performance1	0.594	0.170
Relationship performance2	0.116	0.832
Relationship performance3	0.158	0.870

As shown in Table 4-9 and Table 4-10, after deleting the item of relationship performance 1, two factors were identified, the cumulative percentage changed from 56.349% to 58.421%, the effect of the psychological capital scale after deleting this item

The degree has increased. Employee's individual performance obtained two factors through exploratory factor analysis. The characteristic value of the first factor was 2.330, which explained 38.839% of the total variation. The items it contains are task performance 1. task performance 3. task performance 2. task performance 4. There are four items. The main contents include completing tasks according to the standard and finding new methods. The characteristic value of the second factor is 1.175, which explains 58.421% of the total variation. The items it contains are relationship performance 2, relationship performance 3, and the main content includes maintaining harmonious interpersonal relationships and maintaining cooperation with other colleagues.

(2) Reliability analysis

Reliability is the analysis of the reliability and stability of the scale. The greater the reliability of the scale, the smaller the measurement standard error. Researchers often use the method of evaluating the internal consistency of the scale to measure the reliability of the scale, that is, to evaluate the homogeneity between the measurement indicators. The Cronbach's α coefficient is between 0-1. The higher the Cronbach's α coefficient, the better the internal consistency of the scale. In general, if the α coefficient is greater than 0.7, the measurement scale is acceptable; if the α coefficient is greater than 0.8, it indicates that the internal reliability is better; if the α coefficient is greater than or equal to 0.9, it indicates that the internal reliability of the scale is very good (Wu Minglong, 2010).

This study uses Cronbach's α coefficients, combined with CICT's subscales for psychological capital and individual employee performance and their reliability analysis at all levels. The results are shown in Table 4-11:

Table 4-11 Questionnaire reliability analysis

Factor	The smallest CICT value in the measurement	Cronbach's α coefficient
Psychological capital	0.783	
Self-efficacy	0.361	0.761
Optimism	0.356	0.770
Individual employee performance	0.785	
Task performance	0.380	0.811
Relationship performance	0.574	0.714

The results in Table 4-11 show that the two subscales of psychological capital and individual employee performance, Cronbach's α is above 0.714, which is higher than the acceptable level of 0.70; the CICT value of each test item is above 0.356, which is greater than the minimum acceptable value of 0.35 Level. Therefore, it can be considered that the data collected in this survey is reliable, indicating that the variable measurement has good internal consistency, and hypothesis testing analysis and discussion can be further conducted on this basis.

4.1.3 Correlation analysis of the relationship between sample variables

Correlation analysis is an analysis of the degree of correlation between two variables, reflecting the possibility of interaction between variables. Through correlation analysis, it is possible to preliminarily judge whether the constructed theoretical model is meaningful and whether the hypothesis is reasonable, so as to determine the significance of further research and analysis. Before performing regression analysis, the correlation between variables must be tested. Correlation analysis is the basis of multiple linear regression. The correlation coefficient is represented by r , which is a statistic describing the degree and direction of the linear relationship. $r > 0$ means that the variable is positively correlated, $r < 0$ means that the variable is negatively correlated, $r = 0$ means completely uncorrelated, $r = 1$ means that the variable is completely positively correlated or completely negatively correlated. When the absolute value of r is between (0, 0.3), it means that the correlation between the two variables is low; when the absolute value of r is between (0.3, 0.7), it means that the correlation between the two variables is moderate; when the absolute value of r is between (0.7, 1), it means that the correlation between the two variables is high.

Table 4-12 shows the zero-order correlation between the variables involved in the theoretical assumptions of this paper. Items 1-5 are the basic personal information of employees in the questionnaire. It can be seen that age is significantly negatively correlated with education, age is significantly positively correlated with working hours, and positions are significantly positively correlated with working hours, which is also in line with general experience.

Network scale has a positive effect on individual employee performance (task performance $r = 0.424$, relationship performance $r = 0.416$, $p < 0.01$), indicating that the more employees interact with others in the enterprise, the larger the network scale formed, the more beneficial. When employees complete their work tasks, their work goals are easy to achieve. At the same time, in the process of work communication, the feelings between employees will be strengthened, in the future work, employees will also be happy to help others, so that the relationship performance of employees is improved. The expansion of the network scale promotes the individual performance of employees.

Psychological capital has a positive impact on employees' individual performance, which shows that the more positive the employees' spirits are, they always maintain a high fighting spirit, and they have the confidence to complete the task in any dilemma. In this case, the more employees have, they may reach performance goals and report completion of tasks. The psychological state of employees can promote the improvement of employees' performance.

At the same time, the three dimensions of the employee's social network within the enterprise, network scale and network heterogeneity ($r = 0.320$, $p < 0.01$), network scale and network density ($r = 0.273$, $p < 0.01$), network heterogeneity and network density ($r = 0.528$, $p < 0.01$) is good. Network scale, network heterogeneity, and network density reflect the influence of employees' relationship networks in the organization from different levels.

In addition, network scale, network heterogeneity, network density, and psychological capital also have positive effects. Network scale and self-efficacy ($r = 0.391$, $p < 0.01$), network scale and optimism ($r = 0.291$, $p < 0.01$), network heterogeneity and self-efficacy ($r = 0.536$, $p < 0.01$), network heterogeneity and optimism ($r = 0.354$, $p < 0.01$), network density and self-efficacy ($r = 0.539$, $p < 0.01$), network density and optimism ($r = 0.492$, $p < 0.01$). This result shows that the greater the social network of employees and the closer the interaction, the higher the level of psychological capital. On the contrary, when the social network of employees is smaller and the density is smaller, the level of psychological capital is lower. This study speculates that when the larger the network of knowledge employees in the

organization and the closer the interaction, the employees will have a positive and optimistic work attitude, have a firm belief, and have more faith to complete the task.

It can be drawn from Table 4-12 that

(1) Network size has a very significant correlation with employee task performance and relationship performance, which initially proves that network size has a positive impact on both dimensions of employee performance.

(2) Network heterogeneity has a very significant correlation with the two dimensions of individual employee performance, which initially proves that network heterogeneity has a positive effect on both dimensions of individual employee performance.

(3) Network density has a very significant correlation with employee task performance and relationship performance, which initially proves that network density has a positive effect on both dimensions of employee performance.

(4) Psychological capital has a significant positive impact on all dimensions of the employee's internal social network on employees' individual performance.

Table 4-12 Correlation coefficient matrix

	Gender	Age	Education level	Network scale	Network heterogeneity	Network density	Self-efficacy	Optimism	Task performance	Relationship performance
Gender	1									
Age	-0.071	1								
Education level	0.103	-0.216	1							
Network scale	-0.407	0.085	-0.069	1						

Network heterogeneity	0.013	0.035	0.091	0.320	1					
Network density	0.178	-0.074	0.085	0.273	0.528	1				
Self-efficacy	0.115	0.071	0.059	0.391	0.536	0.589	1			
Optimism	0.149	-0.119	0.024	0.291	0.354	0.492	0.642	1		
Task performance	0.186	0.055	0.090	0.424	0.487	0.613	0.838	0.662	1	
Relationship performance	0.130	-0.047	0.024	0.416	0.481	0.601	0.733	0.657	0.748	1

4.1.4 Regression analysis

The independent variables in this paper are the three constituent dimensions of the employee's internal social network, namely the network scale, network heterogeneity, and network density. The dependent variable is the employee's individual performance, namely the two dimensions of task performance and relationship performance. In addition, psychological capital as an intermediary variable includes two dimensions of self-efficacy and optimism. In this paper, multiple regression is used to analyze the data. In order to avoid multiple collinearities between the dependent variable and the independent variable, the variance expansion factor (VIF) is tested. The results show that all models verify that the VIF value is less than 5, and basically reject the multicollinearity problem.

- (1) The effect of the internal social network of employees on the individual

performance of employees

A. The Effect of Internal Social Network of Employees on Employee Task Performance

Table 4-13 shows the results of the model analysis, where the explained variable is the employee's individual performance—task performance. Model 1 is the effect of control variables on employee task performance. From the regression results, the F value of Model 1 is 1.933. Model 2 shows the explanatory variables—various dimensions of the employee’s internal social network and the explained variables—regression analysis of employee task performance. The network size, network heterogeneity, and network density all enter the regression equation, and the VIF_{max} statistical value is 1.494. There is basically no multicollinearity problem, and the F value is 18.367 ($p < 0.01$), indicating that this regression model is significant.

The network size (238, $p < 0.01$) enters the regression model, the regression coefficient is positive and significantly different from zero, indicating that the network size has a significant positive relationship with employee task performance; network heterogeneity (188, $p < 0.01$) enters In the regression model, the regression coefficient is positive and significantly different from zero, indicating that the heterogeneity of the employee network has a significant positive relationship with employee task performance; the network density (439, $p < 0.01$) enters the regression model, and the regression coefficient is positive And it is significantly different from zero, indicating that it has a significant positive relationship with employee task performance. Test hypothesis H1a: Employee social networks have a significant positive effect on employee relationship performance.

Table 4-13 Regression analysis table of various factors of employee internal social network on employee task performance

	Impact of internal employee social networks on employee task performance	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.200*	0.133
Age	0.047	0.042
Education level	0.101	0.133

Independent variable		
Network scale		0.238***
Network heterogeneity		0.188*
Network density		0.439***
R ²	0.049	0.500
Adjusted- R ²	0.024	0.473
Model F	1.933	18.367**
VIF _{max}	1.057	1.494

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

B. The quantitative relationship between an employee's internal social network and employee's relationship performance

Table 4-14 shows the results of the model analysis, where the explained variable is the individual employee performance—task performance.

Model 1 is the effect of control variables on employee task performance. It can be seen from the regression results that Model 2 shows the explanatory variables—respective analysis of each dimension of the employee's internal social network and the explained variables—employee relationship performance. The network size, network heterogeneity, and network density all enter the regression equation, VIF_{max} statistics The value is 1.494, indicating that there is basically no multicollinearity problem. The F value is 15.283 (p <0.01), indicating that this regression model is significant. The network size (247, p <0.01) enters the regression model, the regression coefficient is positive and significantly different from zero, indicating that the network size has a significant positive effect on employee relationship performance; network heterogeneity (181, p <0.05) enters In the regression model, the regression coefficient is positive and significantly different from zero, which shows that the heterogeneity of the employee network has a significant impact on employee relationship performance; the network density (426, p <0.01)

enters the regression model, and the regression coefficient is positive and significantly different from zero, indicating that network density has a significant positive effect on employee relationship performance. Verify the aforementioned hypothesis H1b: Internal employee social networks have a significant positive effect on employee relationship performance.

Table 4-14 Regression analysis table of various factors of employee internal social network on employee relationship performance behavior

	Impact of internal employee social networks on employee relationship performance	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.127	0.063
Age	-0.037	-0.044
Education level	0.003	0.028
Independent variable		
Network scale		0.247**
Network heterogeneity		0.181*
Network density		0.426***
R ²	0.018	0.455
Adjusted- R ²	-0.008	0.425
Model F	0.701	15.283***
VIF _{max}	1.057	1.494

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

(2) The quantitative relationship between psychological capital and individual employee performance

A. The quantitative relationship between psychological capital and employee task performance

The regression equation model in Table 4-15 shows the regression analysis of psychological capital and employee task performance. Both self-efficacy and optimism enter the regression equation. The F value is 62.191 ($p < 0.01$), indicating that the effect of this regression model is significant. The statistical value of VIF_{max} is 1.799, indicating that there is basically no multicollinearity problem. Self-efficacy (690, $p < 0.01$) enters the regression model, indicating that self-efficacy has a significant positive effect on employee task performance; optimism (208, $p < 0.01$) enters the regression model, which indicates that optimism has a positive effect on employee relationship performance. To influence. Verify the aforementioned hypothesis H2a: Psychological capital has a significant positive effect on employee task performance.

Table 4-15 Regression analysis table of various factors of psychological capital on employee task performance

	The Influence of Psychological Capital on Employees' Task Performance	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.200*	0.082
Age	0.047	0.026
Education level	0.101	0.047
Independent variable		
Self-efficacy		0.690***
Optimism		0.208**
R ²	0.049	0.737
Adjusted- R ²	0.024	0.725
Model F	1.933	62.191***
VIF_{max}	1.057	1.799

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, the variable reported values are standardized regression coefficients.

The regression equation model in Table 4-16 shows the regression analysis of the relationship between psychological capital and employee performance. Both self-efficacy and optimism enter the regression equation. The F value is 33.641 ($p < 0.01$), indicating that the effect of this regression model is significant. The statistical value of VIF_{max} is 1.799, indicating that there is basically no multicollinearity problem. Self-efficacy (543, $p < 0.01$) enters the regression model, indicating that self-efficacy has a significant positive effect on employee relationship performance; optimism (304, $p < 0.01$) enters the regression model, that is, optimism has a positive effect on employee relationship performance Impact, but the impact is not large. Verify the aforementioned hypothesis H2a: Psychological capital has a significant positive effect on employee task performance.

Table 4-16 Regression analysis table of various factors of psychological capital on employee relationship performance

	Influence of psychological capital on employee relationship performance	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.127*	0.014
Age	-0.037	-0.037
Education level	0.003	0.054
Independent variable		
Self-efficacy		0.543***
Optimism		0.304***
R ²	0.018	0.602
Adjusted- R ²	-0.008	0.585
Model F	0.701	33.641***
VIF _{max}	1.057	1.799

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, the variable reported values are standardized regression coefficients.

(3) The quantitative relationship between employees' internal social network and employees' psychological capital

A. The quantitative relationship between an internal social network of employees and self-efficacy

The regression equation model in Table 4-17 shows the regression analysis of the internal social network and self-efficacy of employees. Both self-efficacy and optimism enter the regression equation. The F value is 16.235 ($p < 0.01$), indicating that the effect of this regression model is significant. The statistical value of VIFmax is 1.494, indicating that there is basically no multicollinearity problem. The network size (186, $p < 0.05$) enters the regression model, the regression coefficient is positive and significantly different from zero, indicating that the network size has a significant positive effect on employee self-efficacy; network heterogeneity (274, $p < 0.01$) enters In the regression model, the regression coefficient is positive and significantly different from zero, which shows that the heterogeneity of the employee network has a significant positive effect on self-efficacy; the network density (395, $p < 0.01$) enters the regression model, and the regression coefficient is positive And significantly different from zero, network density has a significant positive effect on self-efficacy. Verify the aforementioned hypothesis H3a: The internal social network of employees has a significant positive effect on self-efficacy.

Table 4-17 Regression analysis table of various factors of internal social network of employees on self-efficacy

	Influence of internal social network of employees on self-efficacy	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.126	0.064
Age	0.068	0.059
Education level	0.057	0.098
Independent variable		
Network scale		0.186*
Network		0.274**

heterogeneity		
Network density		0.395***
R ²	0.023	0.470
Adjusted- R ²	-0.003	0.441
Model F	0.875	16.235***
VIF _{max}	1.057	1.494

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

B. Number of the internal social network of employees and optimistic relationship

The regression equation model in Table 4-18 shows the regression analysis of internal employee social networks and optimism. Only self-efficacy enters the regression equation, and the F value is 7.872 (p <0.01), indicating that the effect of this regression model is significant. The statistical value of VIF_{max} is 1.494, indicating that there is basically no multicollinearity problem. The network size (161, p <0.1) enters the regression model, the regression coefficient is positive and significantly different from zero, the network size has a significant positive effect on employee optimism; the network density (367, p <0.01) enters the regression model, The regression coefficient is positive and significantly different from zero, and the network density has a significant positive effect on optimism. The network heterogeneity (120, p > 0.01) fails to enter the regression model, which shows that the employee network heterogeneity has no positive effect on optimism, that is, the size of the difference between the individuals in the social network maintained by employees. Optimistically, there is no significant impact. This can be explained by the fact that although employees' social network members are quite different and their members come from different departments, employees only need technical support, and members of other departments cannot provide effective resources and help, which also It will affect the employee's optimistic attitude towards the task, so the influence of network heterogeneity on the employee's optimism is not significant. Verify the aforementioned hypothesis H3b: The internal social network of employees has a

significant positive impact on the psychological capital component.

Table 4-18 Regression analysis table of various factors of the internal social network of employees to optimism

	The impact of the internal social network of employees on optimism	
	Model 1 (Beta)	Model 2 (Beta)
Control variable		
Gender	0.147	0.090
Age	-0.122	-0.122
Education level	0.066	0.091
Independent variable		
Network scale		0.161*
Network heterogeneity		0.120
Network density		0.367***
R ²	0.038	0.300
Adjusted- R ²	0.012	0.262
Model F	1.487	7.872***
VIF _{max}	1.057	1.494

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

(4) The relationship between internal social network, psychological capital and individual performance of employees

A. The relationship between employees' social networks, psychological capital and employees' task performance

Model 1 is the effect of control variables on employee task performance. Model 2 is the influence of employee's internal social network on employee task performance. The F value is 15.283 (p <0.01), indicating that the regression model is established.

From Model 2 $VIF_{max} = 1.494 < 5$, we can see that there is basically no multicollinearity problem in the model. From the results of Model 2, network size (238, $p < 0.01$), network heterogeneity (188, $p < 0.01$), and network density (439, $p < 0.01$) all have significant positive effects on employee task performance.

Model 3 is the impact of psychological capital on employee task performance. The F value is 42.850 ($p < 0.01$), which is significant, indicating that the regression model is established. From Model 3, $VIF_{max} = 1.494 < 5$, indicating that the model basically does not have multiple collinearity problems. From the results of Model 3, self-efficacy (582, $p < 0.01$) and optimism (174, $p < 0.01$) have a significant positive effect on employee task performance.

As shown in Table 4-19, psychological capital has an intermediary effect on the impact of network size, network heterogeneity, and network density on employee task performance.

Table 4-19 Regression analysis table of employee's internal social network and psychological capital on task performance

	Model 1 (Beta)	Model 2 (Beta)	Model 3 (Beta)
Control variable			
Gender	0.200*	0.133*	0.080
Age	0.047	0.042	0.029
Education level	0.101	0.133*	0.060
Independent variable			
Network scale		0.238***	0.101
Network heterogeneity		0.188*	0.008
Network density		0.439***	0.145*
Intermediary variable			
Self-efficacy			0.582***
optimism			0.174**
R ²	0.018	0.455	0.643

Adjusted- R ²	-0.008	0.425	0.617
Model F	0.701	15.283***	24.336***

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

B. The relationship between internal social network, psychological capital and employee relationship performance of employees

Model 1 is the effect of control variables on employee relationship performance. Model 2 is the effect of employee internal social networks on employee relationship performance. The F value is 15.283 (p <0.01), which is significant, indicating that the regression model is established. From Model 2 VIFmax = 1.494 <5, we can see that there are basically no multiple common models. Linear problem. From the results in Model 2, network size (247, p <0.01), network heterogeneity (181, p <0.05), and network density (426, p <0.01) all have significant positive effects on employee task performance.

Model 3 is the impact of psychological capital on employee relationship performance. The F value is 24.336 (p <0.01), which is significant, indicating that the regression model is established. From Model 3, VIFmax = 2.445 <5, we can see that the model basically does not have multiple collinearity problems. From the results in Model 3, self-efficacy (392, p <0.01) and optimism (261, p <0.01) have a strong positive effect on employee relationship performance.

As shown in Table 4-20, psychological capital has an intermediary effect on the impact of network size, network heterogeneity, and network density on employee relationship performance.

Table 4-20 Regression analysis table of employee's internal social network and psychological capital on relationship performance

	Model 1 (Beta)	Model 2 (Beta)	Model 3 (Beta)
Control variable			
Gender	0.127	0.063	0.014

Age	-0.037	-0.044	-0.035
Education level	0.003*	0.028	0.035
Independent variable			
Network scale		0.247**	0.131*
Network heterogeneity		0.181*	0.042
Network density		0.426***	0.175*
Intermediary variable			
Self-efficacy			0.392***
optimism			0.261***
R ²	0.018	0.455	0.643
Adjusted- R ²	-0.008	0.425	0.617
Model F	0.701	15.283***	24.336***

Note: *** p <0.001, ** p <0.01, * p <0.05, the variable reported values are standardized regression coefficients.

In short, psychological capital has an intermediary effect on the relationship between employee social networks and individual employee performance within the enterprise, assuming that H4 is partially passed.

4.2 Research hypothesis research results

The comparison between the research hypothesis and the verification results is shown in Table 4-21.

Table 4-21 Comparison of the research hypothesis and test results

H1 Enterprise Internal employee social network has a	H1a The size of the employee 's social network within the company has a positive	H1a1 network size has a positive impact on employee task performance	Get support
		H1a2 network heterogeneity	Get

positive impact on individual employee performance	impact on employee performance	has a positive effect on employee task performance	support
		H1a2 network density has a positive effect on employee task performance	Get support
	H1b Employee social network within the company has a positive impact on employee relationship performance	H1b1 network size has a positive impact on employee relationship performance	Get support
		H1b2 network heterogeneity has a positive effect on employee relationship performance	Get support
		H1b3 network density has a positive effect on employee relationship performance	Get support
H2 Psychology Capital has a positive impact on individual employee performance	H2a psychological capital has a positive impact on employee task performance	H2a1 Self-efficacy has a positive effect on employee task performance	Get support
		H2a2 optimism has a positive effect on employee task performance	Get support
	H2b psychological capital has a positive effect on employee relationship performance	H2b1 Self-efficacy has a positive effect on employee relationship performance	Get support
		H2b2 optimism has a positive impact on employee relationship performance	Get support
H3 Enterprise Internal employee social network has a positive impact on psychological	H3a Employee social network has a positive impact on self-efficacy	H3a1 network size has a positive effect on self-efficacy	Get support
		H3a2 network heterogeneity has a positive effect on self-efficacy	Get support
		H3a3 network density has a	Get

capital		positive effect on self-efficacy	support
	H3b Internal social network of employees has a positive impact on optimism	H3b1 network size has a positive impact on optimism	Get support
		H3b2 network heterogeneity has a positive impact on optimism	Get support
		H3b3 network density has a positive effect on optimism	Get support
H4 Psychological capital has an intermediary effect between the internal social network of employees and the individual performance of employees	H4a self-efficacy has an intermediary effect between internal employee social networks and individual employee performance		Get support
	H4b optimism has an intermediary effect between the internal social network of employees and the individual performance of employees		Get support

5 CONCLUSION

5.1 Research conclusion

This paper focuses on the research theme of the relationship between the internal social network of employees and the individual performance of employees. Through theoretical overview and empirical statistical analysis methods, the theoretical hypothesis proposed by this research is tested, and the internal social network of employees on individual performance is unblocked. The mechanism of influence, and explored the intermediary role of psychological capital under this role relationship. The research conclusions obtained are as follows:

(1) The internal employee social network has a significant positive impact on individual employee performance.

The network scale and network density of employees' internal social networks have a significant positive effect on individual employee performance. The larger the employee network size and the greater the network density, the higher the individual employee performance will be. The support of other members from within the organization is very important to their support. The members of the company reach out in a time when individuals encounter difficulties, help employees complete their work goals, and strengthen the relationship with other colleagues in the process to make employees better. To complete the goal. The scale of the internal social network of employees in the company shows that the employees have extremely strong communication relationships, and there are many people who can lend a helping hand when there are difficulties. These can enable employees to fully tap their potential and continuously improve their performance. Network density is the ratio of the degree of employee self-centered network communication to the entire network. The higher the density, the more employee communication, which is conducive to the completion of tasks. The relationship between network heterogeneity and individual employee performance is not significant. Although the employees interacting in the organization will not be people with the same academic background and the same work department, these cannot significantly affect the individual employee performance. The reason may be that among members of the employee's social network within the enterprise,

regardless of the members' educational level, junior college students, undergraduate students, or graduate students, they will take the initiative to help individuals complete their work tasks. Differences in this department or other departments have little effect on individual employee performance. Therefore, this study believes that the improvement of individual employee performance is more reflected through the size of the established network and the intensity of communication.

(2) Psychological capital has a significant positive effect on individual employee performance.

This article summarizes and summarizes the domestic and foreign scholars' research on psychological capital and employee individual performance theory, and draws the following conclusions: The self-efficacy and optimism of employee psychological capital have a positive impact on employee individual performance. In the organization, the higher the psychological capital of employees, the more conducive to the improvement of individual employee performance, and has a strong significance. When employees have high self-efficacy, they often have strong beliefs. When employees have a high level of optimism, they will also strive to achieve their work goals. Highly optimistic employees are more willing to set higher work goals, and can achieve this goal through a variety of ways, adapt to the changing organizational environment, improve their ability to ensure the realization of the goal. Employees face the future with a positive and optimistic attitude, the greater the possibility of employees completing tasks. Therefore, according to the results of this study, employees with high levels of psychological capital are more inclined to improve performance.

(3) The internal social network of employees has a positive influence on psychological capital.

The network size, network heterogeneity, and network density of employees' internal social networks have a significant positive impact on psychological capital. In the internal employee social network, the larger the network size of the employee's egocentric network, the more people it can communicate within the organization so that employees can face difficulties optimistically. A high network density can also inspire employees to be afraid of difficulties and set up high-goal attitudes. The relationship between network heterogeneity and psychological capital is not significant, and the differences between employee self-efficacy and optimism and

members of employee self-centered networks are not obvious. The different educational backgrounds of employees and the working departments do not necessarily lead to positive optimism.

(4) Psychological capital is the intermediary variable of employees' internal social network on employees' individual performance.

Without considering psychological capital, the three factors of the internal social network of employees have a positive impact on individual employee performance. However, after the intervention of psychological capital variables, the impact of network size and network density on individual employee performance becomes less significant. Network heterogeneity has no significant effect on individual employee performance. This means that psychological capital plays a full or partial intermediary role in the process of internal employee social networks influencing employees' individual performance.

5.2 Management recommendations

In this paper, through literature review and empirical research, in the context of China, the relationship between the three is verified. At the same time, combined with the current research status of academic circles on social network issues, this article believes that follow-up research also needs to be improved, and here are some suggestions:

(1) Improve social network analysis.

In the current research in the field of management, the analysis indicators of social network theory are mostly the commonly used indicators of network density and network size. However, the significance of the social networks is broader than this. If the future research of social network has only focused on It is inevitable that there are shortcomings in these indicators, and the social network theory will not be further developed. Therefore, in future research, we should dig deeper into the essentials of social networks in order to find more valuable content.

In addition, the improvement of individual employee performance is a dynamic process, and most of the analysis of social networks use static indicators. Therefore, future research directions can be combined with complex dynamic networks to study the impact of social networks on individual employee performance.

(2) Improve the competitive advantage of psychological capital.

The employees of modern enterprises generally have higher human capital value and complex social capital. They have a higher loyalty to the profession and relatively lower loyalty to the enterprise. If the management methods of the enterprise are not improved, the competitive advantage of the enterprise cannot be improved. Therefore, the role of employee psychological capital management is highlighted, and psychological capital has the characteristics of less investment and high return. Increasing the management of psychological capital of employees is not only a means of reducing management costs but also a method of improving employee efficiency.

Psychological capital has a positive impact on individual employee performance and plays an intermediary role in the process of internal employee social networks affecting employee individual performance. Therefore, from the perspective of psychological capital to enhance employee competitiveness, combined with enterprise characteristics, adopt different management strategies. In order to provide a competitive advantage for enterprises to survive and develop in the new environment.

5.3 Research limitations and future research prospects

In the research process of this article, it is limited by the personal ability to varying degrees and needs to be further improved in future research.

5.3.1 Limitations of study

(1) In terms of sample source, this article uses a random sample to facilitate sampling, taking into account companies in different industries, different sizes, and different ages. In the future, if the random sampling method is adopted, it will be more extensive and representative. In addition, the distribution of questionnaires is mostly concentrated in Shandong Province, and the data may be affected by the geographical scope. Therefore, future research should be widely sampled in multiple regions.

(2) In this paper, the research on the internal social network of employees in the company mainly uses the commonly used indicators of network density, network size, and network heterogeneity. However, the significance of social networks is not limited to this, so the study of the social networks is not It is very thorough. In the follow-up

research, the essence of the social network should be dug deeper to find more valuable content. And most of the social network research uses static indicators, and individual employee performance improvement is a dynamic process. Using static methods to study dynamic content is also a shortcoming of this paper.

In studying the influence mechanism of internal employee social networks on individual employee performance, psychological capital is used as an intermediary variable, and the role of other variables needs to be further explored in future research.

5.3.2 Future research prospects

Discuss how to strengthen the management mechanism of building employees' internal social networks. This article only carries out a qualitative analysis on how to promote and generate internal social networks of employees in the enterprise and lacks systematic discussion and research. Although the effectiveness of the internal social network of employees in the enterprise has been verified, the research on the promotion and guarantee mechanism needs to be strengthened in order to truly achieve the supplementary effect on the management system.

Expand the collection scope and quantity of samples. Stratified sampling can not only be limited to a certain province in the selection of regions but also consider the conditions of different regions. Only in this way can we better examine the impact of internal employee social networks on individual employee performance, making this article more convincing.

REFERENCES

- Bandura.(1986).*Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bian Yanjie.(2004). The Source and Function of Urban Residents 'Social Capital: Network Views and Investigation Findings. *Chinese Social Sciences*.136-146.
- Carolyn M,Youssef CM&Luthans F.(2007).Positive Organizational Behavior in the Workplace:The Impact of Hope,Optimism,and Resilience.*Journal of Management*,33(5):774-800.
- Cole, K Wellbeing.(2006).*Psychological capital, and unemployment: An integrated theory*. Paper Presented at the joint annual conference of the International Association for Research in Economic Psychology(IAREP) and the Society for the Advancement of Behavioral Economics (SABE),14-28.
- Cross, Rob&J. N. Cummings.(2004). Tie and Network Correlates of Individual Performance in Knowledge Intensive Work. *Academy of Management Journal*,47:928-937
- Goldsmith, A.H.,Darity,W.&Veum, J.R.(1998).Race, cognitive skills, psychological capital, and wages.*Review of Black Political Economy*,26:13-22.
- Granovetter.(1985).Economic Action and Social Structure: the Problem of Embeddedness. *American Journal of Sociology*, 3:481-510.
- Hansen,E.L.(1995).Entrepreneurial Networks and New Organization Growth, *Entrepreneurship Theory Practice*,19(4):7-19.
- Hao Mingliang.(2010).Research on Antecedent Variables of Psychological Capital.*Journal of Chongqing University of Science and Technology*, 11:93-95.
- Hosen, R.&solovey-Hosen, D.(2003).*Education and capital development: capital and durable Personal, social, economic, and political influences on the happiness of individuals*. *Education*,123(3):496-513.
- Jiang Chunyan&Zhao Shuming.(2006),*The relationship between social capital and corporate entrepreneurship and performance: the intermediary role of organizational learning: an empirical study of emerging enterprises in Jiangsu and Guangdong*. *Management World*, 10: 28-31.

- Jiang Jianwu&Zhao Shuming.(2007).Psychological capital and strategic human resource management, *Human Resources*,29 (9): 55-58.
- Ke Jianglin, Sun Jianmin&Li Yongrui.(2009). Psychological Capital: Development of Local Scale and Comparison between China and Western Countries.*Psychology Newspaper*,41(9):875-888.
- Peng Jianping.(2011).A comparative study on the impact of employee social network structure characteristics on relationship performance——Based on the analysis of the overall social network of employees in both Chinese and foreign R & D departments. *Social News*, (4): 49-64.
- Peterson S J&Luthans F. (2003).The positive impact and development of hopeful leaders.*Leadership and Organizational Development Journal*,24(1):26-31.
- Reagans R.&Zuckerman E.W. (2001). Networks, diversity, and productivity: the social capital of corporate R&D teams, *Organizational Science*,12(4), 502-517.
- Seligman,M. (2002). *Authentic happiness*.New York: Free Press.18-29.
- Settoon R P.&Mossholder K W. (2002)Relationship Quality and Relationship Context as Antecedents of Person- and Task-Focused Interpersonal Citizenship Behavior. *Journal of Applied Psychology*,87:255-267.
- Sparrowe.R.T.&R.C.Liden&S.J.Wayne&M.L. Kraimer. (2001). Social Networks and the Performance of Individuals and Groups. *Academy of Management Journal*,44:316-325.
- Tian Xizhou. (2008). Positive Psychological Capital and Its Application in Tourism Human Resource Management. *Tourism Science*, (2):57-60.
- Wang Yanfei&Zhu Yu. (2006).Research progress and prospects of organizational innovation atmosphere. *Advances in Psychological Science*,14(3): 443-449.
- Wei Rong&Huang Zhibin. (2008). Psychological capital structure and development path of enterprise technology innovation team. *China Science and Technology Forum*,11:62-66.
- Witt, L.A.&Kacmar K.M.&Carlson, D.S.& Zivnuska, S. (2002).Interactive Effects of Personality and organizational Politics on Contextual Performance.*Journal of Organizational Behavior*,23:911-926.
- Yang Jie, Fang Liluo&Ling Wenbian. (2001).Thinking about some basic problems of performance evaluation.*Dialogue of Nature Dialogue*, 23 (2): 40-51.
- Yuan Xiaoting. (2010). *Research on the relationship between enterprise R & D team internal social network and team knowledge creation*. Guangzhou: South China

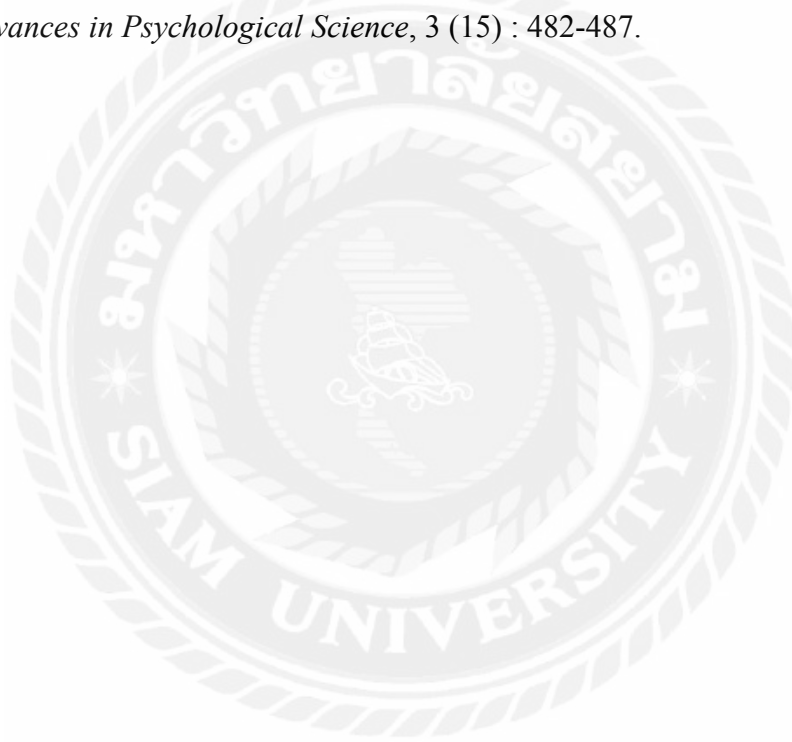
University of Technology.

Zhang Chuanqing. (2012). Theoretical Discussion on Antecedent Variables of Psychological Capital. *Enterprise Vitality-Human Resources Development*, 2: 56-60.

Zhao Yandong & Luo Jiade. (2005). How to Measure Social Capital: A Summary of Empirical Research Closed. *Foreign Social Sciences*, 2: 18-24.

Zhao Xiping & Yang Xiaoping (2009). Study on psychological capital in a complex working environment. *Science and Technology Management Research*, 6: 409-411.

Zhong Lifeng. (2007). Review and Prospect of Psychological Capital Research. *Advances in Psychological Science*, 3 (15) : 482-487.



APPENDIX

Dear lady (sir):

Hello! Please forgive your work and rest time!

All information collected in this questionnaire will be used in the process of writing a master's degree thesis at Siam University in Thailand. The information you provide is very important for the process and results of this academic research. Any information collected in this survey is only for scientific research, not for any other purpose, and fully respects your personal safety and privacy. Please do not have any concerns. This questionnaire will take you about 10 minutes. Please read each question in the questionnaire carefully and answer according to your actual feelings. And mark "√" in the corresponding position of the correct answer.

Part 1: Personal information

Your personal background material (please mark “√” in the brackets of the corresponding item

1. Your gender:

male female

2. Your age:

18-25 years old; 26-35 years old; 36-45 years old; 46-55 years old; 56 years and over

3. Your education level:

high school, technical secondary school, technical school or below; junior college; undergraduate; master and above

4. Your working time in the enterprise:

less than 2 years; 3-5 years; 6-10 years; more than 11 years

5. What kind of staff do you belong to:

Technical and engineering applied middle and senior personnel (engineers, physicians, lawyers, etc.)

Intermediate and senior professionals in research and design (specially appointed professors, experts, etc.)

Senior management personnel (senior accountant, senior marketing engineer,

senior human resource management expert, etc.)

()entry level employee

Part 2: Questionnaire

1. The following are questions about the internal social network of employees in the enterprise. Please answer according to the actual situation in the organization.

(1) You can make an organization member code table by yourself, that is, the names of the organization members are randomly numbered (A to G) to make the code table, and write the person's last name under the corresponding letter, if the same last name, It is distinguished by numbers, for example, Zhang 1 and Zhang 2.

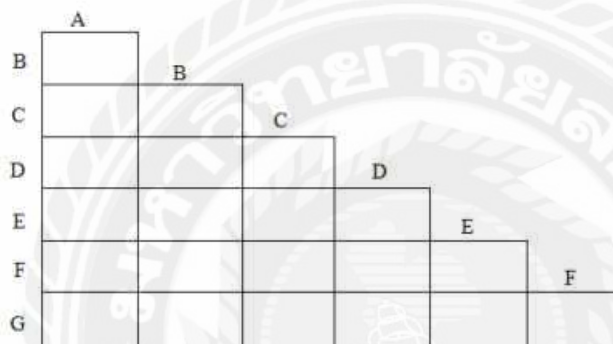
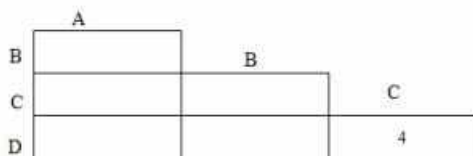
E.g: M	A	B	C	D	E	F	G
Li							

(2) What are the positions of A to G? Please select the correct option and fill in the corresponding position.

	A	B	C	D	E	F	G
Position							
Employees of this department--1;							
Direct leadership--2;							
Administrative staff--3;							
Staff of Finance Department--4							
Sales staff--5							
Chairman, General Manager--6							
Department manager--7							
Engineer--8							
Technical staff--9							
Education							
High school, technical secondary school, technical school or below--1							
Specialist--2							
Undergraduate--3							
Postgraduate and above--4							

(3) A-G How familiar are they with each other? (Please fill in the corresponding code in the space of the table below, as shown in the figure): Cognition degree code: 1- don't know; 2- not too familiar; 3- relatively familiar; 4- very familiar

Legend: If the degree of familiarity between C and D is "4-very familiar", fill in the code in the corresponding space, "4"



2. The following is a descriptive statement about psychological capital. Do you think the following aspects are in line with the actual situation in your organization? Draw "√" on the corresponding option according to the actual situation.

	Strongly disagree	Disagree	Uncertain	Agree	Very much agree
I keep setting higher goals for myself every day					
I think about how to do better work every day					
I hope to undertake challenging tasks					
My friends say I am an					

aspiring person					
I am a person who never gives up until the end					
I can see everything and be happy almost every day					
Something unpleasant happened, I will quickly adjust my emotions					
I believe I can do my job					

3. The following is a descriptive statement about the individual performance of employees. Do you think the following aspects are in line with your actual situation in your organization? Draw "√" on the corresponding option according to the actual situation

	Strongly disagree	Disagree	Uncertain	Agree	Very much agree
Able to complete work tasks in accordance with performance evaluation standards					
Through learning, find new ways to do things and solve problems					
I often plan and arrange the progress of my work					
I often expect to be					

assigned or assigned a challenging job					
Actively help colleagues to complete tasks that are not related to their work					
Efforts to resolve interpersonal conflicts and maintain the harmony of interpersonal relationships					
I often work with other colleagues in the team					

