

A Study of the Influence of Career Management on Employees' Performance in China

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Abstract

The enterprise's career management of employees has a significant impact on the enterprise's development. Therefore, employee performance management has gradually become a hot spot to achieve career management and enterprise objectives. However, various problems in China's high-tech enterprises, such as talent shortage, lack of core technology, lack of vitality of individuals and organizations, the weak ability of technology development and innovation, backward management mechanism and management thought, have gradually become prominent. These problems seriously affect the transformation, upgrading and development of high-tech enterprises. In order to achieve the above research purposes, this paper uses the research methods of literature research, questionnaire survey and empirical analysis. Given the above empirical results, this paper provides suggestions for high-tech enterprises to improve employee performance from the perspectives of employee career management, qualification management and employee incentive mechanism: first, enhance the employee career management, establish scientific employee career planning and provide high-quality career guidance; Second, establish a scientific qualification system and establish a certification team of professional qualification standards to enhance more development opportunities for employees; Third, actively organize staff training, conduct real-time assessment and feedback, and give full play to the effect of staff training; Fourth, establish a comprehensive and perfect salary and welfare system to enable employees to obtain material satisfaction and stimulate employees' work enthusiasm to the greatest extent.



IJSB

Accepted 17 January 2022
Published 22 January 2022
DOI: 10.5281/zenodo.5889645

Keywords: *High-tech enterprises, Career management, Career planning, Employee performance, Employee incentive mechanism.*

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INTRODUCTION

Background of Study

With the popularization and upgrading of information technology, high-tech enterprises have developed rapidly and become a significant medium and vital force to promote China's economic development and economic structure transformation. However, the complex and uncertain economic environment also challenges the development of high-tech enterprises. Under the background of reform and opening up, China's high-tech enterprises have developed rapidly, but they still face problems such as the shortage of professional and technical talents, the lack of core patent technology, the mismatch between the development of internal talents and the development of enterprise organization, the rigid internal management system and backward management thought of high-tech enterprises, which have had a significant impact on the transformation and upgrading of high-tech enterprises. The core asset of high-tech enterprises is employees. The quality of employees has a significant impact on the development of high-tech enterprises. Therefore, it is also essential for high-tech enterprises to pay more attention to employees' career management (Cai 2019).

Industry Background

According to relevant industry data, China's high-tech enterprises have increased steadily, and the growth rate has also increased in the past decade. Especially in recent years, national policies have been improving, support for high-tech companies has been strengthened, and more high-tech companies have been registered. As a result, according to the State Administration of Taxation statistics, the number of high-tech enterprises registered in China in 2020 was 275000, an increase of 26.9% year-on-year compared with 218500 enterprises in 2019.



Figure 1-1 Number of High-tech Enterprises in China

The core competitiveness of high-tech enterprises in the market is a high-tech technology, so it is inevitable to require technological innovation, product innovation and even management innovation. All innovation activities need the participation of employees of high-tech enterprises. Therefore, employees with solid abilities are the core resources of high-tech enterprises. However, it can be seen from the relevant data that a large number of employees in China's high-tech enterprises have lost, which has an important impact on the sustainable development of high-tech enterprises. For example, in 2019, the people's daily conducted a survey on high-tech enterprises in some provinces and cities in China and found that many high-tech enterprises are facing "three difficulties" in talent development, that is, they cannot find, recruit and stay, but the most challenging thing is the lack of high-quality employees and high-tech talents. Therefore, it is difficult for high-tech enterprises to recruit suitable high-quality employees from the outside. Therefore, it is necessary to improve the comprehensive ability of employees through internal cultivation and employee career management to solve

the problem of employment. Employee career management is one of the human resource management methods related to the vital interests of each employee in the enterprise, and employee performance is a way to measure employees' ability and evaluate employees' work completion. In this context, exploring how to improve employee performance through employee career management has become an essential human resource management topic in high-tech enterprises.

Employee Characteristics of a High-tech Company

A significant difference between high-tech enterprises and traditional manufacturing companies is that high-tech enterprises have the characteristics of knowledge-intensive and technology-intensive. Therefore, in high-tech enterprises, the proportion of R & D expenditure is high, and R & D personnel is relatively high. They master the core professional technology of the enterprise, and they carry out knowledge and technological innovation. It is the core force for high-tech enterprises to compete with other enterprises and the key for high-tech enterprises to obtain a competitive advantage. The requirement for them to do more repetitive work is not that they have more technical content. On the other hand, the educational level of such staff is generally relatively high, and most of them have received long-term professional training, which has an intense scarcity. It is also because of their loyalty to professionals and knowledge that they pay more attention to personal growth opportunities and realise their value at work. As a result, they have a higher pursuit of career development and self-realization. They are more willing to achieve career success than just pursuing material rewards. Therefore, for them, career management is critical.

Problem Statement

With the popularization and upgrading of information technology, high-tech enterprises have developed rapidly and become an important medium and strong force to promote China's economic development and economic structure transformation. At present, the rapid development of high-tech enterprises requires employees to have stronger work efficiency and higher work performance. Through career management, employees can fully understand their work content, understand the significance of work content, and further determine their career development direction in combination with work interests, which is conducive to employees' improvement of work performance (Cai 2019). First, the qualification management of enterprises is of great significance to both employees and enterprises. To carry out human resources management, we need to pay special attention to job qualifications, which is basic work. Through qualification management activities, high-tech enterprises can accurately define the work contents of various positions within the company. According to the position portrait, high-tech enterprises effectively match the appropriate employees of the enterprise with the relevant positions to achieve the due use of people, and the corresponding positions have the corresponding staff work, which not only improves the functional matching of post functions of high-tech enterprises but also improves the satisfaction of employees in relevant positions. In addition, if there are no corresponding talents within the company, high-tech enterprises can also put their employment conditions into the talent market, recruit and deploy employees who are most suitable for the position from the talent market to improve employees' sense of career acquisition. The operation modes of high-tech enterprises in different industries have their unique characteristics. They also need high-level and capable employees to work according to a certain enterprise structure and relevant business processes. When carrying out business process operations, pay special attention to the standards of conduct of employees. By formulating employee qualification standards, enterprises enable employees to have rules to follow when carrying out their work. Employees compare their knowledge reserve, technical operation ability and work experience with employee qualification standards one by one to find out the gap between their ability and enterprise

qualification standards, to encourage employees to improve their ability by strengthening self-learning and self-cultivation and promote the common improvement of employees' work performance and enterprise development (Peng 2013).

Research Questions

At present, the development of high-tech enterprises has accelerated and encountered many problems. One of the most difficult problems is the shortage of talents, especially the lack of high-level talents. Even if there are high-quality talents, they face the risk of not staying, and the turnover rate of talents is high, which seriously affect the development of high-tech enterprises. The core competitive capital of high-tech enterprises is talents. How to attract talents, especially stay in talents, improve their sense of belonging and identity in enterprises, and what strategies to adopt to solve the problem of talents are urgent problems high-tech enterprises face. Therefore, this paper mainly focuses on the core issue of "how high-tech enterprises improve employee performance through career management under different employee incentive management modes", specifically to solve the following questions.

(i) What is the relationship between employee career management, qualification management and employee performance?

In the whole performance management of high-tech enterprises, employee performance management is the most important part, which is of great significance to the development of the whole organization and team. There is also a certain relationship between employee career management, qualification management and employee performance. On the one hand, through employee training and career management, employees can more clearly understand their career planning, bind their career development with the enterprise's long-term development, and finally realize the unity of employees' interests and organizational interests. On the other hand, the lack of career management will make employees unable to clearly understand their planning at a certain stage of career development, lack of work objectives, and is not conducive to managers' management of employees and the planning of the overall development the enterprise. These are not conducive to enterprise performance appraisal and reduce efficiency to a great extent. In addition, the ultimate goal of employee performance management is employee career development. This also makes the implementation of employee career management more conducive to the realization of the enterprise's strategic objectives. On the other hand, the qualification management reviews the qualification of employees and systematically manages the work ability and work requirements of employees. Like career management, its essence is to achieve the enterprise's strategic objectives. Therefore, the pursuit of performance is also one of the objectives of its evaluation. Therefore, it is necessary to pay attention to the relationship between employee career management, qualification management and employee performance.

Research Objectives

This paper mainly studies the impact of career management and qualification management on employee performance in high-tech enterprises. Scholars at home and abroad have made a series of valuable research results on employee career management and qualification management, and the discussion on employee performance management theory has been mature. However, the existing research on how to improve employee performance by career management and qualification management in enterprises, especially high-tech enterprises, is less, and the research on employee incentive management as an intermediary is even less. Therefore, it is difficult to provide suggestions for Chinese high-tech enterprises to improve employee performance by implementing employee career management or qualification management. Therefore, through theoretical analysis, combined with the actual situation of

employee performance in high-tech enterprises, combined with the survey data, and using empirical methods, it is necessary to deeply analyze the action mechanism between employee career management, qualification management and employee performance in Chinese high-tech enterprises when enterprises implement employee training management or incentive management. On this basis, this study provides a path and strategic suggestions for Chinese high-tech enterprises on how to improve employee performance in the fierce market competition. Based on relevant research questions, the research objectives of this paper are as follows:

(i) Determine the relationship between employee career management, qualification management and employee performance.

Theoretical significance

Although many previous studies on employee career management and employee performance management, they are also more mature. However, few theoretical studies on the relationship between employee career management, qualification management and employee performance. Moreover, introducing employee training or incentive management as an intermediary variable to analyze and demonstrate the intermediary role of employee incentive management is rarely involved, and there is less research on high-tech enterprises. On the one hand, this paper improves the existing research on the relationship between employee career management and employee performance and reveals the mechanism of the impact of employee career management and qualification management on employee performance in the form of intermediary variable employee incentive management. On the other hand, this paper also enriches the research of career management theory in high-tech enterprises. Some scholars have carried out empirical research on career management from the relevant literature, but relatively speaking, they focus on traditional industries such as education and medical treatment, and there is less research on high-tech enterprises. Therefore, this study also enriches the research on high-tech enterprises.

LITERATURE REVIEW

Under the influence of reform and opening up, China's economic development level has continuously improved and leapt to the forefront of the world. Because a series of economic measures in the past paid too much attention to the speed of economic development and ignored the quality of economic development, China's economy is currently facing problems such as social disharmony and regional imbalance. In this regard, the 19th national congress put forward a high-quality development strategy, which emphasizes that economic development should move towards high-quality development. In essence, enterprises need to rely on technological progress to achieve high-quality development, and the key link of technological progress is technological innovation (Chen Lishan, Fu Yuanhai, 2019). Given this, the importance of technological innovation in the process of high-quality economic development is particularly prominent. High tech enterprises provide high-tech services or carry out technological development, product design, production and sales of high-tech products based on high-tech. The high tech industry has the characteristics of high investment and high return. Therefore, it has become the backbone to enhance China's innovation and become a powerful booster to promote the transformation and upgrading of the national industrial structure (Yang Jianjun, Yu Huimei, Zhou Cheng, 2020). Therefore, to accelerate the transformation of economic development mode, the development of high-tech enterprises must be paid attention to. Talents, especially high-end talents, are undoubtedly important resources for developing high-tech enterprises. Knowledge-based talents with core innovation ability are important for high-tech enterprises to occupy an advantageous position in market competition (Chen Jianfeng, 2019). The content of human resource management is to carry out

vocational training and management for enterprise employees, which helps to improve employees' work enthusiasm and loyalty. It is an important management activity of enterprises.

However, at present, high-tech companies are generally faced with the serious phenomenon of brain drain. High-quality talents often change jobs for their career development or are attracted by more favourable treatment of other enterprises. This has undoubtedly caused the loss of high-quality talent resources and brought huge losses to the performance of the enterprise, and hindered the long-term development of the enterprise. In this context, strengthening the career management and qualification management of enterprise employees and formulating different training programs and incentive management measures for different employees according to their positions and characteristics can not only help enterprise employees realize their professional value but also create greater economic benefits for the enterprise (Guo Yungui, Zhou Xiaodong, Liu Xiaofeng, 2004). Therefore, this chapter mainly summarizes the existing relevant literature on employee career management, qualification management, employee incentive mechanism and employee performance, defines the main research contents of relevant theories and possible research directions in the future, and fully explains the necessity of this research content. In addition, it also considers and summarizes the relevant research hypotheses of this paper to lay a good foundation for the later empirical analysis.

Employee Performance

Employees are the important wealth of the enterprise, which affects the normal operation and growth of the enterprise. Employees' ability can determine the future development of the enterprise to a great extent. As an indispensable part of human resource management, performance appraisal plays an important role in the management of employees. Evaluating employee performance and adopting scientific methods to evaluate the completion of employees' work and the performance of their responsibilities can well understand the efficiency of organizational operation, help employees find their problems, improve their work behaviour, and finally improve the performance of the enterprise. In the context of a complex economic situation, having good performance has become one of the important criteria for enterprises to improve their competitiveness. Therefore, research on employee performance has become an important topic in management. Employee performance is often studied as a dependent variable. On the one hand, employee performance management affects employee interests and is the basis of the performance management system; On the other hand, employee performance management affects the development prospect of enterprises. It is also the focus of human resource management research. However, due to the complexity of performance itself and the different definition perspectives, the concept of performance has not formed a unified definition.

By combing the literature related to performance research, we find that these three types of research on the concept of performance are based on the theoretical and practical background at all levels and have their advantages. However, at the same time, the academic circles' vague definition of performance has increased the definition of performance dimensions and the choice of performance evaluation methods (Ji Shunhong, Chen Xinglin, 2016). Therefore, in the actual performance evaluation, we should also select appropriate methods for evaluation according to the research content and the actual situation of enterprise development.

Table 2-1 Definitions of Employee Performance

Year	Scholar	Related Views
1990	Murphy	Performance is a series of work behaviours based on organizational goals.
1991	Schneider	Performance refers to the behaviour of employees or the organization formed by employees.
1993	Spencer	Performance is an inherent characteristic of employees.
1996	Kane	Performance is the result of employees' behaviour, which is affected by organizational goals and personal goals, but it has a certain degree of independence.
2002	Rong Yang	Performance is the work result of employees, and the generation of these results depends on work behaviour.
2003	Fang Zhenbang	Performance is a series of job-related behaviours and work results through assessment and evaluation.
2009	Xu Weimin & Li Wenbo	The definition of capability performance view covers two levels, one is based on current behaviour performance, and the other is based on future potential capability performance.
2012	Liu Zhen	Employee performance generally reflects employees' performance or achievements and performance.

Employee Career Management

The practice of career management first appeared in Europe and the United States, and the theory originated from some professors in Boston University. He believes that career management is to guide employees' career direction, career choice and career development consulting. The main body of the guidance is the internal organization of the enterprise or a special third party. Subsequently, this definition was widely recognized by the academic community. There are also studies by some scholars, as shown in Table 2-4.

Table 2-2 Definitions of Employee Career Management

Year	Scholar	Related Views
2005	Zhang Guoping	Based on employees' positions and skills, enterprises help employees formulate a series of management activities that are in line with employees' career vision and contribute to employees' career development, which is called employee career management.
2013	Peng Qifei	Career management is to manage employees' career development. In the final analysis, it is a feasible activity integrating organizational objectives and employees' interests.
2014	Wesarat, Sharif & Majid	Career management includes two levels: one is organizational level management, that is, organizational career management, and the other is employee level management, that is, personal career management.
2017	Wang Lu	The purpose of employee career management is to realize the win-win situation between enterprises and individuals through the mutual cooperation between employees and enterprises.
2019	Wang Ying et al	Career management requires the participation of organizations and employees. It is a management activity that requires planning, organizing and controlling employees' work processes.

From the above definition, it can be found that although there is no consensus on the concepts of organizational career and self career, scholars at home and abroad have made different definitions from different angles. Arnold (1997) regards organizational career management as a management activity composed of vocational training, career planning guidance and follow-up career suggestions to promote the effectiveness of employees' careers, which is led by the organization. Greenhaus (1990) believes that employees make a general analysis of their strengths and weaknesses, their abilities and external competitiveness, determine their career direction based on the analysis results, then formulate the career plan, and constantly feed back and adjust in the implementation of the career plan. For the content of self career management, Xu Zhihua (2011) defined the establishment and selection of career objectives, the training plan

and schedule planning for the objectives, and the implementation process of the plan. Among them, the implementation of the plan belongs to a behavioural process, which previously became a reflective process (Kuijpers et al., 2006).

Qualification Management

Scientific management theory is the earliest source of qualification. Then Professor David McLellan put forward competency, that is, the knowledge, skills and characteristics directly related to the work content or results. Since then, enterprise human resource management began to use the idea of competency. In 1979, Romote put forward the job analysis method. The content of this method is to systematically and comprehensively study the work-related contents of employees through job analysis to help enterprises select talents, improve the efficiency of employee training and carry out salary management. In 1985, British industrial institutions put forward the concept of vocational qualification. Then, the British government established the national vocational qualification system (NVQ), from which the concept of job qualification management came into being. Once NVQ was put forward, many other countries also recognized the importance and necessity of qualification management and carried out theoretical research and practical work on qualification management. With the introduction of NVQ into China and pilots in some industries, many domestic scholars focus on qualification management. The traditional concept of job qualification refers to the quality required for a specific post, which is only limited to the conditions or requirements of the post for the incumbent and does not involve the enterprise strategy or the relevant requirements of similar positions. Later, the concept of job qualification was expanded. On the basis of the original requirements for the professionalism and ability of employees, we paid more attention to the deep-seated qualities of excellent employees, such as motivation, morality, ability, personality and so on. The definition of post-qualification can be understood literally: "post" refers to the contribution made by holding a post; "Position" means the responsibilities to be undertaken by the post; "Qualification" represents the skills, knowledge and other qualities required by individuals to complete work tasks (Zhang Zhicheng, 2020). The qualification includes at least three parts: key responsibility, performance and contribution, and key ability. Qualification is the focus of many Chinese scholars, as shown in Table 2-8.

Table 2-3 Definition of Qualifications

Year	Scholar	Related Views
2004	Rao Zheng, Peng Qingfeng & Peng Jianru	Qualification refers to a series of requirements such as education, experience, skills and characteristics required for an employee to hold a specific post.
2012	Feng Jingying	Job qualification is the comprehensive requirements of the job holder's working ability, moral quality, personality traits and work behaviour according to the job type.
2014	Huang Rong	Job qualification is proof of the ability of personnel in the organization to undertake specific tasks and perform corresponding activities.
2018	Xu Jing	Qualification refers to the relevant soft power and hard power possessed by the incumbent in order to achieve the post responsibilities.

It can be seen from the above research that although the above definitions of the concept of job qualification are not exactly the same, they have certain similarities, including knowledge, experience, skills, behaviour and so on.

METHODOLOGY

Research Methods

This study uses a questionnaire survey and empirical analysis to analyze the impact mechanism of career management on employee performance in high-tech enterprises. Firstly, the existing theories and related literature are systematically combed through the literature research method to provide theoretical guidance for the construction of the research framework; Secondly, the questionnaire method is used to collect the relevant data on the four variables of employee performance, employee career management, qualification management and employee incentive mechanism; Finally, this study empirically tests the research hypotheses in the research framework. Therefore, this study provides multiple guarantees for the scientificity and preciseness of the research content through literature research, questionnaire survey and empirical test.

(i) Questionnaire survey method. This paper mainly uses the questionnaire method to collect data. After reading the relevant questionnaire structure and scale design involved in a large number of relevant literature, this paper makes corresponding adjustments and improvements in combination with the actual content of this study to design a questionnaire in line with this study. Then, this study distributed and collected the questionnaire to the subjects, and finally sorted and analyzed the data collected from the questionnaire. Firstly, based on combing the literature, this paper mainly refers to the mature scales in the existing literature, designs the questionnaire, including employee performance scale, employee career management scale, qualification management scale and employee incentive mechanism scale, and makes a pre-survey. Then, through the reliability and validity test, delete or add the questionnaire items to determine the final formal questionnaire. Secondly, issue a formal questionnaire. It mainly takes the employees of high-tech enterprises as the main survey object. The distribution and recovery of the questionnaire are directly completed online, and the website is directly sent to relevant high-tech enterprises. The filler can fill in online directly, and the results will be directly saved on the server. Finally, all questionnaires are recovered, processed and invalid questionnaires are deleted to ensure the validity and reliability of the collected data and reduce the deviation of estimation results caused by data validity problems.

(ii) Empirical analysis. It mainly refers to the reliability and validity test of the questionnaire data based on the effective data collected by the questionnaire to ensure the effectiveness and reliability of the data, which is not only the premise of empirical analysis but also an important guarantee for the robustness of the research conclusion. Then, statistical analysis software is used to empirically test the relationship between variables to verify whether the theoretical model and theoretical assumptions proposed in this paper are tenable. Based on the data collection of questionnaires issued by domestic high-tech enterprises, this paper empirically analyzes the internal relationship between various variables and the impact mechanism of career management and qualification management on employee performance. Firstly, the statistical analysis software SPSS 24.0 is used to test the reliability and validity of the sample data. Secondly, through descriptive statistical analysis, variable correlation analysis and multiple linear regression analysis, empirical research is carried out to verify whether the relevant assumptions are tenable, explain the research results, and finally draw the corresponding conclusions.

Population/Sampling/Unit of Analysis

This study obtains the required sample data through a questionnaire survey, mainly selects the employees of domestic high-tech enterprises as the research object, and understands the impact of employee career management and qualification management on employee performance in talent management of these high-tech enterprises.

The questionnaire is mainly distributed and recovered through QQ, WeChat and website connection. The content of the questionnaire is mainly divided into two parts: one is the basic information of the interviewed employees, including age, gender, educational background, working years and job nature; The second is to measure the relevant variables of the research model, including employee performance, employee career management, employee qualification management, employee incentive mechanism and other variables. A total of 301 original data samples were obtained. After eliminating the invalid questionnaire, 301 valid questionnaires were obtained, and the effective rate of the questionnaire was 100%.

Instrumentation

This study mainly uses the mature scale at home and abroad for reference to design the questionnaire to ensure the validity and reliability of the items of the questionnaire, and makes some adjustments according to the actual situation of career management in China's high-tech enterprises and the suggestions of experts and scholars in related fields. The questionnaire adopts the Likert five-level scale, which is composed of a group of statements. Each item is divided into five levels from weak to strong, which are recorded as 1, 2, 3, 4 and 5, respectively. The total attitude score of each respondent is the sum of the scores obtained from his answers to each question. This study involves four variables, including two independent variables (employee career management, employee qualification management), one dependent variable (employee performance) and one mediator (employee incentive mechanism).

Questionnaire design of employee performance

As for the scale design of employee performance, most scholars at home and abroad divide the dimensions of employee performance into the following four categories: first, single dimension. For example, Bernardin (1984) believes that performance is a record generated by a specific job function or activity within a specified time. Second, two-dimensional structure. Borman and Motorwidlo (1993) divided performance into two dimensions: task performance and relationship performance, which is also the most popular performance division method at present. Third, three-dimensional structure. Different scholars have different views on the division of three-dimensional performance. For example, Van Scotter and Motorwidlo (1996) divided performance into three dimensions: interpersonal promotion, task and work dedication. Hesketh and Neal (1997) divided performance into the task, relationship, and adaptive performance. Fourth, four-dimensional structure. London, money and Scott (2004) put forward the theoretical model of learning and innovation performance, which divides employees' work performance into four dimensions: task performance, relationship performance, learning performance and innovation performance. In addition, Wen Zhiyi (2005) measured employee performance from four dimensions: task performance, interpersonal performance, adaptive performance and effort performance.

Based on the scale design of employee performance by Zhang Jing (2013), this study divides the employee performance of high-tech enterprises into four dimensions: task performance, relationship performance, learning performance and innovation performance, and each has different measurement indicators under different performance, as shown in Table 3-1.

Table 3-1 Measurement of Employee Performance

Dimension	Secondary dimension	No.	Measurement items	Source
Task performance (TP)	Work cognition	TP1	I am well aware of my work objectives and responsibilities.	Zhang Jing (2013)
	Job responsibilities	TP2	I will strictly perform the post responsibilities in the job description.	
	Work tasks	TP3	I will complete the work according to the assessment criteria.	
	Professional knowledge	TP4	I have the professional knowledge required by my position.	
	Professional skills	TP5	I have the professional skills required by my position.	
Relationship performance (RP)	Work responsibility	RP1	I take the initiative to solve problems in my work without shirking responsibility.	
	Team work	RP2	I am full of team spirit and can work closely with my colleagues.	
	Interpersonal cooperation	RP3	I fully support and assist my superiors in their work.	
	Personal image	RP4	I pay more attention to my behaviour, language, conversation and dress.	
	Sense of team responsibility	RP5	I have a strong sense of collective honour and responsibility.	
	Professional norms	RP6	I strictly follow professional ethics and norms.	
Learning performance (LP)	Learning enthusiasm	LP1	I insist on learning new knowledge and skills.	
	Application ability	LP2	I am good at applying new knowledge to practical work.	
	Academic ability	LP3	I think I have high learning ability and efficiency.	
Innovation performance (IP)	Innovation ability	IP1	I acquire new working methods, abilities and tools through learning.	
	Difficult solution	IP2	I have innovative thinking and can put forward innovative solutions to solve difficulties.	
	Environmental adaptability	IP3	I can always adapt to new work and changes in the environment.	

Reliability and validity analysis of employee performance

According to the design of the scale, this paper uses EP to represent employee performance, in which task performance, relationship performance, learning performance and innovation performance are represented by TP, RP, LP and IP. This section analyzes the reliability and validity of employee performance, as shown in Table 3-5.

Table 3-2 Reliability Test Results of Employee Performance Scale

Dimension	Number of measurements	Cronbach's α	Reliability
TP	5	0.908	Reliable
RP	6	0.914	Reliable
LP	3	0.728	Reliable
IP	3	0.779	Reliable

According to the reliability test results in Table 3-5, Cronbach 'of the four dimensions of employee performance α The coefficients are greater than 0.7. Therefore, the employee performance scale passes the reliability test. The sample data of employee performance has reliability, stability and consistency, and the data is credible.

FINDINGS AND DISCUSSIONS

Profile of Respondents

The questionnaire was distributed to employees of China's high-tech enterprises, with 301 valid questionnaires. The researchers mainly sent the website for the questionnaire survey with the consent of the questionnaire distribution object, mainly from the age distribution, gender ratio, education level, working years in high-tech enterprises and post-distribution of respondents in high-tech enterprises.

(i) Age: According to the statistical information of the questionnaire, the respondents are between the ages of 26 and 45, which are the backbone of the development of high-tech enterprises. The number of employees aged 25 and below is small, accounting for 8% of the total respondents, and the number of employees aged 46 and above is also small, accounting for 5.32% of the total respondents. The composition ratio of people of all ages is shown in Table 4-1.

Table 4-1 Age Distribution of Respondents

Age	Subtotal	Percentage
25 and under	24	7.97%
26-30 years old	94	31.23%
31-35 years old	104	34.55%
36-45 years old	63	20.93%
46 years and over	16	5.32%
Total	301	100%

(ii) Gender: In terms of the gender of the respondents, there are 162 males, accounting for 53.82%, and 139 females, accounting for 46.18%, as shown in Table 4-2.

Table 4-2 Gender Distribution of Respondents

Gender	Subtotal	Percentage
Male	162	53.82%
Female	139	46.18%
Total	301	100%

Relationship between Employee Career Management and Employee Incentive Mechanism

Employee career management is an important way of enterprise human resource management, which is related to employee incentive mechanisms. This section explores the relationship model between employee career management and employee incentive mechanism according to empirical research, existing literature and relevant theoretical discussions on employee career management and employee incentive mechanism.

Analysis

In this study, employee career management (ECM) is divided into four dimensions: fair promotion (FP), focus on training (FT), self-knowledge (SK) and job information (JI); Employee incentive mechanism (EI) is subdivided into two dimensions: staff training (ST) and employee incentive (EI). This study uses an effective questionnaire to conduct an empirical study to analyze the relationship between the four dimensions of employee career management and employee incentive mechanism.

Firstly, the relationship between employee career management and employee incentive mechanism is analyzed. The analysis structure is shown in Table 4-4.

Table 4-3 Correlation Analysis Results of Employee Career Management and Employee Incentive Mechanism

	FP	FT	SK	JI	ECM	ST	EI	STEI
FP	1							
FT	0.000	1						
SK	0.000	0.000	1					
JI	0.000	0.000	0.000	1				
ECM	0.783**	0.347**	0.341**	0.387**	1			
ST	0.235**	0.094	0.417**	0.334**	0.488**	1		
EI	0.196**	0.202**	0.723**	0.081	0.501**	0.000	1	
STEI	0.306**	0.206**	0.796**	0.301**	0.699**	0.736**	0.677**	1

Note: *** means $P < 0.001$; ** means $P < 0.01$; * means $P < 0.05$

According to the correlation analysis results of employee career management and employee incentive mechanism in Table 4-4, there is a significant non-correlation between staff training (ST) and employee incentive (EI). There was no significant correlation between fair promotion (FP), staff training management (ST) and employee incentive management (EI). Focus on training (FT) was significantly correlated with staff training (ST) and employee incentive (EI). Self-knowledge (SK) is significantly correlated with staff training (ST) and employee incentive (EI). Job information (JI) is significantly correlated with staff training (ST) and employee incentive (EI).

For the relationship and causality between employee career management and employee incentive mechanism, further multiple regression analysis is needed, as shown in Table 4-5.

Table 4-4 Multiple Regression Analysis Results of Employee Career Management and Employee Incentive Mechanism

	Unstandardized Coefficients		Standardized Coefficients		
	β	S.E.		t	Sig.
Constant	4.407E-17	0.022		0.000	1.000
FP	0.306	0.022	0.306	14.101	.000
FT	0.206	0.022	0.206	9.488	.000
SK	0.796	0.022	0.796	36.672	.000
JI	0.301	0.022	0.301	13.848	.000

Table 4-5 Goodness of Fit between Employee Career Management and Employee Incentive Mechanism

R	R2	Adjusted R2
0.928	0.860	0.859

According to the multiple regression analysis of employee career management and employee incentive mechanism in Table 4-5 and the goodness of fit results of the impact model of employee career management and employee incentive mechanism in Table 4-6, the model R2 is 0.860, the adjusted R2 is 0.859, $f = 456.359$, and the significance level is $p < 0.001$. The regression of fair promotion (FP) to employee incentive (EI) was significant, $P < 0.01$, the regression coefficient was 0.306. The focus on training (FT) had a significant regression on employee incentive mechanism (EI), $P < 0.01$, the regression coefficient was 0.206. Self-knowledge (SK) had a significant regression to employee incentive mechanism (EI), $P < 0.01$, the regression coefficient was 0.796. The regression of job information (JI) to employee incentive mechanism (EI) was significant, $P < 0.01$, the regression coefficient was 0.301.

Results

Through the correlation analysis and multiple regression analysis between employee career management and employee incentive mechanism, the following empirical results can be obtained: the fair promotion (FP), focus on training (FT), self-knowledge (SK) and job information (JI) of employee career management (ECM) are significantly positively correlated with employee incentive mechanism (EI). Therefore, the improvement of fair promotion (FP), focus on training (FT), self-knowledge (SK), and job information (JI) of employee career management (ECM) can promote the improvement of employee incentive mechanism (EI).

Relationship between Qualification Management and Employee Incentive Mechanism

Qualification management is a way of enterprise talent management, which is related to the development of enterprises and is closely related to the employee incentive mechanism. This section explores the relationship model between qualification management and employee incentive mechanism according to empirical research, existing literature and relevant theoretical discussion of qualification management and employee incentive mechanism.

Analysis

In this study, qualification management (QM) is divided into three dimensions: eligibility standard (ES), quality standard (QS) and behaviour standard (BS). This study subdivides the employee incentive mechanism (EI) into two dimensions: staff training management (ST) and employee incentive mechanism (EI). This study uses 301 effective questionnaires to conduct empirical research according to the effective sample data to analyze the relationship between the two dimensions of qualification management (QM) and employee incentive mechanism.

Firstly, the relationship between qualification management and employee incentive mechanism is analyzed. The analysis results are shown in Table 4-7.

Table 4-6 Correlation Analysis Results of Qualification Management and Employee Incentive Mechanism

	QM	ES	QS	BS	ST	EI	STEI
QM	1						
ES	0.519**	1					
QS	0.599**	0.000	1				
BS	0.610**	0.000	0.000	1			
ST	0.390**	0.277**	0.141**	0.265**	1		
EI	0.424**	0.224**	0.278**	0.231**	0.000	1	
STEI	0.574**	0.356**	0.292**	0.352**	0.736**	0.677**	1

Note: *** means $P < 0.001$; ** means $P < 0.01$; * means $P < 0.05$

According to the correlation analysis results between qualification management and employee incentive mechanism in Table 4-7, there is a significant correlation between qualification management (QM), staff training (ST) and employee incentive (EI). The eligibility standard (ES) is significantly correlated with staff training (ST) and employee incentive (EI). Quality standard (QS) is significantly correlated with staff training (ST) and employee incentive (EI). There was a significant correlation between behaviour standard (BS), staff training (ST) and employee incentive (EI).

CONCLUSION

The research on employee career management has long been a hot research direction of scholars. It is also an important means for enterprises to carry out human resource management in the industry. At present, the competition of high-tech enterprises is becoming more and more difficult, more dependent on talents and higher requirements for talents (Dong

2015). However, the frequent resignation of talents and the replacement of companies have an important impact on the competitiveness of enterprises, which undoubtedly increases the cost of human capital and is also very unfavourable to the technical team construction of high-tech enterprises. Therefore, the research on enterprise talent recruitment and training is becoming more and more important. However, the research on career management and qualification management explores effective career management and the construction of qualification systems. Most of them are based on single variables such as employee career management, qualification management and staff training incentive. There are relatively few studies on the relationship between career management and employee performance, especially between qualification management and employee performance, and a complete research system has not been formed. There are few studies on the impact mechanism between career management and employee performance. In addition, the research on the employees of high-tech enterprises also focuses on the loss of R & D personnel and knowledge workers in high-tech enterprises. The research on career management in high-tech enterprises is still under exploration. Therefore, taking Chinese high-tech enterprises as the research object, this paper constructs the theoretical framework of "career management and qualification management employee incentive mechanism employee performance" through literature and empirical research, which arranges the previous research and has a new research breakthrough. Therefore, based on the summary of empirical results (Cai 2019).

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Cite this article:

WU JIANKUN (2022). A Study of the Influence of Career Management on Employees' Performance in China. *International Journal of Science and Business*, 8(1), 26-41. doi: <https://doi.org/10.5281/zenodo.5889645>

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