A STUDY OF THE INFLUENCE OF KNOWLEDGE SHARING ON THE INNOVATION PERFORMANCE OF HIGH-TECH ENTERPRISES[*]

Huawen Fan
International Chinese College, Master of Business Adminisration
Rangsit University, Pathum Thani, Thailand
E-mail: 644357196@qq.com

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Abstract

At present, market competition is intensifying. If companies would like to maintain long-term operations, they must continuously improve their own innovation performance and strengthen their core competitiveness. In the operation of an enterprise, knowledge sharing is an important condition for promoting the production of enterprises and their research and development, as well as an important link of enterprise knowledge management, and it has an important impact on the innovation performance of enterprises. At present, as companies continue to assume that knowledge sharing is concerned, it is of great value to study the impact of knowledge sharing on the innovation performance of high-tech enterprises. This article first elaborates that knowledge sharing has a significant positive impact on innovation performance and analyzes the empirical results and the role of knowledge sharing in improving innovation performance. Finally, it summarizes the full text and makes some suggestions. Based on the research results, some suggestions are put forward, including strengthening the incentives for employee knowledge sharing, creating a good knowledge sharing environment, strengthening human resource management, etc., to provide a certain reference for high-tech enterprises to improve their innovation performance.

Keywords: knowledge sharing, high-tech enterprises, innovation performance

Introduction

The emergence of knowledge economy is the general trend of world economic development. Due to the economic development of various countries after the industrial revolution, the resource economic development sacrificed resources, and various natural disasters are the revenge of earth action. At this point, humans are seeking development models that can continue to consume resources, so the knowledge economy exists. Knowledge, as repetitive, reusable, marginal income will not reduce, which gradually becomes the only endless motive for social and economic development, is the key to the formation of enterprise competitiveness. As a subject of knowledge sharing, many employees and operators are paying attention to the construction of enterprise information system. Knowledge sharing is an activity to build an enterprise knowledge base and increase knowledge access. Knowledge sharing, especially knowledge, can be simply coded knowledge and comparative clear knowledge, implied knowledge values, thinking patterns, beliefs, experience, skills Finally, from the perspective of knowledge sharing environment, knowledge management practice, knowledge base organization cultural concepts, all staff knowledge management awareness, lack of interest in incentive mechanisms for knowledge sharing and knowledge contribution action. Employees personally do not feel the benefits of knowledge sharing action, so there is no motivation to share knowledge. It can be seen that enterprises still have many problems in effective knowledge sharing, and they need to do a lot of work.

Knowledge has become the most important resource in the enterprise, and is the basic resource for the company to obtain the core competitiveness. But, on the one hand, a company struggles to have all the knowledge it needs to survive and develop. On the other hand, it doesn't necessarily produce organizational performance. .Starting from the practical application value of this paper, the relationship between knowledge sharing and innovation behavior of high-tech enterprise employees can provide some reference for cultivating the leadership ability of enterprise managers and the relationship between leaders and employees. By analyzing the relationship between knowledge sharing and innovation of high-tech enterprises, enterprises can better understand the role of leadership behavior in innovation, and consciously take relevant measures to have a positive impact on employee behavior, so as to improve the innovation ability of enterprise employees. Based on this, this paper analyzes the impact of knowledge sharing on the innovation performance of high-tech enterprises.

Objective

The paper uses detailed theoretical basis to analyze the impact of knowledge sharing on high-tech enterprises, and develops a series of solutions accordingly to provide vouchers for the innovation performance of high-tech enterprises. Based on this, this study finally obtained relevant data through the dimension measurement of knowledge sharing, and verified the assumptions proposed in this paper with the help of SPSS26.0 statistical analysis software. According to the above research discussion, the paper elaborates on various aspects of knowledge sharing and analyzes the impact of its performance.

Material and Method

1. Literature review of Literature review

Scholars have made some research on the relevant content of knowledge sharing and enterprise innovation performance, mainly starting from the concept, dimensions and measurement of these variables, which provides some reference for the study of this paper. Combined with the different literature, for the present study is greatly helpful.

Knowledge sharing has two topics. Scholars have different understandings of the knowledge-sharing process and have different insights into the role of trial subjects. Very effective knowledge sharing can improve the overall traffic within the enterprise, and enhance their trust in each other, so as to increase partnerships, and then share their knowledge, and finally promote the enterprise to become more cohesive.

Through the transaction analysis of knowledge, the feedback on knowledge sharing plays an important role in the smooth knowledge sharing. During the period, trust between employees and parts is a prerequisite for operation in the market at the current stage. When this trust cannot be generated, knowledge sharing shows the desired will, and the value of knowledge sharing to both sides must also be affected. For example, in the process of knowledge sharing, when the knowledge provider has less income than the value of knowledge, it needs to improve the remuneration of knowledge sharing or reduce the quality of the knowledge provided. Similarly, the knowledge receiver evaluates the shared knowledge to formulate the necessary conditions to improve the knowledge quality and reduce the remuneration of knowledge sharing. Analysis the theoretical basis of knowledge sharing through Chinese scholars and clarify its meaning. The main factors affecting its sharing are mainly the cost of the required transaction and the risk problems of both parties.

Analyzing the barriers to knowledge sharing from the purpose of knowledge sharing, the types and characteristics of knowledge, is a common research outlook for scholars.

Researchers Jiang Wen believes that clear knowledge can be accurately expressed. Implicit knowledge is difficult to express in the right language because it has its "unspeakable" nature. It can express knowledge with the help of implicit, posture, or specific scenarios, and knowledge receiver also need to understand shared knowledge by observing, imitating, and learning conversations. Therefore, it is very difficult to share the implied knowledge.

Because the main topic of this paper research is the influence of knowledge sharing on enterprise performance, through the relevant literature, learning and induction, when the enterprise for this part of the innovation performance research is relatively few, high-tech enterprises have certain special value, so this article will further around these content, to provide some reference for relevant research.

Analyze the corresponding views provided by some scholars, and explain the source of the competitive advantage of the enterprise according to the examples used. The relationship between knowledge sharing and enterprise performance has different starting points and methods, but the conclusion that knowledge sharing has a positive impact on the improvement of enterprise performance is basically the same. In a relatively open environment, through the knowledge sharing research of enterprises and external organizations, it has attracted the attention of scholars across the country, and some scholars also analyze their internal and external influence factors. The context of these empirical studies is completely different. Some scholars take high-tech enterprises as their sample, while some scholars take multinational enterprises and small and medium-sized enterprises. Analysis of its measured vector variables yielded relative connected results, so that the organizational performance of knowledge sharing plays a crucial role.

For the connection of knowledge sharing and innovation performance, most scholars give research and analysis on the connection based on its basis. These insights include that organizational innovation capability is a function of organizational management, knowledge maintenance, and creation, that organizational innovation cannot be separated from applications of knowledge acquisition and integration, and that innovation is the result of knowledge application. As an important part of maintaining enterprise innovation, knowledge management is the driving factor for the key development of target enterprises. The creation, internalization, popularization and application of knowledge can promote and promote innovation knowledge management can increase the innovation of enterprises. The research of knowledge-sharing activities has a brand new driving force.

According to the current research and analysis of scholars from various countries, although the direction and prospects are different, their common purpose is to break through the current situation of knowledge sharing. And, through the investigation of its internal impact factors, to formulate a series of measures for its management mechanism. And use the corresponding resources for reasonable use. Through two different angles and establishing corresponding management model, it provides a reliable data and idea through empirical research and data analysis.

2. The study assumes that the Research hypothesis

Sharing of knowledge occurs at all levels of the enterprise. When their own knowledge rises to the enterprise knowledge, the enterprises can provide the overall knowledge level through the increase of the knowledge reserve, so that the innovation ability can also increase accordingly. Second, the enterprise innovation is achieved by the employees. Employees master the knowledge, solve their problems, and decide to solve their abilities. Therefore, the level of knowledge has an important impact on the innovation ability of enterprises. However, no matter what the individual knowledge level can not meet the knowledge needs of enterprises in various aspects. Knowledge sharing can not only improve the comprehensive quality of employees, but also enable their professional ability and

communication ability to be improved, so as to strengthen the innovation ability of enterprises.

Knowledge sharing includes three meanings: First, enterprises should provide a good platform for employees based on knowledge sharing, second, to ensure the specified time, finally, enterprises need to share knowledge for employees, ensure that employee turnover does not affect their competitiveness, and through a series of incentives.

Knowledge sharing can not only improve the competitiveness of enterprises, but also use the strategic measures needed to enrich their performance. In the process, enterprises also need a lot of knowledge, and can allow employees to use it at will. Therefore, employees and departments do not need to spend time and money to gain knowledge. Instead, the necessary knowledge can be shared through personal or departmental knowledge to avoid repeated work, obtained directly from businesses or other departments. Save costs for the enterprise: the enterprise must have personnel flow, most of the knowledge exists in people's brain. Knowledge sharing, and the business risks caused by knowledge loss can not be reduced, but in order to save the corresponding enterprise costs, enterprises must invest in time and capital costs to restore the lost knowledge, reduce costs leading to higher enterprise performance.

In Han Ying et al (2018) in the case study of two international five-star hotels, it can be seen that the atmosphere of knowledge sharing within the organization is very strong, and the performance level of the organization is very high.

Xu Ying (2018) in 2018 pointed out that employee knowledge sharing has a great impact on the organization's sales performance.Hu Lewei et al (2018) investigated 182 business teams of the business consulting company, and believe that the use of relevant high-quality electronic documents can be greatly shortened before the completion of the work, and the content of knowledge sharing has promoted the improvement of work performance. It is understood that Xiao Hanet al (2020) have an important and positive impact on the flexibility and knowledge sharing practice on the competitive advantage of the organization.

Wei Ling et al (2019) analyzed the indicators provided by organizational knowledge and analyzed the factors influencing their performance. We propose a systematic model and a quantitative approach to describe the relationship between knowledge sharing and enterprise performance, and empirically test the relationship between knowledge sharing and enterprise performance. Feng Jingyu (2019) classifies knowledge to derive knowledge sharing from two different perspectives. According to the behavior of employees, the corresponding dimensions are found, and according to the three questionnaire methods. The degree of knowledge sharing is clearly related with enterprise performance in several cities through surveys, sampling and related analysis and processing of sample data.

Gebaoshan et al. (2018) divided knowledge sharing in two different aspects. Thus, the model of the relationship between the two sides is established through assumptions. Through research and analysis, knowledge sharing plays a different role for two different enterprise performance. Wang Lijing believes that in the high organization of knowledge sharing, there are benign actions. Improve the overall strength of employees and build better performance.

The learning ability of Sun Shiqiang and others (2019) individuals and organizations is a necessary part of the innovation ability, and knowledge-sharing action can promote this ability and improve the innovation ability and performance of organizations. Wang Changqiong et al (2019) believe that knowledge sharing is a key factor in improving enterprise ability, that is, knowledge sharing helps to improve innovation ability.

Lee Yan et al (2018) found a positive relationship between knowledge sharing and innovation performance. Yan Jiaqi (2018) found that knowledge-sharing behavior is a key condition for achieving innovation performance. Song Yanqiu et al. (2018) found that exploratory knowledge sharing meaningfully promotes innovation performance, and

knowledge dissemination improves innovation performance. Inter-individual interactions produce higher innovation capacity than independent individuals. Employees need to share knowledge, sort out and absorb the knowledge they gain, and stimulate innovation. So, assume that this is as follows:

H1: The implicit knowledge sharing has a significant positive impact on the innovation performance of high-tech enterprises.

H2: The explicit knowledge sharing has a significant positive impact on the innovation performance of high-tech enterprises.

Based on the research and analysis of knowledge sharing and innovation performance, the influence of knowledge sharing on enterprise performance is crucial. Therefore, knowledge sharing directly affects enterprise performance.
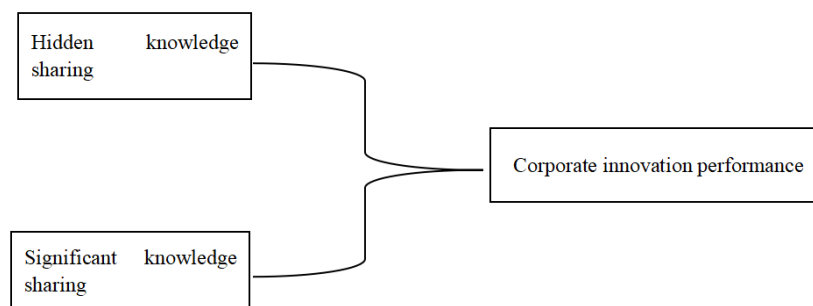
Study process

1. Test of reliability validity

(1) Confidence analysis

Data values that are measured for things at the same time and in the status quo. In the list scale coefficients to further understand the consistency, reliability, and stability of the measurement scales used in this study. For the Krenbach people. "The larger the s coefficient, the better the internal consistency of the factors tested, so the better the reliability and stability of the scale. According to the SPSS19.0 software, the reliability table coefficient of this questionnaire is shown in the table below.

Table 1 Reliability analysis of each variable

Measuring variables	Measurement coefficient	Cronbach α
Knowledge sharing	15	0.922
Innovate performance	18	0.902

Source: the author arranges it by myself

(2) Validity analysis

This study used Amos 17.0 software, using the confirmation factor analysis of the proposed structural equation model, to test the range of the suggested internal structure reflecting the propositions and concepts. That is, validity occurs if the outcome of the measured ratio better reflects its theoretical properties.

①   knowledge-sharing metrics

Table 2 Knowledge-sharing validity index

metric	X^2/df	RMSEA	GFI	NFI	IFI	CFI
Index value	1.804	0.048	0.964	0.909	0.904	0.902

Source: the author arranges it by myself

According to the above table above, the X2/df in the knowledge sharing confirmatory factor analysis is less than 3 and the RMSEA is less than 0.05, with a good fit;

② for innovative performance metrics

Table 3 Innovate performance indicators

metric	X^2/df	RMSEA	GFI	NFI	IFI	CFI
Index value	1.759	0.070	0.885	0.984	0.921	0.909

Source: the author arranges it by myself

As can be seen from the above table, the confirmation factor analysis of innovation performance has x2/df below 3 and RMSEA below 0.05.

2. Descriptive statistics

Descriptive system statistics are made for the knowledge sharing of high-tech enterprises. The analysis found that the level of knowledge sharing and innovation performance of employees are at a medium to high level, but it still needs to be improved. Results are presented in the table below

Table 4 Descriptive statistics

Variable	n	M	SD	Item
Knowledge sharing	120	29.47	5.81	9
Innovate performance	120	86.22	16.02	20

Source: the author arranges it by myself

For the specific organization and the corresponding code of conduct analysis, by describing the behavior of internal organization, according to the behavior of knowledge sharing, said the better enterprise culture can strengthen the cohesion and motivation of enterprise employees, can promote the smooth progress of knowledge sharing in the enterprise.

The traditional hierarchical organizational structure makes it difficult for employees to break their respective job constraints and achieve knowledge-sharing measures.In the new organizational structure, information dissemination is faster among employees and has strong sharing ability, which can improve the traditional structure of customer service for knowledge sharing.

Time and space are constrained by organizational knowledge sharing.Knowledge-sharing technology can effectively help employees overcome the problem.Therefore, for enterprises, we must pay attention to knowledge sharing.

3. Analysis of variance

One-way ANOVA was used, as shown in the following table:

Table 5 Analysis of variance of basic information with knowledge sharing

		Square and	df	Equal	F	Significance
Age	Between groups	47.726	120	0.252	1.300	0.304
	Within the group	1.156	4	0.183		
Working years	Between groups	110.202	120	0.565	0.658	0.707
	Within the group	5.156	4	0.850		
Cultural degree	Between groups	190.884		0.884	0.837	0.570
	Within the group	6.000	120	1.156		
Gender	Between groups	212.417	4	1.110	0.805	0.612
	Within the group	8.156	120	1.350		
	Within the group	7.136	4	0.741		

According to the table above, age, working life, education level and gender significance for knowledge sharing were 0.304,0.707,0.570, and 0.612, respectively,

Analyze the impact of each underlying variable on knowledge sharing, as shown in the table below:

Table 6 Analysis of variance on basic information and innovation performance

		Square and	df	Equal	F	Significance
Age	Between groups	45.246	120	0.241	1.238	0.248
	Within the group	1.138	4	0.171		
Working years	Between groups	106.201	120	0.544	0.618	0.721
	Within the group	5.144	4	0.848		
Cultural degree	Between groups	183.764		0.836	0.828	0.564
	Within the group	5.120	120	1.124		
Gender	Between groups	210.432	4	1.108	0.832	0.603
	Within the group	8.144	120	1.324		
	Within the group	7.128	4	0.733		

As can be seen from the above table above, the significance of age, working years, education and gender to enterprise innovation performance are 0.248,0.721,0.564 and 0.603, respectively,

4. Correlation analysis

Correlation analysis can measure the association of its variables and study by the corresponding unified method. To test whether there was multiple collinearity between the variables in the study model, the following two validity test methods were used for the variables, and the results of the correlation analysis are shown in the following table:

Table 7 Results of the correlation analysis

		Knowledge sharing	Innovate performance	Age	Working years	Cultural degree	Gender	Dominant knowledge sharing	Hidden knowledge sharing
Knowledge sharing	Pearson correlation	1	616**	.151**	.461**	0.132	0.051	0.124	0.048
	Significance (bilateral)		0	0.022	0.061	0.126	0.513	0.115	0.511
Innovate performance	Pearson correlation	653**	1	.153**	.361**	0.056	0.122	0.121	0.048
	Significance (bilateral)	0		0	0	0.233	0.151	0.115	0.504
Age	Pearson correlation	.159**	.246**	1	.261**	-.326**	.153*	0.128	0.047
	Significance (bilateral)	0.012	0		0.004	0.061	0.004	0.115	0.506
Working years	Pearson correlation	.261*	.361**	.162**	1	-.203**	-0.032	0.124	0.046
	Significance (bilateral)	0	0	0.001		0	0.632	0.118	0.552
Cultural degree	Pearson correlation	-.563**	-.236**	-.262**	-.364**	1	-.262*	0.124	0.038
	Significance (bilateral)	0	0	0	0	0	0.065	0.115	0.524
Gender	Pearson correlation	0.062	0.065	.361*	-0.026	0.103	1	0.126	0.044
	Significance (bilateral)	0.531	0.061	0.130	0.361	0.167	0.154	0.115	0.512
Dominant knowledge sharing	Pearson correlation	0.051	0.053	.351*	-0.024	0.102	0.064	1	0.041
	Significance (bilateral)	0.521	0.051	0.128	0.352	0.154	0.143	0.124	0.512
Hidden knowledge sharing	Pearson correlation	0.061	0.062	.351*	-0.016	0.102	0.074	0.122	1
	Significance (bilateral)	0.521	0.051	0.120	0.341	0.157	0.153	0.116	0.501

Source: the author arranges it by myself

**.In.01 Significant correlation on levels (bilateral).

*.Significant correlation was significant at 0.05 levels (bilateral).

In the corresponding analysis coefficient table, the correlation coefficient of variables in enterprise knowledge sharing and innovation performance is 0.653, and the P value is less than 0.01, showing a positive correlation.

Is facing a system between variables greater than 0.8.There are multiple integration issues. The relevant systems of all the variables are relatively significant, which indicates that there is no multiple collinear problem development among the variables, and that the structure tested is the same as that of foreign scholars.

Therefore, explicit and implicit knowledge sharing play a crucial role in enterprises, while dominance has more influence than recessive. Under the relevant research and analysis, business entrepreneurship and technological innovation have a pivotal impact on the performance of enterprises. And show a strong business innovation and technological innovation, better enterprise performance. However, relatively speaking, technological innovation makes a far more contribution to enterprises than business innovation. In addition, knowledge sharing has a relatively significant role in enterprise innovation, among which explicit and recessive have a consistent impact on business innovation, while technological innovation is greater than recessive.

5. Regression analysis

According to knowledge sharing as independent variable, innovation performance as dependent variable, multi-linear regression backwash, which can be seen according to the influence information obtained from knowledge sharing. The analysis of regression are shown in Table:

Table 8 Model summary table

model	R	R square	Adjust the R party	Error in the standard estimates	Durbin-Watson
1	.437*	.191	.176	.0238529053910	1.652

Caential variable: Innovation performance
Source: the author arranges it by myself

Table 9 Analysis of variance

model		Square and	Df	Equal	F	Sig.
	regression	.043	6	.007	12.720	.000b
1	Residual	.184	323	.001		
	Total	.227	329			

Caential variable: Innovation performance
Source: the author arranges it by myself

For the regression analysis, the coefficients of dominance and recessive sharing were 0.150 and 0.480, respectively, both with positive numbers, indicating that the two relationships were in a positive correlation. See the following table:

Table 10 Regression analysis of knowledge sharing and innovation performance

Self-variable	Non-standardized coefficients		Standard coefficient	t	Sig.	Conlinear statistics	
	B	Standard error	Beta			tolerance	VIF
Hidden	0.150	0.047	0.150	2.768	.005		
knowledge sharing Dominant knowledge sharing	0.480	0.047	0.480	4.465	.001	0.346	2.668

Caential variable: Innovation performance
Source: the author arranges it by myself

In the above regression, B is a non-standard coefficient; F tests the significance of the regression model; tolerances mean tolerance values, and the variance extension coefficient is the reciprocal of the tolerance and indicates collinearity.

The best fit from the model summary table was 0.176. Among them, the autocorrelation test D-w value is 1.652, indicating close to 2 and no autocorrelation phenomenon is produced. Analysis of ANOVA was 12.72.

From the regression coefficient table, the knowledge sharing standardization system is 0.157 and t2.309, P is less than 0.05. In terms of collinearity measurements, both tolerance and VIF values were low (both less than 10), without significant multiple collinearity, indicating good overall model regression.

The stronger the ability of enterprises to share hidden knowledge among organizations, the more significant the performance of technological innovation. Therefore, for high-tech enterprises, we should not only rely on the clear knowledge sharing with other enterprises, but also pay more attention to the informal experience and technical exchange and learning between enterprises. To further improve the innovation performance of enterprises.

In conducting scientific and technological innovation activities, high-tech enterprises must combine their business base and characteristics to improve their knowledge absorption capabilities. In addition, the economic interactions between upstream and downstream enterprises should be increased, and the frequency of knowledge-sharing activities should be increased. In order to conduct cooperation and communication between organizations, based on knowledge sharing, new technologies, new knowledge and new methods are imported, integrating their own characteristics and knowledge absorption capabilities. Build a knowledge system according to the enterprise characteristics and enterprise development.

Conclusions

This paper mainly analyzes the impact of knowledge sharing on the innovation performance of high-tech enterprises. By describing statistics, correlation analysis, and regression analysis, we found that knowledge sharing has significant effects on innovation performance. The research results are as follows:

Code	hypothesis	Validation results
H1	Hidden knowledge sharing has a significant and positive impact on the innovation performance of high-tech enterprises	Established
H2	Significant knowledge sharing has a significant positive impact on the innovation performance of high-tech enterprises	Established

Combined with the above analysis, this paper puts forward some suggestions, including strengthening the incentive for employee knowledge sharing, creating a good knowledge sharing environment, strengthening the management of human resources, etc., to provide a certain reference value for the development of high-tech enterprises.

For enterprises, satisfying internal factors such as personal sense of achievement and altruism can promote knowledge sharing. In order to promote the progress of knowledge activities, they can also deal with the pursuit of personal interest and ability factors through external incentive factors. In addition, enterprise organizations should pay attention to the impact of organizational environmental factors on knowledge sharing, establish a comprehensive organizational cultural atmosphere and mutual trust relationship, actively promote the exchanges and interactions between employees, and fully grasp the knowledge

potential. Improve the level of knowledge active use, produce new knowledge through knowledge conflict, and improve the knowledge level of all the organization.

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