

## RESEARCH ON INNOVATION STRATEGIES OF KNOWLEDGE MANAGEMENT SYSTEM OF COMMERCIAL BANKS BASED ON EMPLOYEE TACIT KNOWLEDGE SHARING

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**ABSTRACT.** *The tacit knowledge of employees is a potentially valuable part of the knowledge resources of commercial banks. How to strengthen the knowledge exchange and sharing of commercial banks will help to improve the knowledge structure of commercial banks and enhance the core competitiveness of commercial banks. Because the tacit knowledge of employees is difficult to describe and personalize, it can only reflect its role and play a key role through practice, which will restrict the knowledge innovation of commercial banks. How to promote employees' tacit knowledge sharing and innovate the knowledge management system of commercial banks has become a hot issue at this stage. This paper expounds the basic situation of employees' tacit knowledge, introduces the role of employees' tacit knowledge sharing, and puts forward the reference strategies for the innovation of knowledge management system of commercial banks, including: first, establish the incentive mechanism of employees' tacit knowledge sharing; second, improve employees' ability to share and exchange tacit knowledge; third, build a platform for employees' tacit knowledge sharing; fourth, create an atmosphere for employees to share tacit knowledge. We hope to strengthen the core competitive advantage of commercial banks.*

**Keywords:** Tacit knowledge of employees, Knowledge management of commercial banks, Knowledge sharing, Institutional innovation

1. **Introduction.** Employees' tacit knowledge is the inherent knowledge that is difficult to standardize, write and code, understand and master, communicate and share, accept and apply among employees. Nonaka Ikujiro, a Japanese management scientist, focuses on the creation of tacit knowledge and explicit knowledge, as well as the interaction between tacit knowledge and explicit knowledge in collective learning. Among them, tacit knowledge is considered to be more important than explicit knowledge, especially in the nonlinear innovation process leading to progressive innovation [1]. The value chain analysis method of American management scientist Michael Porter, as the knowledge chain in the process of organizational knowledge flow, takes the generation of tacit knowledge as the starting point, which is difficult to be directly controlled by the organization, but depends on the learning and accumulation of individual knowledge in the knowledge chain [2]. When studying the relationship between tacit knowledge and education, the British philosopher Michael Polanyi pointed out that individuals can realize their "rational power" only based on this "potential knowledge" in educational activities [3]. He suggested that individuals should not be limited to the learning of explicit knowledge, but should

combine explicit knowledge with tacit knowledge. Therefore, the innovation of knowledge management system in commercial banks is inseparable from the development and sharing of employees' tacit knowledge. Valaei et al. made the following points: knowledge management is improved by the corporate culture, which stimulates knowledge development and generation and makes it easier for employees to share and apply it [4]. It promotes a free-flowing environment of ideas. It is also crucial to a company's ability to effectively manage knowledge. Sytnik thinks that, the innovation of a friendly and optimistic behaviour toward knowledge in terms of performance, involvement, and the institution of a society related to knowledge sharing as well as important interpersonal communication is yet another important component of the organization's culture in performance management [5]. How to manage and use the tacit knowledge resources of employees and maximize the innovation of knowledge management system of commercial banks is the focus of this paper. This paper expounds the basic situation of employees' tacit knowledge, introduces the role of employees' tacit knowledge sharing, and puts forward the reference strategy for the innovation of knowledge management system of commercial banks. The contribution and significance of this study are mainly to build a system model of tacit knowledge sharing among employees of commercial banks. Through this study, we can obtain methods to promote tacit knowledge sharing among employees of commercial banks. To sum up, it is very important to explore the innovation strategy of commercial bank knowledge management system based on employee tacit knowledge sharing.

## 2. Overview of Tacit Knowledge of Employees in Commercial Banks.

**2.1. Connotation of employees' tacit knowledge.** Employees' tacit knowledge means mainly the business skills and research methods hidden in the process of employees' individual thought and behaviour, as well as employees' experience, lessons and value orientation [6]. Employees' tacit knowledge mainly includes business tacit knowledge, R & D tacit knowledge and practical tacit knowledge. Business tacit knowledge mainly includes employees' thinking concepts, business operation methods and business skills. R & D tacit knowledge mainly includes R & D concept, product design method and R & D channel of employees. Practical tacit knowledge mainly includes employees' practical ideas, practical experience and practical insight. Financial products and business development are the basis for the development of commercial banks. R & D is the key task to solve problems, and practice is the link to serve customers. This is not only the knowledge transformation between business, R & D and practice, but also the process of knowledge value transformation of commercial banks.

**2.2. Employees' tacit knowledge category.** First, employees' business knowledge and skills. Employees use unique management methods and skills to make the business execute according to the set requirements, so as to achieve the purpose of profit transformation. According to the actual situation, employees comprehensively use various methods and means to carry out business development activities, which fully reflects their own experience and knowledge, which is a typical employee tacit knowledge.

Second, employees' R & D knowledge and skills. In commercial banks, having good R & D knowledge and skills is an important condition for becoming excellent employees, with the characteristics of tacit knowledge and individual differences. The R & D knowledge and skills gradually formed according to the actual situation of employees belong to tacit knowledge. This knowledge is unique, easy to highlight the personal advantages of employees, and difficult to be mastered and recognized by others.

Third, the practical knowledge and skills of employees. Employees participate in the practical activities of business development, and the knowledge and skills obtained through practical operation also have the characteristics of tacit knowledge. The experiences and lessons they show are the final result of employees' practical knowledge and skills.

**2.3. Characteristics of employees' tacit knowledge.** First, subjectivity. The work of employees in commercial banks has the complexity of mental work and the artistry of interpersonal communication, and its subjectivity is strong. Mental work is an extremely detailed knowledge creation. Its process is difficult to monitor and the result is difficult to measure. If we want to discover and share this tacit knowledge, we must observe and obtain something in combination with practice.

Second, diversity. Commercial bank employees generally have different professional knowledge and skill backgrounds, and their own experience and growth environment are different, resulting in obvious diversity of individual tacit knowledge. Employees' individual tacit knowledge is limited. With the communication between employees, tacit knowledge is constantly generated and integrated, which makes the diversity of tacit knowledge further enhance its value.

Third, universality. The professional knowledge and ability of employees in commercial banks break through the explicit knowledge found, summarized and coded at present, and are more reflected in their personal business experience. Business, R & D and practice are the concentrated areas of tacit knowledge. Due to the high personalization of employees and the constraints of the environment, employees' tacit knowledge presents the characteristics of universality.

**3. The Role of Tacit Knowledge Sharing among Employees in Commercial Banks.** Employee tacit knowledge sharing is the core work of knowledge management system innovation of commercial banks, which has the following four practical functions.

**3.1. Promote employee professional development.** Knowledge innovation is the process of continuous development of knowledge and ability, and tacit knowledge is the basic resource of knowledge innovation [7]. In the process of tacit knowledge sharing, commercial bank employees can obtain new business ideas, R & D methods and practical skills, realize knowledge integration and create new tacit knowledge, so as to achieve the purpose of knowledge innovation. Through tacit knowledge sharing, employees can continuously generate innovative professional knowledge, so as to promote their own professional development and improve the overall business quality. Employees actively share their business experience, solve the problems encountered in the process of business development, make tacit knowledge explicit and promote their professional development.

**3.2. Improve employees' knowledge and ability.** In business development activities, employees' individual knowledge, behaviour and concept will determine the effect of business [8]. The professional knowledge level of employees plays a decisive role in their knowledge ability, and the moral cultivation of employees will also have a subtle impact on their values. This tacit knowledge not only affects employees' business experience, but also affects employees' R & D methods. Therefore, the sharing of tacit knowledge promotes the knowledge exchange among employees, so that employees can gradually enrich and improve themselves. At the same time, it also allows employees to obtain valuable tacit knowledge and internalize it into a healthy psychological model, forming a virtuous circle, so as to improve employees' knowledge ability.

**3.3. Enhance the core competitiveness of commercial banks.** At present, the competition between commercial banks is becoming increasingly fierce. If you want to win in the competition, you must form your own core competitiveness. The core competitiveness of commercial banks is mainly reflected in the tacit knowledge of employees, including knowledge and skills in business, R & D and practice, so as to highlight the business work quality of employees. Through the application of tacit knowledge in business, R & D and practice, commercial banks can form a unique core competitive advantage. By continuously strengthening the management of employees, especially the management of employees'

tacit knowledge, we can avoid the loss of valuable intellectual capital and continuously improve the core competitiveness of commercial banks.

**3.4. Guide the knowledge innovation of commercial banks.** Knowledge innovation in commercial banks can be reflected in the socialization, externalization, combination and internalization of employees' tacit knowledge, realize knowledge transfer among employees and generate new tacit knowledge. Therefore, employee tacit knowledge is the basic resource of knowledge innovation in commercial banks. Through the exchange and sharing of employees' tacit knowledge, constantly create new tacit knowledge, promote employees' professional development and guide commercial banks' knowledge innovation.

**4. Suggestions on the Innovation Strategy of Knowledge Management System of Commercial Banks.** Based on the role of tacit knowledge sharing among employees in commercial banks, this paper puts forward four specific strategic suggestions for the innovation of knowledge management system in commercial banks.

**4.1. Establish employee tacit knowledge sharing incentive mechanism.** In order to establish an incentive mechanism for employees' tacit knowledge sharing, commercial banks must do the following three jobs.

First, establish a perfect incentive mechanism to ensure that employees can obtain corresponding spiritual or material benefits while sharing their own tacit knowledge, so as to enhance the initiative of sharing tacit knowledge among employees. Commercial banks can take spiritual and material incentives to let employees "give their work and then show their ability", so as to find the benefits of communication and cooperation in business, R & D and practice, and encourage employees to actively participate in tacit knowledge sharing.

Second, establish the integrity mechanism of knowledge management in commercial banks, create a harmonious atmosphere for employees' tacit knowledge sharing, and safeguard the basic rights and interests of employees. Employees should establish a "mutually beneficial and win-win" trust relationship to make the exchange and sharing of tacit knowledge harmonious and integrated.

Third, realize the connection between tacit knowledge sharing and employee performance evaluation, establish a reasonable and effective incentive mechanism, promote the sharing and integration of employees' tacit knowledge, and maximize the value of tacit knowledge. Employees will invest a lot of energy and financial resources to develop knowledge and innovative knowledge. If they feel difficult to get the corresponding return when sharing and transforming results, tacit knowledge sharing will be difficult to sustain. For knowledge recipients, if they can timely supplement the experience brought by tacit knowledge, their knowledge stock will gradually expand and their knowledge transformation will be more sufficient.

**4.2. Improve employees' ability to share and exchange tacit knowledge.** Employees' own cognitive structure and communication skills are the premise of tacit knowledge sharing. Therefore, to cultivate employees' tacit knowledge sharing ability, the following three tasks must be done well.

First of all, employees should adhere to purposeful and planned learning to maintain their own knowledge value, realize knowledge innovation, gradually improve their own knowledge structure and create favourable conditions for the dissemination of new knowledge.

Secondly, employees should constantly improve their knowledge management quality, including network operation ability and mastering knowledge management methods and skills.

Third, employees should maintain a modest and friendly attitude in the process of communication, trust, respect and treat each other equally, so as to fully realize the value of tacit knowledge.

Therefore, by carrying out learning and communication activities, commercial banks can cultivate employees' ability to share and exchange tacit knowledge, pay timely attention to employees' ideological trends, and enhance employees' awareness of "diligent exploration, careful experience, careful consideration and understanding", so that they can select communication objects according to their own knowledge structure, interest and thinking mode, forming a "hundred flowers bloom" knowledge exchange atmosphere, so as to promote the innovation of knowledge management system of commercial banks.

**4.3. Build an employee tacit knowledge sharing platform.** Employees' tacit knowledge sharing must be based on perfect platforms and technical means, and commercial banks are required to have complete information technology systems, such as data warehouse, knowledge map, retrieval technology, expert support, and interactive space. Provide strong technical support for the circulation and transformation of knowledge [9]. At the same time, commercial banks should pay attention to the classification and coding of knowledge, through the identification of employees' tacit knowledge, transform it into explicit knowledge that is easy to spread and obtain, and promote the sharing of employees' tacit knowledge. In addition, commercial banks should take a variety of ways to build a professional platform for employee tacit knowledge sharing, such as business experience exchange meeting, R & D work sharing meeting, and practical activity interaction meeting, so as to promote employee tacit knowledge sharing. Therefore, the construction of employee tacit knowledge sharing platform can simplify the communication level of employees and flatten the organizational structure, so as to reduce the cost and difficulty of tacit knowledge sharing and improve the efficiency of knowledge sharing. We can define the main structural components and functions of the commercial bank knowledge management system, including search tools, content and interaction management tools, data storage tools and mining tools, as well as groups and artificial intelligence tools [10]. In this way, the function of the tacit knowledge sharing platform for commercial bank employees can be improved. At present, the platform structure mode has achieved preliminary results in the application of some Internet commercial banks. At the same time, in the mode of knowledge management system strategy, with the help of the application of "intelligent agent" in organizational memory system, including the target role at the level of institutional memory method and the conceptual exploration of the internal framework of intelligent organization, which can be used to identify, retain, deliver and reuse information for future use, the role of "intelligent agent" in information search, retrieval and analysis in the formation of organizational memory, as well as the expansion in the form of nonlinear two-way, these layered roles include acquiring and reapplying important information as part of expanding human-computer cognition [11]. In addition, the method can be implemented by computer, including receiving the user input knowledge information in the user input control, transmitting the user input knowledge information or the derived knowledge information to the query redirection knowledge system, and receiving the search result set from the query redirection knowledge system. The search result set includes one or more query redirection knowledge, and each query redirection knowledge includes a link. This link provides the location of the help content associated with the query redirection knowledge, and displays the link control. After the link control is activated, it redirects to the help content associated with the query redirection knowledge [12]. The development of system science and knowledge science must support each other, combine system thinking with knowledge management, and integrate the informed system method and knowledge construction system method [13], so as to realize the functional

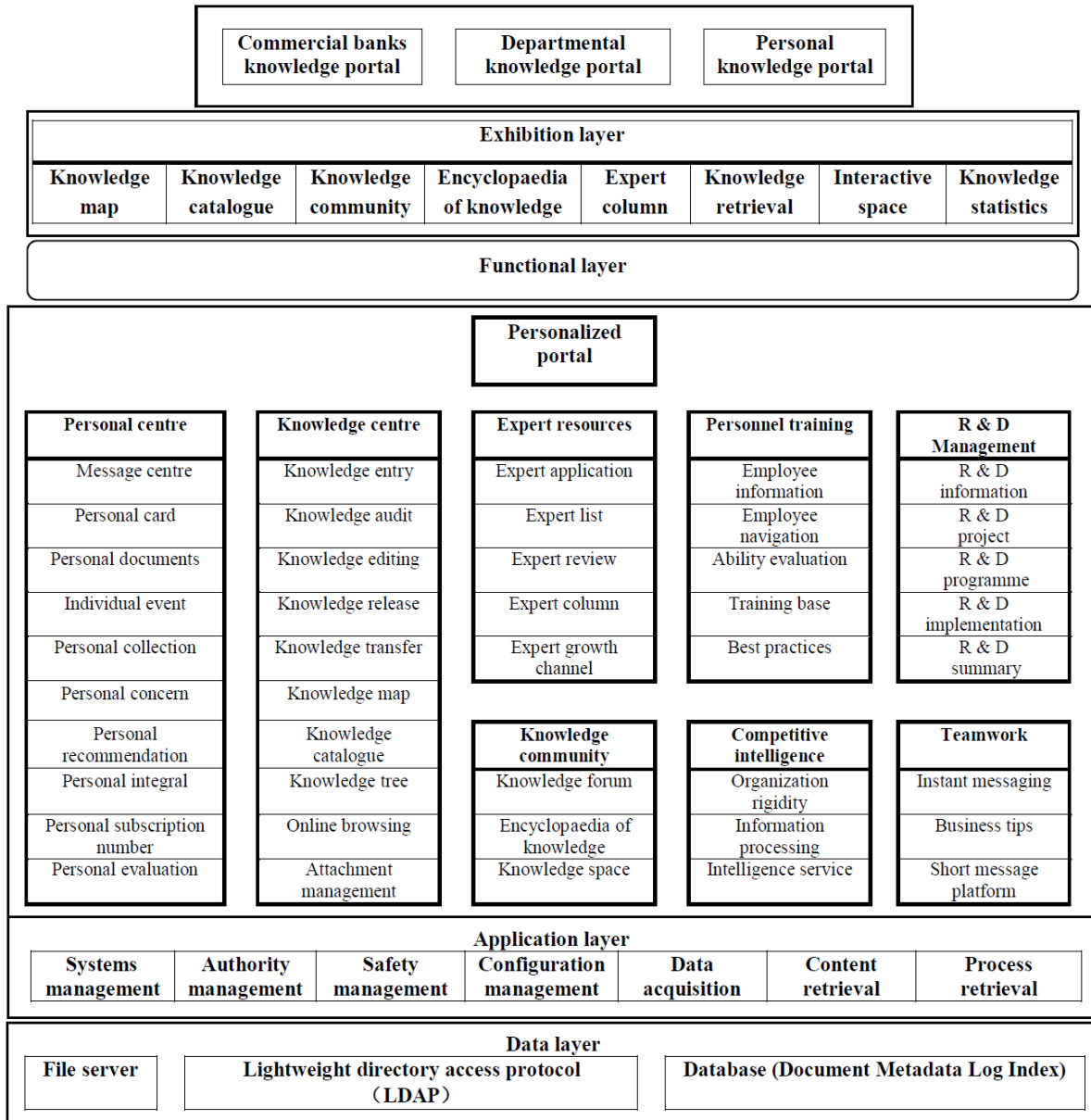


FIGURE 1. Tacit knowledge sharing platform for employees of commercial banks

upgrading of the tacit knowledge sharing platform for commercial bank employees. The structure of employee tacit knowledge sharing platform is shown in Figure 1.

The data layer of the tacit knowledge sharing platform for employees of commercial banks includes database, lightweight directory access protocol, file server, etc. The database mainly manages documents, metadata, logs, indexes and other information. Due to the use of external authorization authentication service, the database does not store organization information [14]. The application layer is the main part of the tacit knowledge sharing platform for employees of commercial banks, including system management, authority management, security management, configuration management, data collection, content retrieval and process retrieval. System management is the core part nested in the application layer and belongs to the basic function of employee tacit knowledge sharing [15].

4.4. **Create an atmosphere for employees to share tacit knowledge.** A good knowledge sharing environment in commercial banks can promote the development of employee relations, help to form a mutual trust mechanism and improve the efficiency

of employee tacit knowledge exchange and sharing. To create an atmosphere of tacit knowledge sharing among employees, the following three tasks must be done well.

Firstly, we should establish an organizational culture of mutual trust, eliminate the traditional hierarchical relationship, create a “free, equal and harmonious” environment through the “people-oriented” cultural atmosphere, and realize the sharing of employees’ tacit knowledge.

Second, cultivate the “team spirit” of employees, communicate and promote each other in a harmonious organizational culture through the role orientation of creative learners and reflective practitioners, and use collective wisdom to solve a series of problems in business, R & D and practical work.

Third, employees should establish the awareness and concept of sharing tacit knowledge, enhance their sense of personal mission and collective honour, and realize the knowledge innovation of commercial banks through full communication and interaction.

Therefore, under the influence of employees’ tacit knowledge sharing atmosphere, it is of great significance to establish a trust mechanism between employees and realize employees’ tacit knowledge sharing.

The way to shape the cultural atmosphere of employees’ tacit knowledge sharing is shown in Figure 2.

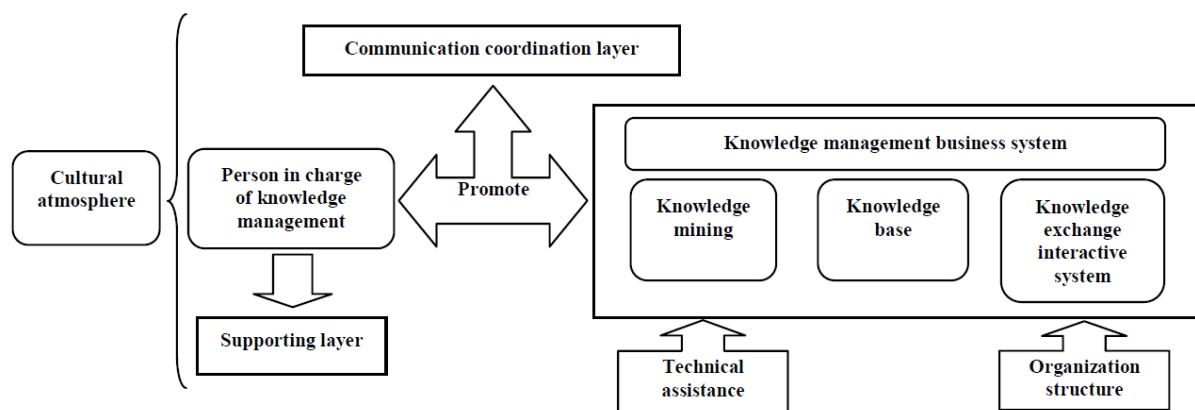


FIGURE 2. Ways of shaping the cultural atmosphere of tacit knowledge sharing among employees in commercial banks

In the process of implementing knowledge management, the person in charge of knowledge management of commercial banks needs to deeply understand that knowledge management is a gradual process of continuous exploration, innovation, summary and implementation. At the same time, all employees should not only fully understand that knowledge is composed of explicit knowledge and tacit knowledge, but also pay attention to knowledge sharing. With the help of shaping the cultural atmosphere of employee tacit knowledge sharing, they can realize the communication between individuals and enhance their knowledge application ability [16]. In addition, the knowledge management system based on sustainable development goals can more effectively realize the sharing and dissemination of internal employees’ tacit knowledge [17].

**5. Conclusion.** To sum up, giving full play to the tacit knowledge sharing mechanism of employees in commercial banks is conducive to the formation of explicit knowledge. It has vital strategic value for improving the professional quality of employees, promoting the development of employees’ business, R & D and practical ability, and enhancing the core competitiveness of commercial banks. Based on the role of employee tacit knowledge sharing, in order to realize the innovation of knowledge management system of commercial banks, this paper summarizes four strategic suggestions, including: first, establish

an incentive mechanism for employee tacit knowledge sharing; second, improve employees' ability to share and exchange tacit knowledge; third, build a platform for employees' tacit knowledge sharing; fourth, create an atmosphere for employees to share tacit knowledge. Therefore, commercial banks must constantly sum up experiences and lessons in the practice of knowledge management, so that employees' tacit knowledge can be deeply exchanged and shared, and better realize the innovation of their own knowledge management system, so as to enhance their core competitiveness. In the follow-up of this study, the research will focus on how to effectively achieve "Green Symbiosis" for the tacit knowledge of employees and the explicit knowledge of organizations in commercial banks.

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