

# Research on the Mechanism of Knowledge Management in Enhancing Enterprise Innovation Capability

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**How to cite this paper:** Li, M. Z. (2025). Research on the Mechanism of Knowledge Management in Enhancing Enterprise Innovation Capability. *Open Journal of Business and Management*, 13, 371-381.  
<https://doi.org/10.4236/ojbm.2025.131021>

**Received:** November 16, 2024

**Accepted:** January 19, 2025

**Published:** January 22, 2025

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## Abstract

In the era of the knowledge economy, innovation has become key for enterprises to maintain competitive advantage. Knowledge management, as a theoretical method for systematically managing enterprise intellectual capital, plays an important role in promoting innovation. This study deeply explores the influence mechanism of knowledge management on enterprise innovation capability. The research analyzes how core processes such as knowledge acquisition, knowledge sharing, knowledge application, and knowledge creation promote enterprise innovation activities. The study proposes that effective knowledge management can theoretically accelerate knowledge flow, promote cross-departmental collaboration, and stimulate employee creativity, thereby improving the efficiency and quality of enterprise innovation. Especially in complex and dynamic market environments, knowledge management theory provides a framework for enterprises to respond quickly to changes and achieve continuous innovation. However, the research also points out that the effect of knowledge management is theoretically influenced by factors such as organizational culture, leadership style, and incentive mechanisms. Based on these analyses, this study proposes strategic suggestions for optimizing knowledge management practices to enhance enterprise innovation capability, providing theoretical guidance for enterprises to formulate effective strategies in knowledge-driven innovation competition.

## Keywords

Knowledge Management, Enterprise Innovation, Organizational Learning, Innovation Capability, Knowledge Sharing

## 1. Introduction

In today's rapidly changing business environment, knowledge has become one of the most valuable strategic resources for enterprises. As the global economy transitions towards a knowledge-based economy, enhancing innovation capability has become a key factor in determining an enterprise's long-term competitive advantage. Knowledge management, as a systematic method for managing an enterprise's knowledge assets, has received widespread attention from both academia and industry in recent years. It not only provides enterprises with an effective approach to utilize knowledge resources but also offers theoretical foundations and practical guidance for promoting enterprise innovation. Knowledge management involves multiple aspects, including knowledge acquisition, sharing, application, and creation, all of which are closely related to an enterprise's innovation activities. Existing research has shown that effective knowledge management can significantly enhance an enterprise's innovation capability (Alavi & Leidner, 2021). While significant progress has been made in understanding the relationship between knowledge management and innovation capability (Foss et al., 2021), several aspects of this relationship still require further investigation. In particular, the impact of emerging technologies on knowledge management practices and their subsequent effects on innovation capability remains an active area of research. Additionally, the relationship between knowledge management and different types of innovation (incremental versus radical) needs deeper exploration.

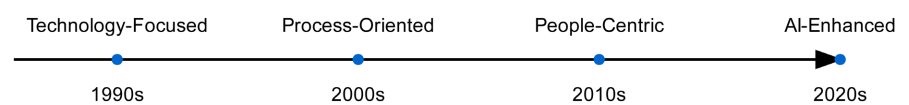
With the rapid development of digital technologies, the methods and tools of knowledge management are constantly evolving, providing new perspectives for studying the relationship between knowledge management and enterprise innovation. This study aims to delve into the mechanisms by which knowledge management enhances enterprise innovation capability, analyzing how various aspects of knowledge management promote the enterprise innovation process, while considering the moderating effects of organizational factors on this relationship. Through research, this paper attempts to provide theoretical guidance and practical suggestions for enterprises on how to optimize knowledge management to enhance innovation capability. In the current increasingly competitive global market, understanding and utilizing knowledge management to drive innovation has become a necessary condition for enterprise survival and development. Therefore, this research not only has theoretical significance but also important practical value, as it can help enterprises better seize opportunities and achieve sustainable development in the knowledge economy era.

The remaining of this study is structured as follows: Section 2 presents the theoretical foundations of knowledge management, including its definition, development, and core processes. Section 3 examines the influence mechanism of knowledge management on enterprise innovation capability. Section 4 discusses the organizational factors affecting the effectiveness of knowledge management. Finally, Section 5 concludes the study with implications and future research directions.

## 2. Theoretical Foundations of Knowledge Management

### 2.1. Definition and Development of Knowledge Management

Knowledge management, as an interdisciplinary research field, has experienced rapid development since the 1990s. It involves multiple disciplines such as organizational behavior, information science, and cognitive science, aiming to systematically identify, acquire, organize, and utilize an enterprise's knowledge assets. Davenport and Prusak (2018) defined knowledge management as “a conscious and systematic method to ensure the full utilization, effective transfer, and innovation of knowledge within an organization.” This definition emphasizes the systematic nature and purposefulness of knowledge management, highlighting the flow and application of knowledge within organizations. As research has deepened, scholars' understanding of knowledge management has continually evolved. Alavi and Leidner (2021) proposed that knowledge management is a dynamic, ongoing process that includes the creation, storage, retrieval, transfer, and application of knowledge. This view emphasizes the procedural nature of knowledge management, highlighting the dynamic flow of knowledge within organizations. In practice, knowledge management has developed from an initially purely technology-oriented approach to a comprehensive management method that combines technology, organization, and people. Enterprises have gradually recognized that successful knowledge management requires not only advanced information technology support but also the establishment of an organizational culture that supports knowledge sharing and innovation. In recent years, with the development of new technologies such as big data and artificial intelligence, knowledge management methods and tools have been continuously innovating, providing more possibilities for enterprises (Chen & Huang, 2019).



Source: Adapted from Chen & Huang (2019) and author's analysis.

**Figure 1.** Evolution of knowledge management concepts.

As shown in Figure 1, the evolution of knowledge management concepts has progressed from technology-oriented to process-oriented, then to people-centric, and finally to AI-enhanced development. This evolution reflects the deepening understanding of knowledge management by enterprises and the continuous impact of technological advancements on knowledge management practices.

### 2.2. Core Processes of Knowledge Management

The core processes of knowledge management include knowledge acquisition, knowledge sharing, knowledge application, and knowledge creation. Knowledge acquisition refers to the process by which organizations obtain new knowledge through internal development or external introduction. This may include

employee training, R&D investment, patent purchases, or collaboration with external institutions. Knowledge sharing focuses on how to promote the flow of knowledge within the organization, enabling knowledge to be effectively disseminated among different departments, teams, and individuals. Effective knowledge sharing can avoid “reinventing the wheel” and improve the overall efficiency of the organization. Knowledge application is the process of transforming acquired and shared knowledge into practical value, which directly relates to the effectiveness of knowledge management. Only applied knowledge can create value for the organization, making the promotion of effective knowledge application a key issue in knowledge management. Knowledge creation refers to the generation of new knowledge based on existing knowledge, which is the source of organizational innovation. The SECI model (Socialization, Externalization, Combination, Internalization) proposed by Nonaka and Takeuchi (1995) describes in detail the process of organizational knowledge creation, providing a theoretical framework for understanding knowledge creation. These four core processes do not exist in isolation but are interconnected and form a dynamic, cyclical process (Alavi & Leidner, 2021). For example, the process of knowledge application may uncover new problems, triggering the need for new knowledge acquisition; knowledge sharing may inspire new ideas, promoting knowledge creation.

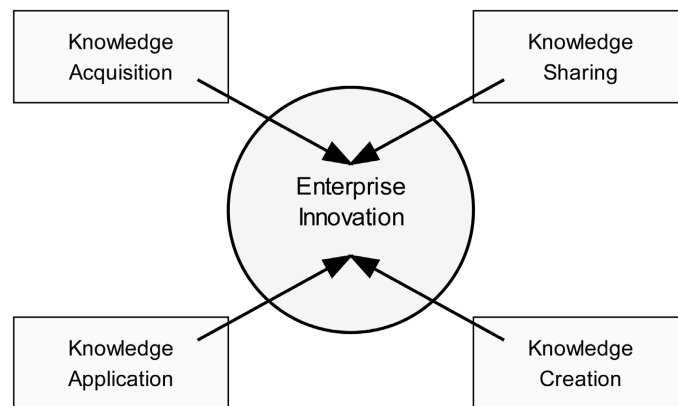
### **2.3. Knowledge Management and Organizational Learning**

Knowledge management and organizational learning are two closely related concepts. Organizational learning emphasizes how organizations acquire knowledge through experience accumulation and reflection to improve adaptability. Knowledge management, on the other hand, focuses on how to systematically manage these learning outcomes so that they can be effectively preserved, disseminated, and applied. It can be said that effective knowledge management provides support for organizational learning, while organizational learning provides continuous content input for knowledge management. The theory of learning organizations proposed by Senge (1990) emphasizes five disciplines: systems thinking, personal mastery, mental models, shared vision, and team learning, which have many commonalities with the concepts of knowledge management. For example, systems thinking emphasizes the holistic and relational nature of knowledge, which corresponds to the emphasis on systematic management of knowledge in knowledge management; team learning directly relates to the processes of knowledge sharing and creation. In practice, many enterprises combine knowledge management with organizational learning, establishing mechanisms to support continuous learning and knowledge innovation (Argote & Miron-Spektor, 2021). For instance, by establishing internal knowledge bases, organizing learning groups, and promoting the sharing of best practices, enterprises both promote organizational learning and strengthen knowledge management.

### 3. The Influence Mechanism of Knowledge Management on Enterprise Innovation Capability

#### 3.1. Theoretical Basis for Knowledge Management Promoting Innovation

The role of knowledge management in promoting enterprise innovation capability has a profound theoretical foundation. The Resource-Based View (RBV) posits that an enterprise's sustained competitive advantage stems from its possession of rare, valuable, inimitable, and non-substitutable resources. In the knowledge economy era, knowledge has become such a critical resource. Effective knowledge management can help enterprises better utilize and develop these knowledge resources, thereby enhancing innovation capability. The Dynamic Capabilities Theory emphasizes that enterprises need to continuously integrate, build, and reconfigure internal and external resources to respond to rapidly changing environments. As a dynamic capability, knowledge management can help enterprises continuously update their knowledge base, respond quickly to market changes, and promote innovation. The Knowledge Creation Theory, with its SECI model (Socialization, Externalization, Combination, Internalization) proposed by Nonaka and Takeuchi (1995), describes in detail the process of organizational knowledge creation, which is essentially an innovation process. By promoting the conversion of tacit knowledge to explicit knowledge, knowledge management directly drives the occurrence of innovation.



Source: Developed based on Alavi & Leidner (2021).

**Figure 2.** Knowledge management processes contributing to innovation.

As shown in Figure 2, the four core processes of knowledge management all directly impact an enterprise's innovation capability. Knowledge acquisition provides the necessary information and intellectual foundation for innovation; knowledge sharing promotes the exchange and collision of innovative ideas; knowledge application transforms innovative ideas into actual products or services; while knowledge creation directly drives the generation of new concepts and methods. These processes interact with each other, jointly promoting the enhancement of enterprise innovation capability.

### **3.2. The Impact of Knowledge Management on Innovation Types**

Knowledge management has different influence mechanisms on different types of innovation. Based on the degree of innovation, innovation can be classified into incremental innovation and radical innovation. Incremental innovation refers to minor improvements to existing products, services, or processes, while radical innovation involves entirely new concepts or technologies. Knowledge management promotes both types of innovation, but in slightly different ways. For incremental innovation, knowledge management mainly achieves its effect through promoting internal knowledge sharing and application within the organization. For example, by establishing a best practices database, enterprises can more effectively promote and apply successful improvement schemes, thereby promoting incremental innovation. For radical innovation, the role of knowledge management is more reflected in knowledge acquisition and knowledge creation. Through collaboration with external institutions and cross-industry knowledge integration, enterprises can acquire entirely new knowledge and perspectives, providing a foundation for radical innovation. Knowledge management can also increase the possibility of radical innovation by promoting the fusion of knowledge from different fields, stimulating innovative thinking.

### **3.3. The Impact of Knowledge Management on the Innovation Process**

Knowledge management has a significant impact on each stage of the innovation process. The innovation process typically includes opportunity identification, idea generation, idea evaluation, innovation implementation, and innovation diffusion. In the opportunity identification stage, effective knowledge management can help enterprises more quickly capture market signals and technology trends, timely identifying innovation opportunities (Darroch, 2015). In the idea generation stage, knowledge management provides fertile ground for the generation of innovative ideas by promoting knowledge sharing and exchange. For example, cross-departmental knowledge sharing may inspire new ideas. In the idea evaluation stage, knowledge management can provide decision support, helping enterprises more accurately assess the feasibility and potential value of innovation projects. In the innovation implementation stage, knowledge management can improve the success rate of innovation projects by providing necessary technical knowledge and management experience. Finally, in the innovation diffusion stage, knowledge management can help enterprises more effectively disseminate and promote innovation outcomes, realizing the value of innovation.

## **4. Organizational Factors Affecting the Effectiveness of Knowledge Management**

### **4.1. The Influence of Organizational Culture**

Organizational culture, as an intangible but powerful force, plays a crucial role in enhancing the effectiveness of knowledge management and the innovation

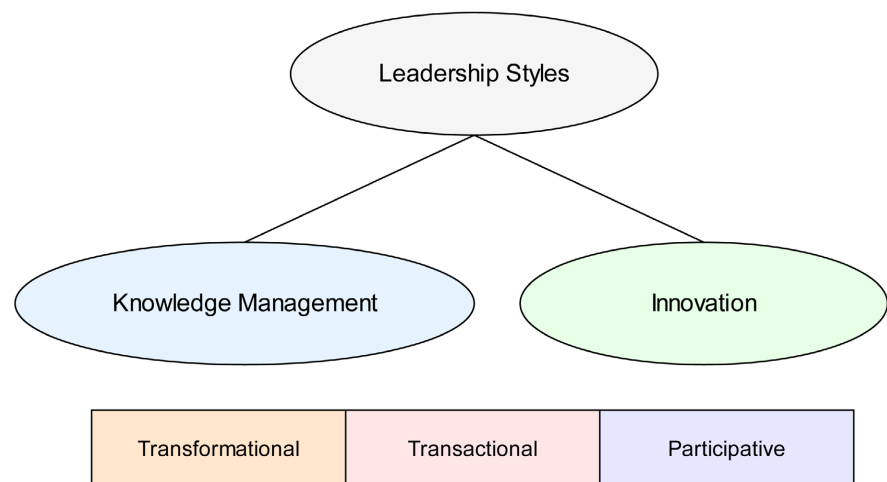
capability of enterprises. A cultural environment that supports knowledge sharing and innovation can significantly improve the effectiveness of knowledge management, thereby promoting innovation. An open, trusting, and collaborative cultural atmosphere can encourage employees to actively share knowledge and participate in innovation activities. This culture is typically characterized by tolerance for new ideas, acceptance of failure, emphasis on learning, and a focus on team cooperation (Donate & Guadamillas, 2021). Conversely, if the organizational culture overly emphasizes hierarchy, information confidentiality, or individualism, it may hinder the flow of knowledge and the generation of innovation. Research shows that an organizational culture with a learning orientation is more conducive to the implementation of knowledge management and the enhancement of innovation capability. This culture encourages continuous learning, experience sharing, and critical thinking, creating a favorable environment for knowledge management and innovation. An innovative culture also directly affects the effectiveness of knowledge management. A culture that encourages risk-taking, tolerates uncertainty, and values creativity can inspire employees' enthusiasm for innovation, promoting knowledge creation and application. However, changing organizational culture is a long-term and complex process that requires firm commitment and continuous effort from leadership. Enterprises can cultivate a culture that supports knowledge management and innovation through methods such as establishing knowledge sharing rewards, organizing innovation competitions, and building cross-departmental collaboration mechanisms. At the same time, enterprises need to be aware of the resistance that cultural change may bring and adopt appropriate change management strategies to ensure that cultural transformation can proceed smoothly and continue to play its role. Overall, shaping an organizational culture that supports knowledge management and innovation can not only improve the effectiveness of knowledge management but also lay a solid foundation for the enterprise's long-term innovation capability and competitive advantage.

#### 4.2. The Role of Leadership Style

Leadership style plays a key role in knowledge management and innovation, with different leadership styles having varying impacts on the implementation and effectiveness of knowledge management. Transformational leadership, through providing vision, inspiring, and offering individualized consideration, can effectively promote knowledge sharing and innovation. This leadership style encourages employees to challenge the status quo and try new ideas, thereby providing impetus for knowledge creation and innovation. Transformational leaders typically create an open and supportive environment, encouraging employees to express their ideas and giving appropriate empowerment, which facilitates the free flow of knowledge and the generation of innovative ideas. Transactional leadership, on the other hand, can provide structured support for knowledge management through clear goals and reward-punishment systems. For example, incorporating knowledge sharing and innovation performance into performance evaluations can motivate



employees to participate more actively in knowledge management activities. Although this method may be effective in the short term, it may not be conducive to cultivating intrinsic motivation and enhancing long-term innovation capability. Participative leadership, by encouraging employee involvement in decision-making, can promote the horizontal flow of knowledge, which is beneficial for the generation and implementation of innovative ideas. This leadership style can create a democratic and collaborative atmosphere, making employees feel valued and trusted, thus more willing to share their knowledge and creativity. Authentic leadership, by demonstrating genuine, transparent, and ethical behavior, can build trust, which is crucial for knowledge sharing and innovation. Research shows that combining the advantages of multiple leadership styles and adopting appropriate leadership approaches based on specific situations can maximize the promotion effect of knowledge management on innovation. Leaders need to be aware of the significant impact of their behavior on the organization's knowledge management and innovation atmosphere, and strive to cultivate leadership abilities that support knowledge sharing and innovation (Birasnav, 2024). This may include improving their own learning abilities, fostering an open and inclusive attitude, and enhancing communication and motivation skills. At the same time, enterprises should also consider the ability to support knowledge management and innovation as an important factor when selecting and cultivating leaders.



Source: Synthesized from Birasnav (2024) and author's analysis.

**Figure 3.** Leadership styles influencing knowledge management and innovation.

As shown in **Figure 3**, different leadership styles influence enterprise innovation through their impact on knowledge management. Transformational, transactional, and participative leadership each have their characteristics and promote knowledge management and innovation activities in different ways.

### 4.3. The Importance of Incentive Mechanisms

Effective incentive mechanisms are crucial for knowledge management and



innovation, as appropriate incentives can promote employees' active participation in knowledge sharing, knowledge creation, and innovation activities. Incentive mechanisms can be divided into external incentives and internal incentives, both of which play important roles in promoting knowledge management and innovation. External incentives include material rewards, promotion opportunities, etc., which can directly stimulate employees' enthusiasm for participating in knowledge management and innovation activities. For example, establishing knowledge contribution awards or innovation awards can encourage employees to actively share knowledge and propose innovative ideas. However, over-reliance on external incentives may lead employees to focus only on short-term results, neglecting long-term knowledge accumulation and innovation capability cultivation. Internal incentives, on the other hand, include work autonomy, sense of achievement, personal growth opportunities, etc., which can promote long-term participation from the perspective of intrinsic motivation. For instance, giving employees more work autonomy and opportunities to participate in challenging projects can enhance their intrinsic motivation and promote the formation of innovative thinking. Research shows that the comprehensive application of external and internal incentives can better promote knowledge management and innovation. Furthermore, the design of incentive mechanisms needs to consider the special nature of knowledge management and innovation. Due to the high-risk nature of innovation, incentive mechanisms should tolerate failure and encourage employees to dare to try. At the same time, incentive mechanisms should also focus on team incentives to promote knowledge sharing and collaborative innovation. For example, establishing team innovation awards can encourage cross-departmental collaboration and knowledge integration. When implementing incentive mechanisms, enterprises need to pay attention to fairness and transparency to ensure that incentive measures can be understood and accepted by employees. Incentive mechanisms should be flexible and able to adjust according to the enterprise's development stage and strategic priorities. Enterprises can also consider introducing non-traditional incentive methods, such as innovation leave or idea incubators, to inspire employees' enthusiasm for innovation. Well-designed incentive mechanisms can not only promote the development of knowledge management and innovation activities but also help enterprises attract and retain innovative talents, laying a foundation for the enterprise's long-term development (Foss et al., 2021).

## 5. Conclusion

This study has deeply explored the mechanisms by which knowledge management enhances enterprise innovation capability, revealing the key role of knowledge management in promoting enterprise innovation. Through analyzing the core processes of knowledge management, including knowledge acquisition, knowledge sharing, knowledge application, and knowledge creation, the research has elucidated how these processes directly impact an enterprise's innovation activities. The study finds that effective knowledge management can not only provide the

necessary knowledge foundation for innovation but also promote the generation, evaluation, and implementation of innovative ideas. Especially in today's rapidly changing business environment, knowledge management provides enterprises with a powerful tool to cope with complexity and uncertainty, enabling them to innovate more quickly and effectively. However, the research also points out that the promotional effect of knowledge management on innovation is influenced by various organizational factors, such as organizational culture, leadership style, and incentive mechanisms. This implies that enterprises need to adopt a systematic approach when implementing knowledge management, while simultaneously focusing on optimizing these organizational factors. Based on these findings, this study proposes several strategic recommendations for enterprises: enterprises should view knowledge management as a strategic resource and closely integrate it with their innovation strategy; enterprises need to establish an organizational culture that supports knowledge sharing and innovation, fostering an open and trusting atmosphere; leaders should adopt appropriate leadership styles to inspire employees' enthusiasm for innovation; enterprises should design comprehensive incentive mechanisms, considering both external and internal incentives, to promote long-term knowledge management and innovation behavior. Future research can further explore the specific applications of knowledge management in different industries and enterprises of different scales, as well as how to optimize knowledge management processes in the context of digital transformation. In the era of the knowledge economy, effective knowledge management has become a key strategy for enterprises to enhance innovation capability and maintain competitive advantage.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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