

Exploring knowledge sharing and absorption: A framework of knowledge creation, transfer, hiding and waste in emerging innovative organizations

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Abstract

Purpose: This study aims to gain an in-depth understanding of knowledge management behaviors in emerging innovative organizations by integrating the two critical dimensions of knowledge sharing and knowledge absorption and dividing them into four quadrants. This study seeks to answer the following question: How do managers promote knowledge sharing and absorption among individuals in emerging innovative organizations?

Design/methodology/approach: This study adopts a systematic literature review method: clarifying the inclusion and exclusion criteria for literature, selecting appropriate databases, preliminary screening of literature samples, in-depth content analysis, and organized analysis results.

Findings: This study found that knowledge transfer between individuals is ideal for promoting knowledge sharing and improving organizational performance. Knowledge can be wasted when the recipient is unable to absorb it.

Research limitations/implications: This study is based on a conceptual framework from selected literature and needs to be supported by broader empirical data. Secondly, the study focuses on knowledge flows in emerging innovative organizations, and future research could expand the scope.

Practical implications: This study provides a research framework on knowledge sharing and absorption, which helps solve knowledge inequality and information isolation problems in emerging innovative organizations. It also offers practical guidance for knowledge workers.

Originality/value: The innovation of this research framework focuses on emerging innovative organizations and considers multiple dimensions, such as knowledge creation, transfer, hiding, and waste, by incorporating it into the two dimensions of knowledge sharing and knowledge absorption and forming four quadrants.

Keywords: Knowledge sharing, Knowledge absorption, Knowledge creation, Knowledge transfer, Knowledge hiding, Knowledge waste

1. Introduction

With the continuous growth of the economy and the vigorous development of technological innovation, enterprises increasingly rely on knowledge sharing (KS) among employees to improve their innovation capabilities and competitiveness. Innovative enterprises in emerging economies play an essential role in economic development. These companies can improve their

competitiveness and innovation capabilities through practical knowledge management practices, adopt the latest technologies and tools, adapt to market changes faster, and become critical players in the global innovation field. At the same time, it can also make full use of the rich knowledge resources to promote economic growth further and contribute to overall economic development.

According to the results of a survey conducted by KPMG among 423 organizations with annual revenues exceeding \$347 million, encompassing CEOs, CFOs, CMOs, and individuals responsible for Knowledge Management (KM), According to Figure 1, the potential benefits that knowledge management can bring are mainly reflected in the following aspects: Respondents were surveyed to gauge their perspectives on the potential impact of Knowledge Management (KM) in attaining specific organizational goals. 79% believed KM could play an "extremely significant" or a "significant" role in improving competitive advantage, 75% in respect of marketing, 72% in the case of improving customer focus, 64% in respect of product innovation, 63% in respect of revenue growth, 63% in respect of profit growth and 57% in respect of employee development. These statistics testify to the participants' perception that KM is integral to realizing various organizational objectives.



Figure **Error! No text of specified style in document.** Potential role of knowledge management

Source: Knowledge Management Research Report 2000

Managers know many potential benefits employees can bring by sharing knowledge. Many companies have invested much time and money in developing knowledge management systems,

including using advanced technologies to promote knowledge collection, storage, and sharing. However, these investments did not bring the expected benefits because the knowledge sharing among individual employees was not fully realized. Startlingly, fortune 500 companies lose at least \$31.5 billion a year by failing to share knowledge, according to International Data Corp. (IDC), a Framingham, Mass.-based market intelligence and advisory firm in the IT and telecommunications industries (Babcock, 2004).

The Globe and Mail surveyed knowledge sharing behavior among approximately 1700 readers in the United States, and survey data showed that 76% of respondents stated that they had previously hidden relevant knowledge or information from colleagues at work (The Globe & Mail, 2006). Peng (2013) found in a survey of 190 Chinese knowledge workers that 46% of respondents had engaged in knowledge-hiding behavior in their work (Peng, 2013).

However, in the face of this demand, employees in emerging innovative organizations face complex knowledge sharing challenges. Although many employees possess a wealth of knowledge and experience, there is often a preference to retain this knowledge. First, the competitive culture of some companies may lead employees to worry that sharing knowledge will harm career prospects. Even if an enterprise establishes a knowledge base, converting personal Knowledge into organizational learning is rare. On the contrary, individuals often need to understand different motivations (Bock et al., 2005). Data reports indicate that although knowledge sharing behavior is crucial to business management, some companies suffer severe financial losses due to a lack of employee sharing.

Although it is known that knowledge sharing behavior plays a crucial role in promoting innovation and improving competitiveness, previous research has yet to comprehensively analyze the factors that encourage or hinder employees' knowledge sharing behavior in emerging innovative organizations, especially from the two dimensions of knowledge sharing (KS) and knowledge absorption (KA) research.

In this study, based on the related characteristics of knowledge sharing and knowledge absorption, a new research framework is introduced, which divides knowledge behavior into four quadrants: knowledge creation (KC), knowledge transfer (KT), knowledge hiding (KH), knowledge waste (KW). An extensive review of the existing literature scrutinizes the definitions and characteristics of these behaviors to gain a more comprehensive understanding. The framework reveals the dynamic nature of knowledge flows and highlights the interrelationship between knowledge sharing and absorption in emerging innovative organizations. Furthermore, it highlights the interconnections between these behaviors and their impact on knowledge management efforts. By acknowledging the intricacies of knowledge behavior, organizations can elevate their performance by fostering an influential culture of knowledge exchange.

Knowledge sharing behavior has always been the focus of scholars' research and is also a research difficulty in knowledge management. Theoretically, there are many reasons why the practical application of knowledge sharing in emerging innovative organizations is not effective. According to relevant data, there are mainly the following aspects:

The first reason is that the object of sharing is knowledge itself. According to the World Organization for Economic Cooperation and Development (OECD, 1996), knowledge can be divided into four types: knowledge of what, principal knowledge of why, skill knowledge, and interpersonal knowledge of who. The first two types, called explicit knowledge, can be directly explained, and conveyed by words and characters. The latter two types of knowledge are called tacit knowledge, which can only be understood and gradually explored through careful observation and experience. Tacit knowledge is difficult to express, spread, understand, and code. Although it is challenging to share tacit knowledge, employees must share it. Because the quantity of tacit knowledge is greater than that of explicit knowledge, and most explicit

knowledge exists through tacit knowledge. On the other hand, tacit knowledge is complex to express but rich in connotation. It includes not only the unique perspective of personal experience but also some valuable experience and hidden rules of the organization.

Secondly, the knowledge owner's personality and experience will affect knowledge sharing. Employees often consciously hide unique knowledge in daily work to increase its indispensability and reduce competition from colleagues. When knowledge owners share their unique knowledge resources, there will be many knowledge owners, leading to a decline in the relative value of knowledge. Knowledge sharing plays a significant role in promoting enterprises' core competitiveness and sustainable development. However, it is very likely to threaten knowledge owners in knowledge sharing. Because of the most primitive self-protection, the knowledge owners are generally unwilling to share their knowledge with others. Thirdly, their characteristics affect the effect of knowledge sharing as the beneficiaries and receivers of knowledge sharing. Many people do not want to admit their ignorance and do not want to take the initiative to learn because of vanity. This vanity restrains people's desire for knowledge, limits the opportunities for knowledge exchange, and increases the cost of acquiring knowledge. Some individuals are unwilling to accept the knowledge of others and are keen on independent creation and research, which may increase the cost of knowledge innovation. In addition, some individuals need help to effectively absorb the knowledge shared by others due to limitations in their knowledge absorption capacity. The individual's absorptive capacity affects the effectiveness of knowledge sharing (Nguyen et al., 2022).

This research framework aims to comprehensively understand the multiple dimensions of knowledge management, comprehensively consider key factors such as knowledge creation, transfer, hiding, and waste, and organically combine the two dimensions of knowledge sharing and knowledge absorption to provide a more comprehensive theoretical perspective. By focusing on emerging innovative organizations, it fills the gap in previous research and deepens the understanding of knowledge sharing behavior, especially how it affects innovation in emerging innovative organizations. A combined systematic literature review and content analysis method is used, aiming to provide researchers with practical tools to promote a deeper understanding of knowledge management.

The primary purpose of this study is to consolidate the concepts of KS and KA. Therefore, the research revolves around the following questions: What are the main characteristics of KC, KT, KH, and KW? What is the relationship between these four concepts? How do managers promote knowledge sharing and absorption among individuals in emerging innovative organizations? In order to answer these questions, this research adopts the positivist paradigm (Hirschheim, 1985). It refers to the method of conceptual review by Webster and Watson (2002) to present the results of a systematic literature review (Webster & Watson, 2002). This study is a conceptual review rather than an author review and follows the guidelines set forth by scholars (Watson, 2015; Wolfswinkel et al., 2013). The research results propose a new conceptual model that systematically clarifies the inherent characteristics of KC, KT, KH, and KW and provides insights into the potential relationships between these concepts. This study uniquely provides a structured model to assess and respond to challenges associated with knowledge management efforts, thereby significantly contributing to academic research and practical knowledge management efforts.

2. Literature Review

In subsections, the relevant literature on critical topics in the field of knowledge management, including KS, KA, KC, KT, KH, and KW, will be explored in depth. A comprehensive literature review of these topics aims to provide a comprehensive understanding of each concept, laying the foundation for building a research framework.

2.1 Knowledge Sharing

Knowledge sharing behavior is a concept widely studied in the academic literature. Knowledge sharing behavior refers to explicit and formal knowledge transfer between individuals through training, documents, videos, and audio. There are many types of knowledge sharing behaviors, including all formal, informal, and spontaneous knowledge-exchange activities, including but not limited to forms of discussion, guidance, coaching, and social interaction. Knowledge owners can share knowledge through face-to-face communication or use digital tools such as social media, Wikipedia, and other online platforms to facilitate sharing and collaboration. Different research backgrounds and subject areas have different understandings and focus on knowledge sharing, so previous research literature has different definitions of knowledge sharing. The following is a definition of knowledge sharing proposed by scholars:

Davenport and Prusak (1998) defined *knowledge* as "a fluid mix of framed experience, values, contextual information, and expert insights that provides a framework for evaluating and incorporating new experiences and information. It originates in and is applied in the minds of knowers" (Davenport et al., 1998). Knowledge sharing behavior involves the distribution and acquisition of knowledge. It is described as the extent to which individuals consciously provide knowledge to other members within the organization, including the proactive behavior of the knowledge owner (Ipe, 2003). Knowledge sharing covers providing or receiving information, expertise, and feedback about a product or planned task (Cummings, 2004).

Furthermore, knowledge sharing is when individuals exchange tacit and explicit knowledge and jointly create new knowledge (Van Den Hooff & Ridder, 2004). In organizations, knowledge sharing forms a culture of social interaction, including exchanging experience, skills, and knowledge among employees (Lin et al., 2009). Although knowledge sharing is a voluntary act by individuals within an organization, it is not required to be explicitly stated in official job descriptions or formal responsibilities (Sedighi et al., 2016). At the same time, knowledge sharing covers sharing task-related ideas, information, suggestions among employees. Its main goal is to achieve positive organizational outcomes, including individual and team creativity (Dong et al., 2017).

Knowledge is the fundamental driver of a company's overall value and plays a significant role in shaping a company's competitive advantage (Martinez-Conesa et al., 2017). As a core component of knowledge management, knowledge sharing reflects employees' willingness to transfer their accumulated or generated knowledge to other organizational members (Muhammed & Zaim, 2020). As an essential critical capability for employees, knowledge sharing (KS) enables employees to use each other's knowledge resources promptly, thereby improving the organization's performance and innovation capabilities (Yoon & Park, 2023). This active knowledge sharing behavior is crucial for employees to contribute to the practical application of knowledge, promote innovation, and ultimately achieve organizational competitive advantage (Jackson et al., 2006).

In knowledge management, knowledge is generally the understanding of the state of things and the law of development, which individuals acquire from practical activities and have been tested for correctness. It can guide people's practical activities and improve the performance of individuals and organizations (Davenport et al., 1998). Knowledge-based economies have the most potential for delivering competitive advantages in knowledge-based activities. Learning how to utilize common knowledge resources effectively is essential. In knowledge-based work, information exchange is critical because if this process is disrupted, the firm may be unable to exploit its most asset knowledge capital.

2.2 Knowledge Absorption

Today's characteristic of many enterprises is the rapidly changing business environment, which means that absorptive capacity is an essential focus of attention for new innovative organizations. In a highly competitive business environment, individual knowledge absorption is integral to knowledge management efforts and crucial to organizational learning and innovation (Cohen & Levinthal, 1990). Knowledge absorption refers to an organization's ability to effectively acquire, absorb, and apply external knowledge. This process helps improve the organization's competitiveness and innovation capabilities. Knowledge absorption is regarded as one of the crucial capabilities for organizations to operate successfully and remain competitive.

Cohen and Levinthal (1990) proposed the "absorptive capacity" concept. They defined it as an organization's recognition of the value of external knowledge and its ability to apply it to work. This concept provides a basic framework for explaining knowledge absorption, emphasizing an organization's critical ability to identify, absorb, and apply external knowledge. An individual's absorptive capacity consists of two key dimensions, namely, potential absorptive capacity (PAC) and realized absorptive capacity (RAC) (Zahra & George, 2002). Potential absorptive capacity represents an organization's ability to identify and evaluate external knowledge, while realized absorptive capacity reflects the extent to which an organization can effectively apply this knowledge (Zahra & George, 2002).

Factors affecting knowledge absorption have been identified in previous literature, including organizational culture (Szulanski, 1996), individuals' prior relevant knowledge (Lane et al., 2006), and interfirm communication networks (Powell et al., 1996). Furthermore, Hu et al. (2019) highlighted that top management support plays a vital role in absorptive capacity at both the individual and organizational levels.

Previous research has also found that knowledge absorption is closely related to organizational performance. Companies with higher absorptive capabilities tend to be more likely to produce innovative results (Cohen & Levinthal, 1990) and gain competitive advantages within the industry (López-Nicolás & Meroño-Cerdán, 2011). The research of Rosenkopf and Nerkar (2001) also found that knowledge absorption is positively related to innovation performance (Rosenkopf & Nerkar, 2001). Organizations in which individuals establish and maintain close working relationships with suppliers or customers can effectively identify and absorb new external knowledge, including technological advances, regulatory changes, and customer needs, thereby improving overall enterprise performance (Braojos et al., 2020). Knowledge absorption, therefore, plays an essential role in organizational performance and innovation.

In today's rapidly evolving business environment, gaining a deep understanding of the antecedents and consequences of knowledge absorption by knowledge recipients is particularly important. This process helps organizations effectively integrate external knowledge into the organization, thereby improving innovation capabilities and performance. Therefore, organizations must focus on knowledge absorption and use by knowledge collectors.

2.3 Knowledge Creation

Knowledge creation transforms individual and collective skills into valuable and actionable explicit or tacit knowledge, a dynamic process supporting organizational innovation and competitive advantage (Nonaka & Takeuchi, 1995). This concept is the core of the corporate knowledge view, emphasizing the vital status of knowledge as a strategic resource. Nonaka's SECI (Socialization et al.) model can serve as a basis for understanding knowledge creation. Among them, socialization refers to sharing knowledge through interpersonal interaction, externalization is the process of knowledge expression, including expressing implicit

knowledge in explicit form, and combination integrates various sources of explicit and implicit knowledge. The final internalization Transformation transforms explicit knowledge into tacit knowledge or one's skills through practical learning (Nonaka & Takeuchi, 1995).

Knowledge creation within an organization is affected by various factors, among which leadership support and a favorable organizational culture are crucial to the creation process (Nonaka & Konno, 1998). Cross-functional teams and open communication among individuals within an organization will also promote knowledge sharing and creation (Cohen & Levinthal, 1990; Nonaka, 1994), while Cohen and Levinthal (1990) propose that individuals' "absorptive capacity" can also affect the organization's ability to create new knowledge from external sources. The research results indicate that when organizations develop convincing, sustainable strategies, knowledge increases, and it is understandable that knowledge creation occurs (Ordieres-Mere et al., 2020).

The process of personal knowledge creation is closely related to organizational innovation and organizational performance. Organizations with good knowledge-creation capabilities are usually more innovative (Nonaka & Toyama, 2003) and can continuously gain competitive advantages (Grant, 1996). In organizational innovation, knowledge creation can lead to fundamental breakthroughs or incremental improvements (Nonaka & Takeuchi, 1995). Knowledge sharing behavior aimed at knowledge creation may benefit more from allowing individual creativity judges (Hendriks, 1999).

In summary, knowledge creation is a dynamic process that transforms individual and collective knowledge into valuable and actionable forms, and Nonaka's SECI model provides a foundation for understanding this phenomenon. Organizational leadership, culture, teamwork, and absorptive capacity are essential in knowledge creation.

2.4 Knowledge Transfer

Globalization provides enterprises with opportunities and challenges in knowledge transfer (KT), which can bring benefits but come with costs and potential risks (Liu et al., 2020). Knowledge transfer is a critical process in organizations, which helps organizational individuals successfully transfer knowledge from one source to another within or across units (Szulanski, 1996). Knowledge transfer impacts organizational performance improvement, innovation, and competitive advantage (Nonaka & Takeuchi, 1995). Knowledge transfer impacts organizational performance improvement, innovation, and competitive advantage. Transfer can also be understood as the process by which an individual, team, or department is influenced by the experience of others (Argote & Ingram, 2000). Knowledge transfer requires organizational members to transfer their knowledge among themselves while acquiring knowledge from others to modify and reuse it (Chen & Hung, 2010).

The attributes of knowledge significantly impact the knowledge transfer process; specifically, tackiness, complexity, and specificity make successful knowledge transfer difficult. The absorptive capacity of the knowledge receiver can be concluded to affect knowledge transfer. Management and organizations have always focused on exploring the factors and mechanisms affecting knowledge transfer (Szulanski et al., 2016). Some scholars have emphasized the vital role of social networks in promoting knowledge transfer (Hansen, 1999; Nahapiet & Ghoshal, 1998). Because social networks provide a platform for individuals within an organization to share and exchange knowledge, at the same time, the structure and composition of social networks will also affect the effectiveness of knowledge transfer. For example, Burt (1992) highlights the critical line of "structural holes" in social networks, arguing that individuals who bridge these holes are more likely to contribute to the flow of knowledge.

The role of cultural factors in knowledge transfer cannot be ignored, and the concept of "knowledge sharing culture" has been widely discussed (Lin, 2007; Wang & Noe, 2010). A

culture that values and encourages knowledge sharing among employees can significantly facilitate knowledge transfer within an organization.

In addition, the role of leadership in promoting knowledge transfer is also significant. Leaders who actively support and promote knowledge sharing initiatives can create an environment conducive to knowledge transfer for organizational individuals (Carmeli & Schaubroeck, 2007).

Previous research has shown that leadership behaviors, particularly transformational leadership, are positively related to increased knowledge sharing behaviors. At the same time, the continuous development of technology and information systems also promotes the transfer of knowledge between individuals and organizations. The emergence of digital platforms and collaboration tools has revolutionized the way knowledge is shared within organizations (Wasko & Faraj, 2005). In the process of evolution, knowledge management systems (KMS) have become crucial for acquiring, storing, and disseminating organizational knowledge (Alavi & Leidner, 2001).

In addition, the concept of absorptive capacity proposed by Cohen and Levinthal (1990) emphasizes the importance of organizations effectively absorbing external knowledge. This knowledge absorptive capacity becomes critical for successfully transferring knowledge from external sources (Cohen & Levinthal, 1990). Undeniably, an organization with high absorptive capacity is more likely to acquire more beneficial knowledge from the external environment (Zahra & George, 2002).

Scholars' research on relative absorptive capacity (1998) has deeply explored how the relative absorptive capacity between cooperative enterprises affects inter-organizational knowledge transfer in strategic alliances (Lane & Lubatkin, 1998).

Generally speaking, knowledge transfer will be affected by various factors, including but not limited to the nature of knowledge, absorptive capacity, corporate culture, organizational mechanisms, leadership, and technological evolution. Understanding these influencing factors and their interactions is critical to achieving innovation and gaining competitiveness through knowledge assets. This study will focus on the impact of absorptive and sharing capacity on knowledge transfer.

2.5 Knowledge Hiding

The academic research on "knowledge hiding" is still very early, so it is necessary to delve into this concept in different backgrounds and relationships with other organizational structures to enhance the theoretical explanation and rationality of this structure (Pereira & Mohiya, 2021). Knowledge hiding can be understood as individuals deliberately hiding valuable knowledge in organizations. Knowledge hiding harms knowledge sharing, organizational learning, and performance and has attracted extensive research attention. Knowledge-hiding behavior manifests in various ways, such as withholding information, avoiding questions, or providing incomplete answers (Connelly et al., 2012). Connelly et al.'s study, shows that knowledge hiding includes three related factors: avoidance of hiding, rationalizing hiding, and pretending to be deaf (Connelly et al., 2012). Knowledge owners may choose to hide their knowledge because of these factors.

Several factors influence knowledge-hiding behavior. The first is the fear of negative consequences after knowledge sharing. Employees may hide knowledge to protect their positions or interests because of job insecurity or loss of competitive advantage, even if this results in a waste of knowledge.

Second, organizational culture also plays a role in encouraging or discouraging knowledge hiding. In a culture that prioritizes personal competition over collaboration, employees may view knowledge as a personal competitive advantage and hide it accordingly. Relevant research

shows that if employees are psychologically disconnected from the organization, unable to integrate into the team, and have experienced unfair treatment by the organization, these will enhance knowledge-hiding behavior (Jahanzeb et al., 2020).

Thirdly, leadership style also affects knowledge hiding (Zhao et al., 2023). There are often relatively few knowledge-hiding incidents in a team of leaders who promote openness and knowledge sharing norms. Managers can provide incentives for knowledge sharing or address employee concerns to reduce knowledge-hiding behavior, such as developing reward systems, creating an atmosphere of trust, and promoting an open culture.

Reducing knowledge-hiding behavior is critical for organizations to improve their knowledge management practices. Understanding the root causes and influencing factors of knowledge hiding can inform strategies to mitigate its negative impacts. Previous research has shown that measures such as building a culture of trust, implementing effective leadership, and creating incentives for knowledge sharing are critical steps for organizations to respond to knowledge hiding, promote knowledge transfer, and create a more enabling environment.

2.6 Knowledge Waste

In a highly competitive business environment, companies face tremendous competitive pressure. Wasting knowledge is costly and very dangerous for the business (Ferenhof et al., 2015). Knowledge waste is a fundamental issue in organizational knowledge management work. In the context of knowledge management, the waste of knowledge is of increasing concern. Nonaka and Takeuchi (1997) define knowledge waste as any failure in the knowledge sharing process. Knowledge waste can be understood as the underuse of existing knowledge or the failure to realize its full potential (Aisenberg Ferenhof et al., 2016). Kutanoglu et al. (2019) proposed that from the perspective of underutilized talent, certain types of knowledge waste highlight the failure to utilize employees' creativity and talents. Knowledge owners share valuable information or professional knowledge, but this shared knowledge needs to be effectively absorbed or applied, resulting in the loss of essential knowledge resources. Ferenhof (2011) found that knowledge reshaping, lack of systematic discipline among employees, underutilization of personnel, dispersion, transfer, and wishful thinking can all cause KW.

Knowledge waste includes many aspects, such as knowledge loss, redundancy, obsolescence, and underutilization. Many factors contribute to knowledge waste, such as communication breakdown, information overload, and lack of absorptive capacity that hinder knowledge transfer (Aisenberg Ferenhof et al., 2016). When knowledge is shared but not absorbed by recipients, it can lead to inefficiencies in organizational learning and decision-making, wasting knowledge resources. Furthermore, according to Gardas et al. (2017), disseminating knowledge among managers and experienced individuals within an organization can positively reduce knowledge waste (Gardas et al., 2017). In other words, these individuals have better skills in sharing knowledge, which can improve the absorptive capacity of knowledge recipients and thus avoid knowledge waste.

One of the significant challenges in dealing with knowledge waste is how to recognize its occurrence. Many instances of knowledge waste are silent, occurring without organizational awareness. Organizations often need help to measure the extent of knowledge waste and its impact on performance. Previous research shows that to avoid knowledge waste, organizations can implement strategies such as improving communication channels, enhancing knowledge absorptive capacity, and promoting a continuous learning culture. Through more interactions among employees, organizational employees can enhance their knowledge in professional fields and demonstrate their talents and experience, thereby reducing the waste of knowledge (Klein et al., 2023). At the same time, using knowledge management systems and technologies

can help capture, organize, and disseminate knowledge more effectively and reduce the risk of waste.

Understanding the causes and influencing factors of knowledge waste is also critical for organizations seeking to optimize knowledge management efforts and improve overall performance. By identifying and reducing instances of knowledge waste, organizations can maximize the value of their knowledge assets and foster a culture of knowledge utilization and innovation.

3. Methods

This study adopted a systematic literature review method and strictly followed the research steps proposed by the researchers (Wolfswinkel et al., 2013). The advantage of this research method is that it ensures that the entire research process is systematic and comprehensive, the research findings are reliable, and it can contribute to knowledge sharing and related fields. The specific steps to be taken are as follows:

Step 1 - Define inclusion/exclusion criteria: This study clearly defined the inclusion and exclusion criteria for the literature. This study established the following inclusion criteria:

1. The publication period of the articles was from 2014 to November 2023, which was used as the cut-off date for data collection.
2. The research field is business economics.
3. The paper type is the article.
4. The article must be written in English.

Accordingly, this study excluded the following types of articles:

1. Papers published in languages other than English
2. Papers not belonging to the field of business economics

The required articles are selected through non-probabilistic and intentional screening in the Web of Science database. This article is mainly a qualitative and exploratory study.

Step 2 - Literature search: The relevant literature selected in this article mainly comes from Web of Science. The database is widely considered reliable and covers a variety of research areas. Therefore, in step 2, this research further screened the articles for which the search terms "knowledge sharing" or "knowledge absorption" appeared in the title, resulting in 1611 papers. As shown in Figure 2, these papers cover the time range from 2013 to 2023 and are distributed in the Web of Science database.

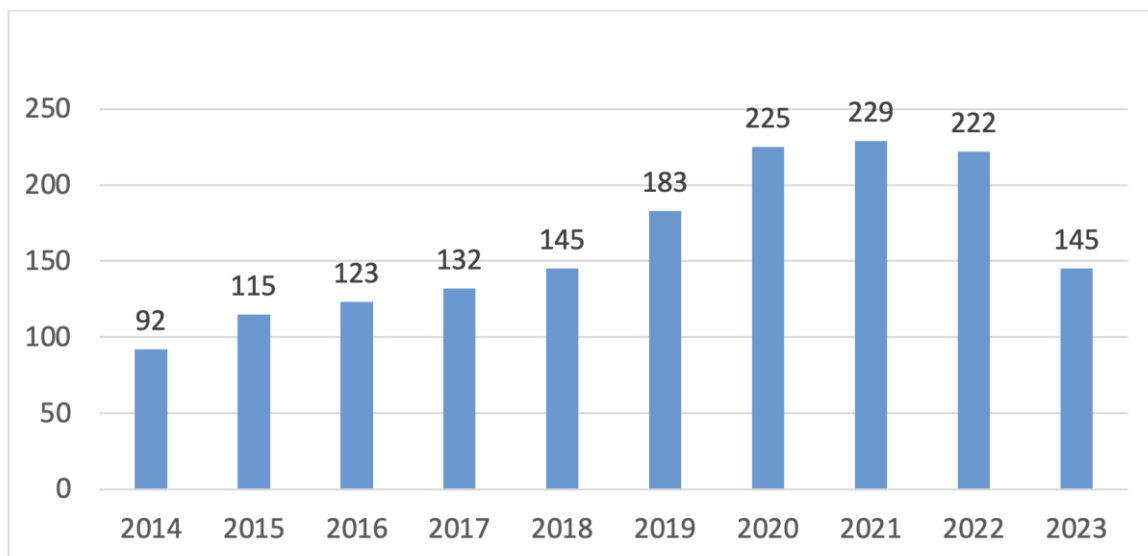


Figure 2 Articles published by year

Step 3 - Sample improvement: This study excluded some articles by referring to correlations and prepared for the following analysis step. This study conducts a preliminary screening of the literature search results to exclude duplicate literature and literature with low citations that do not meet the inclusion criteria. Finally, 51 papers with relatively high influence were retained. This step helps narrow down the study sample and ensures the quality of the selected literature.

Step 4 - In-depth analysis of literature: This study uses content analysis techniques and analyzes the selected literature according to the method of Gibbs (2009). This study extracted the definitions and characteristics of the KC, KT, KH, and KW concepts from the literature. It sorted out their relevance from the two dimensions of KS and KA. This step provides a deeper understanding of relevant concepts in the research area. This process aimed to aggregate each author's definition of KS and KA, revealing any distinctive features, qualities, or attributes, regardless of their consistency or contradiction. Identify relevant features in text fragments, introduce related concepts, and ultimately form abstract or general concepts about the research phenomenon.

Step 5 - Content Representation and Organization: The final goal of the above steps is to reorganize the data extracted from the literature, including definitions and characteristics. Each text fragment is analyzed to obtain conceptually defined terms for the phenomenon, and the phenomenon is expressed at a higher level of abstraction by regrouping into similar or equivalent categories. This study conceptually organizes the extracted data by integrating attributes to ensure consistency. When constructing a new research framework, these extracted data can be used to understand better KS and KA behaviors.

This study could systematically acquire, analyze, and organize relevant literature and identify research consensus and controversial points on related concepts by taking these steps. This process provides a solid theoretical foundation for this article's research, allowing for a more comprehensive exploration of an essential topic in knowledge management. This method helps build a theoretical framework but also helps to guide actual investigation and analysis, ensuring that the research is more targeted and scientific. The findings of the review are detailed in the next section.

4. Findings

The framework of this study aims to provide a structured perspective for understanding knowledge sharing and knowledge behaviors in emerging innovative organizations. This framework combs through the existing important English literature on KC, KT, KH, and KW to find out the characteristics and similarities of each behavior. The literature review findings indicate that KT and KW are related to KS, while KC and KH are related to KA. Four quadrants were derived by exploring the complex relationship between KS and KA, each representing different knowledge behaviors scenario, as shown in Figure 3. These scenarios reveal the dynamic flow of knowledge in emerging innovative organizations, emphasize the critical role of knowledge sharing and absorption in the knowledge flow process, and provide practical operational guidance for managers. Based on these scenarios, managers can better plan the flow of knowledge within the organization, improve sharing effects, and break down information silos between departments. Thus, it provides practical strategic direction for emerging innovative organizations to achieve sustainable competitive advantage.

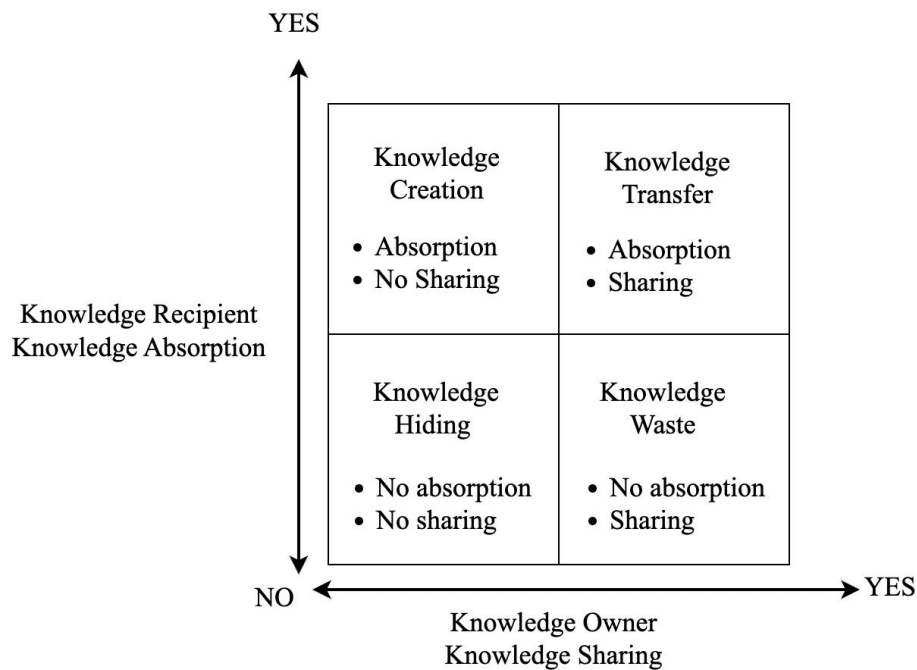


Figure 3 Framework of knowledge creation, transfer, hiding and waste

The results of this study highlight the complexity and importance of knowledge sharing and absorptive behaviors within emerging innovative organizations. Here are some key findings: In-depth exploration of the relationship between KS and KA: This study emphasizes the close relationship between KS and KA. Quadrant B represents KT. When knowledge is successfully shared and effectively absorbed, it will promote knowledge flow and knowledge transfer among organizational members. Such behavior has a positive impact on the organization and individuals. Emerging innovative organizations should actively promote the flow and utilization of knowledge to improve organizational performance and gain competitive advantage.

1. Knowledge creation is important: Knowledge creation (Quadrant A) can occur in different ways, and individuals in an organization may also absorb new knowledge even if it is not shared. In organizations, employees should be encouraged to develop new ideas and merge understanding from different areas.

2. Achieving knowledge transfer is an ideal state: Knowledge transfer (Quadrant B) is the successful sharing and absorption of knowledge, which is an ideal state to promote the flow of knowledge. Knowledge owners actively share knowledge, and knowledge absorbers can and are willing to absorb and fully apply this knowledge. This behavior helps emerging innovative organizations utilize their internal resources and knowledge assets to improve performance and innovation capabilities.

3. Negative impact of knowledge hiding: Quadrant C represents KH behavior, which may harm the flow of knowledge among organizational members. KH may lead to organizational information isolation and resource waste, hindering the full utilization of knowledge. In emerging innovative organizations, individuals' hiding knowledge may harm organizational performance. Therefore, managers should reduce personal KH behavior in knowledge management work.

4. KW is a potential trap: Quadrant D represents KW behavior. If the knowledge owner shares the knowledge, but the recipient does not properly absorb and use the shared knowledge, KW

may occur. This result shows that the effectiveness of knowledge sharing depends not only on the behavior of the sharer but also on the absorptive capacity and motivation of the recipient. Organizations, therefore, need to ensure that knowledge is not only shared but also that this shared knowledge is fully absorbed and applied.

5. Discussion and Conclusion

As shown in Figure 3, the framework of this study aims to provide a structured perspective for understanding knowledge sharing and knowledge-absorption behaviors among individuals in the context of emerging innovative organizations. This framework combines the vital literature of KC, KT, KH, and KW and introduces the concepts of "knowledge sharing" and "knowledge absorption." Finally, it is divided into four quadrants, representing different scenarios emphasizing the complex relationship between KS and KA. These scenarios reveal the dynamic flow of knowledge within emerging innovative organizations and the commonalities and differences between these knowledge behaviors.

Quadrant A: Knowledge creation (No sharing and absorption)

Quadrant A highlights a unique scenario in which the knowledge owner does not actively share the knowledge, but the recipient obtains new knowledge resources. This quadrant represents knowledge creation, meaning that knowledge can emerge despite the absence of an explicit act of knowledge sharing. This quadrant shows that knowledge can be generated differently, not just through knowledge sharing. In this case, individuals or teams that absorb knowledge may realize the value of knowledge to themselves and take active actions to explore and absorb relevant information, thereby generating new knowledge. Knowledge creation behavior promotes innovation within emerging innovative organizations.

Quadrant B: Knowledge transfer (Sharing and absorption)

The situation in Quadrant B represents the ideal state of knowledge sharing and absorption, in which the recipient successfully absorbs the knowledge shared by the knowledge owner and achieves effective knowledge transfer. Knowledge sharing and absorption form a seamless process in this state, maximizing knowledge's effective absorption and utilization. At the same time, good communication and cooperation are established between the knowledge sharer and the recipient so that knowledge can be transferred and accepted smoothly. This behavior contributes to the inheritance and accumulation of knowledge and improves the performance and competitiveness of emerging innovative organizations.

In knowledge transfer behavior, the sharer and the recipient can benefit from the knowledge sharing process. Sharers feel satisfied that their knowledge has been disseminated and contributed while contributing to the added value of the organization's knowledge assets. The recipients gain valuable knowledge, improve their abilities and performance, and positively impact the organization. Therefore, the ideal state represented by Quadrant B emphasizes the interdependence and complementarity of knowledge sharing and absorption. The flow of knowledge in this state contributes to individual growth and organizational innovation and provides a solid foundation for the long-term competitiveness of emerging innovative organizations.

Quadrant C: Knowledge hiding (no sharing and no absorption)

Quadrant C represents a very challenging scenario with neither KS nor KA. This situation reflects the existence of knowledge hiding, where an individual or team, for various reasons, chooses to hide knowledge and impede its flow within the organization deliberately. *Knowledge hiding* is a bad behavior that hinders the sharing of knowledge. It may originate

from factors such as monopoly on knowledge, competition, cultural differences, or internal politics of the organization. In Quadrant C, knowledge sharing is intentionally inhibited, causing knowledge recipients to fail to collect the required knowledge, thus negatively affecting the development of emerging innovative organizations.

Knowledge hiding hinders the free flow of knowledge and can lead to information isolation and an atmosphere of distrust within the organization. In this situation, employees may become frustrated because they cannot access the knowledge, they need to complete tasks or solve problems. This wastes existing knowledge resources within the organization, hindering innovation and reducing organizational performance.

Quadrant D: Knowledge waste (Sharing and no absorption)

Quadrant D depicts a challenging knowledge management situation in which knowledge is shared but not absorbed by the recipient, resulting in knowledge waste. Knowledge waste reflects the potential inefficiency of knowledge sharing behavior and hinders the effectiveness of the knowledge sharing process. Although individuals in an organization are willing to share their knowledge, knowledge recipients need help absorbing and applying knowledge, resulting in knowledge being unable to be successfully transferred and achieving the expected sharing goals.

The above discussion shows that knowledge sharing is not a single process, but a complex behavior containing multiple dimensions. By dividing knowledge sharing into different quadrants, organizations can more accurately identify issues and challenges that may arise during the flow of knowledge. For example, for knowledge sharing in Quadrant B, organizations can focus on providing support and opportunities to promote successful knowledge transfer. Regarding knowledge hiding in Quadrant C, organizations can take steps to build a more open and trusting culture and reduce the intentional hiding of knowledge. For knowledge waste in Quadrant D, organizations can improve the knowledge transfer and absorption process to ensure that knowledge can be effectively used.

Second, by emphasizing the interactive relationship between KS and KA, the framework of this study provides a more comprehensive perspective. Knowledge sharing and absorption should not be viewed as isolated actions but as interrelated. Effective knowledge sharing facilitates knowledge absorption, promoting the cyclical knowledge sharing process. Therefore, emerging innovative organizations can better utilize knowledge by improving cooperation between these two processes.

In summary, the framework of this study provides a comprehensive perspective for understanding KS and KA in emerging innovative organizations, highlighting the similarities and differences between knowledge sharing, transfer, hiding, and waste. By understanding the subtle differences in these scenarios, organizations can better develop management strategies that encourage effective knowledge sharing and improve knowledge absorption capabilities, ultimately enhancing organizational performance and competitiveness.

6. Theoretical Implications

This research has important theoretical significance in the field of knowledge management. First, this study comprehensively considers key dimensions such as knowledge creation, transfer, concealment, and waste, and divides them into four quadrants based on two dimensions: KS and KA. This research framework provides a more comprehensive and comprehensive perspective for theoretical research. In previous studies, these dimensions were often studied independently. However, this research framework organically combines each dimension, helping scholars pay more in-depth attention to their interactions and helping emerging innovative organizations better manage and fully Leverage knowledge resources.

Secondly, in-depth research on the knowledge sharing behavior of individuals in emerging innovative organizations can fill the gaps in previous research and enable scholars to understand better how knowledge is spread within organizations and its impact on innovation. At the same time, the research also highlights the connection between knowledge sharing and absorption, introduces the concept of knowledge absorption, and considers the entire knowledge flow process more comprehensively, making the research framework more comprehensive.

Finally, this study uses a method that combines literature review and content analysis to provide researchers with a powerful tool better to understand related concepts and relationships in knowledge management. This method was not only successfully used in this study but can also be promoted and applied in other research fields, helping to improve the depth and breadth of research. By integrating literature review and content analysis, researchers can gain a more comprehensive understanding of the current status and trends in the research field and provide deeper insights for future research.

7. Practical and Social Implications

This article profoundly explores the theoretical framework of knowledge sharing and absorption based on emerging innovative organizations. After sorting out the relevant definitions and characteristics of KC, KT, KH, and KW, the results of this study have some practical and social significance for managers of emerging innovative organizations and academic researchers.

Firstly, from a practical perspective, knowledge management has always been a core issue in organizational management. A clear research framework will help more organizational managers better understand the complex relationship between knowledge sharing and absorption and provide more systematic and comprehensive guidance for understanding and managing knowledge flows. In particular, emphasizing the importance of the absorptive capacity of knowledge recipients can help organizations engage in knowledge sharing behaviors more effectively, thereby improving performance and innovation.

Secondly, from the perspective of social impact, knowledge management not only affects individual emerging innovative organizations but also has a significant impact on the entire socioeconomic system. The framework of this article contributes to a better understanding of the diffusion and application of knowledge in society. By in-depth exploration of knowledge sharing and absorption mechanisms, knowledge dissemination can be better promoted, and the pace of social innovation can be accelerated.

In addition, the content of this study also has practical guiding significance for knowledge workers and organizational decision-makers. Knowledge workers can better understand how to share knowledge with other organizational members so that recipients can absorb the knowledge and achieve the intended purpose. Organizational decision-makers can formulate knowledge management strategies based on the research framework of this article, better manage and stimulate knowledge sharing behavior among organizational individuals, and improve organizational innovation and competitiveness.

Finally, from the perspective of long-term social impact, this research framework contributes to building a more inclusive and collaborative knowledge-based society. By deeply understanding the characteristics of knowledge sharing and absorption, this research can guide solving the problems of knowledge inequality and information isolation and promote the popularization and sharing of knowledge in society.

8. Limitations and Suggestions for Future Research

First, although this article's literature review and conceptual framework provide a basic framework for understanding KS and KA, it mainly relies on compiling existing literature and needs more extensive empirical data support. In order to further verify and expand the applicability of this framework, future research can adopt more empirical research methods. These methods can include surveys, interviews, case studies, and field observations better to understand organizational members' knowledge sharing and absorptive behaviors. In addition, cross-cultural research can also be conducted to understand better the similarities and differences in knowledge sharing and absorption in different cultural backgrounds and provide more accurate knowledge management recommendations.

Secondly, the research framework of this article is based on the two dimensions of knowledge sharing and absorption behavior, dividing knowledge behavior into four quadrants. However, the actual behavior of knowledge sharing and absorption among individuals in organizations is more complex and diverse. Future research can explore and identify other types of knowledge behaviors to improve the theoretical framework of knowledge sharing. For example, different knowledge content can use different sharing strategies to research explicit and tacit knowledge segmentation. Furthermore, as the field of knowledge management continues to evolve, emerging technologies and digital tools may accompany new knowledge behaviors that can be further studied and explored.

Finally, this article focuses on the flow of knowledge among members within emerging innovative organizations without an in-depth study of the relationship between knowledge and the external environment. Future research could consider expanding the scope of the study to examine knowledge exchange and influence among members within the organization and its external environment. Future research includes, but is not limited to, knowledge sharing and collaboration with suppliers, customers, partners, and other organizational members within the industry. Understanding the impact of these external environments on organizational members' knowledge sharing and absorptive behavior will help develop more comprehensive knowledge management strategies.

Acknowledgement

I would like to sincerely thank many people and organizations for their great help in writing this research article.

First of all, I would like to thank my supervisor, Dr. Shankar Chelliah. You have given me valuable advice and guidance on my research direction, so that I can be more clear about the goal and accurately grasp the problem in my research. Your guidance is key to completing this research.

Thanks also to my family, your continued support has allowed me to focus on research. Your understanding and encouragement have always been my motivation. I would like to thank all my classmates and friends who have given me help and support during my research. Your sharing and discussion have provided me with rich ideas and inspiration for my research.

Finally, I would like to thank all relevant institutions and individuals who provided data, resources, and assistance for this research. Without your support, this research would not be possible.

Thank you again for all the people and things that have appeared in my academic career. Your efforts and support made this article possible.

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