

Data sharing Ba: A unified digital framework for tacit knowledge management in SMEs

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Abstract

This study addresses knowledge management (KM) gaps in small and medium-sized enterprises (SMEs), specifically the lack of systematic approaches to managing tacit knowledge and preventing knowledge loss when employees depart. While SMEs typically operate with informal, human-centric KM practices due to their flat structures and close social ties, these approaches limit their ability to utilize knowledge for innovation. Building upon Nonaka's Socialization, Externalization, Combination, and Internalization (SECI) model, this research proposes a reconceptualization through a novel "Data Sharing Ba" framework that integrates digital capabilities with organizational culture. Unlike conventional implementations that maintain separate spaces (Ba) for each knowledge conversion mode, this unified model creates a centralized digital ecosystem where tacit and explicit knowledge continuously interact. The framework prioritizes tacit knowledge as the primary driver of value creation while incorporating anonymization mechanisms to foster trust and encourage sharing. By transforming how SMEs capture, store, and convert knowledge artifacts, the model bridges theoretical and practical gaps in KM implementation. The research contributes theoretically by expanding the SECI model to accommodate contemporary digital contexts while preserving the contextual integrity of knowledge exchanges. Practically, it offers SMEs an adaptable solution that aligns with their flexible structures yet provides systematic knowledge retention. Though empirical validation remains necessary, this framework represents a step toward enabling SMEs to harness their collective intelligence for sustained innovation and competitive advantage in increasingly digital business environments.

Keywords: Knowledge management, systematic approach, small and medium-sized enterprises, Socialization, Externalization, Combination, and Internalization (SECI) model, data sharing Ba.

Introduction

Knowledge Management (KM) practices in Small and Medium-sized Enterprises (SMEs) focus on the operational level, are informal, deal more with tacit KM than explicit KM, and are more about human-to-human interactions than about KM systems (Cardoni et al., 2020; Escobar-Castillo & Velandia-Pacheco, 2024). SMEs commonly have less pressure to codify their knowledge extensively because important knowledge is disseminated and reused within the organization by a small number of employees with close social ties (Ferraris et al., 2020). SMEs are also hesitant to

invest heavily in sophisticated KM systems because the data and information generated and used by SMEs can generally be managed using basic Information Technology (IT) systems (Kianto et al., 2018). However, managing knowledge unsystematically may cause organizations to be unable to improve their performance; furthermore, relying on tacit knowledge that is rarely shared may cause enterprises to lose knowledge when personnel leave (Firdaus & Amin, 2025). Thus, SMEs face two gaps: a system for managing knowledge and sharing tacit knowledge. Consequently, they cannot take advantage of all the benefits of KM, especially knowledge creation as a factor in innovation. Moreover, SMEs face distinct KM constraints - limited resources, informal processes, and reliance on interpersonal knowledge sharing - that differentiate them from large enterprises. Within this context, the success of an SME is closely linked to how effectively it manages and utilizes its knowledge assets (Durst et al., 2023; Perez-Sanchez et al., 2003; Urîtu et al., 2017). Therefore, there is a need to offer a model adaptable to SMEs' structures for overcoming these issues. SMEs have a simple, flatter, and less complex structure, which will facilitate a change initiative across the organization (Salgado et al., 2022). SMEs have simple systems due to the small scale and low complexity of their operations (Ramaswamy, 2019; Ryabota et al., 2019). Their systems are people-dominated, with low formalization and standardization (Bishop, 2018; Wadzwanya, 2017). Also, their processes are often flexible and adaptable, allowing them to make changes faster and more easily implement new initiatives (Koçyiğit & Akkaya, 2020; Rauch et al., 2020). SMEs' systems cause employees to be reluctant to capture and store their knowledge formally; additionally, knowledge sharing and creation programs may be conducted haphazardly (Jeong et al., 2018). Knowledge within SME deteriorates when employees, as knowledge storage devices, leave the SME and take their know-how (tacit), experience, and insights with them (Adesina & Ocholla, 2024). Thus, SMEs may achieve better performance in the longer-term with a systematic approach to using and sharing tacit knowledge. One of the most highly cited models for sharing tacit knowledge is the Nonaka and Takeuchi (1995) model, known as Socialization, Externalization, Combination, and Internalization (SECI). The SECI model is a systemic model based on the dynamic process of knowledge creation through the separation between explicit and tacit knowledge as well as converting tacit and explicit knowledge into each other (López-Meza et al., 2024; Žatuchin, 2024). Although this model emphasizes knowledge sharing, Bratianu and Bejinaru (2019) suggested that knowledge sharing does not create new knowledge in SECI; it can only change the knowledge distribution within an organization to make the existing knowledge accessible to a larger number of employees. Despite being rooted in Japanese culture, the SECI model demonstrates a strong capacity for cultural integration that makes it applicable across diverse organizational contexts. Its principles of knowledge creation and sharing resonate with various cultural practices. This characteristic enables SMEs in different regions to effectively adapt and implement this framework. Accordingly, this study addresses the following research question: How can SMEs systematically share and retain tacit knowledge through a digitally enabled adaptation of the SECI model? Hence, this study, by examining how SMEs can share their knowledge effectively, aims to propose a modification of the SECI model.

Literature Review

Navigating Tacit Knowledge in SMEs: The Role of SECI Model and Organizational Culture in Knowledge Management Systems

Inspired by the SECI model, knowledge conversion follows four stages: Socialization - Originating Ba - during which shared face-to-face experiences and emotions transfer collective tacit knowledge to individuals; Externalization - Dialoguing Ba - where peers use dialogue and metaphors to turn personal tacit knowledge into explicit ideas; Combination - Systemizing Ba - through which individual explicit knowledge is synthesized into collective explicit knowledge using virtual, IT-mediated systems; and Internalization - Exercising Ba - by means of virtual practice and individual application, collective explicit knowledge is absorbed and becomes collective tacit understanding (Kaur, 2015; Nonaka & Konno, 1998). Buunk et al. (2019) and Shrafat (2018) probed how the adoption of KM systems by SMEs advances further understanding and outcomes. Their study found that KM capabilities, knowledge sharing, organizational learning, and IT capability have a positive influence on the adoption of KM system (KMS) among Jordanian SMEs. However, these SMEs are not willing to share knowledge using a KM system because their culture is not an influencing factor in this situation. Nevertheless, the effectiveness of these processes often hinges on the organizational culture. When culture is open and supportive, it encourages individuals to share their tacit knowledge freely, thereby enriching the collective intelligence of the organization (Kucharska & Bedford, 2024).

When knowledge is shared, organizational memory may be enhanced through both tacit and explicit knowledge accumulation. While tacit knowledge sharing enriches contextual understanding, explicit knowledge alone can also contribute to organizational memory (Obrenovic et al., 2015; Versiani et al., 2024). This is true provided that tacit knowledge is also shared more, after all, the SECI model commences with collective tacit knowledge. Gourlay (2006) and Kucharska and Erickson (2023) discussed that if tacit knowledge is the source of new knowledge, it is not clear that knowledge conversion has to begin with socialization; new tacit knowledge can be generated by internalization in the individual. Moreover, Jarrahi et al. (2023) and Sanzogni et al. (2017) studied artificial intelligence and KM with particular emphasis on the role of tacit knowledge and stated that the benefit of enabling the circulation of collective and individual tacit knowledge is unclear. This circulation in the SECI model, figure 1, is embarked on by the originating Ba that is a place where individuals share feelings, emotions, experiences, and mental models. Physical face-to-face experiences are the key to converting collective tacit knowledge into individual tacit knowledge. Originating Ba is necessary during the socialization phase (Krippendorff, 2019). In the following step, dialoguing Ba, externalization is defined by collective peer-to-peer and face-to-face interaction with conceptual knowledge, product concepts, and design. Individuals' mental models and skills are shared, converted into common terms, and articulated as concepts. The individual can profit from the creativity-producing synthesis of rationality and intuition. Metaphor, metonymy, and synecdoche are used when converting tacit knowledge to explicit knowledge (Huhtelin & Nenonen, 2021). The next two steps, systemizing Ba and exercising Ba, are defined by virtual interaction: the former by collective and the latter by an individual. Information technology, such as online networks, groupware, documentation, and databanks, offers a virtual collaborative environment for the creation of systemizing Ba. Exercising Ba mainly offers a context for internalization (Lievre & Tang, 2015).

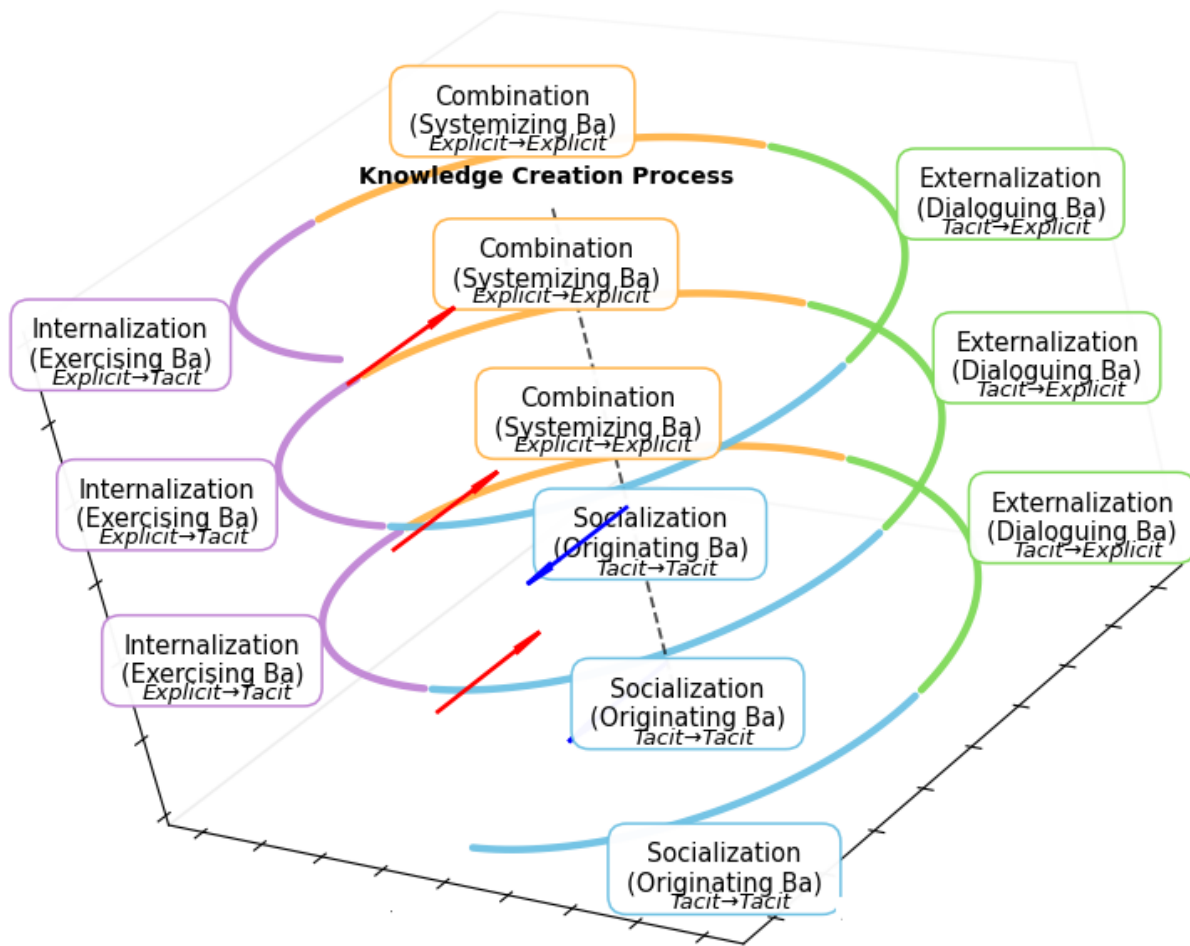


Figure 1. SECI Model.

Note. Created by the authors, inspired by Nonaka and Takeuchi (1995)

Sujatha and Krishnaveni (2018) examined knowledge-creating Ba as a determinant of work performance of employees in manufacturing firms, stated that knowledge creation is a continual process and effective management and creation of new knowledge is an integral part of any organization and resulted that of the four 'Ba's, dialoguing Ba showed significant impact on work performance, thus, illustrating that most of the new knowledge created is mainly through dialogues and interaction among employees.

Buunk et al. (2019) and Sinclair et al. (2010) surveyed tacit knowledge sharing in online environments and located Ba and demonstrated that since social media tools enable person-to-person interactions, face-to-face interactions may not be necessary. This led to the conclusion that the conversion of tacit knowledge between individuals can occur within a virtual context. Buunk et al. (2019) concluded that digital platforms play a strong role in the facilitation of tacit knowledge sharing, and this leads to outcomes of learning, expertise sharing, problem-solving, and innovation. Also, these platforms are important to the initiation of discussions among experts, the fostering of collective intelligence, and making tacit and personal knowledge visible and accessible quickly,

with minimal effort. These insights highlight the necessity for exploring research gaps and identifying effective strategies. This process aims to enable SMEs to utilize KM more efficiently. It ultimately leads to the formulation of a systematic method tailored for managing tacit knowledge within their operational frameworks.

Bridging the Knowledge Gap: A Systematic Approach to Managing Tacit Knowledge in SMEs Using the SECI Model

This section uses a literature-based gap-spotting technique to identify unresolved issues and justify the study's purpose (Cesari et al., 2024; Olanrewaju et al., 2022). The following gaps helped the development of a systematic knowledge approach for SMEs. Finding a systematic method for managing tacit knowledge in SMEs is the main purpose of this research. It is set out by the classical model, SECI, which utilizes four levels for sharing more tacit knowledge and converting tacit and explicit knowledge into each other (Nonaka & Konno, 1998). The study accepts the systematic approach of the spiral model that allows SMEs to accept the complex procedures and pave the way for them to grow. However, prior studies on Ba and SECI have largely emphasized knowledge creation and sharing rather than the systematic storage of tacit knowledge artifacts (Farnese et al., 2019; Nonaka et al., 2000). Knowledge artifacts are inscribed resources - whether physical or digital - that are collaboratively created and maintained to support knowledge-oriented social processes within communities of practice (Cabitza et al., 2013). This research contributes by proposing a Data Sharing Ba that operationalizes tacit knowledge conversion into a sustainable organizational reservoir. In this way, this study not only aids SMEs in taking advantage of all KM benefits, but also, due to the main goal of the SECI model, that is to create knowledge (Bandera et al., 2017), it will cause innovation for SMEs resulting from the new Ba platform. Moreover, the successful implementation of this novel Ba in SMEs is contingent not only on its structure but also significantly influenced by the environmental culture of the organization.

Research Methodology

This study employs a conceptual methodology to develop a framework. In this regard, it synthesizes existing theories instead of collecting primary data. It clarifies concepts, proposes relationships, and advances understanding of a topic. This paper contributes to scholarly dialogue by offering new perspectives, guiding future research, and refining theoretical foundations within a field.

Conceptual Framework

Ba can be thought of as a shared space for emerging relationships. This space can be physical (e.g., office, dispersed business space), virtual (e.g., e-mail, teleconference), mental (e.g., shared experiences, ideas, ideals), or any combination thereof (Attard et al., 2022). What differentiates Ba from ordinary human interaction is the concept of knowledge creation. Ba provides a platform for advancing individual and/or collective knowledge (Hu et al., 2023). It is from such a platform that a transcendental perspective integrates all information needed. Ba may also be thought of as the recognition of the self in all (Nonaka & Konno, 1998). Räsänen (2010) examined organizational knowledge creation and utilization using a new generation of IT tools and emphasized that by using technologies like profiles, data importing and exporting, sharing, editing,

and inviting, to name a few, users gradually start to create the content and user base for the service in question. Moreover, the new content for sharing knowledge can be text, video, pictures, or any other format, and one key factor in all this is the perceived ease of use of the service. Users need intuitive, powerful tools to manage, share, analyze, and track information, ideas, arguments, and the connections between them (Okada et al., 2008, 2015). Handzic (2006) studied KM in SMEs, addressing two issues: a) why managers of SMEs need to know about KM in their organizations, and b) how they can conduct it. Handzic (2017) stated that it is important in designing the appropriate KM system to determine if the critical knowledge is tightly connected to the skills of people and deeply rooted in their years of experience, or it is just kept in instructions, procedures, documents, and databases. Otherwise, it is not possible to create the right “Ba”. This study concluded that KM needs to be integrated into the strategic management of the organization. Rustemi (2011) researched organizational learning and knowledge creation processes in SMEs, mentioning that knowledge creation is a process that consists of the knowledge assets derived from the SECI-process, highlighted that in an enterprise that applies the maximum extent of the knowledge creation process, all the types of Ba can be found. In an enterprise where the knowledge creation process is found to a great extent, there can be found three to four types of Ba. If an enterprise can identify only two types of Ba, the knowledge creation process is found to a medium extent, and if there exists only one type of Ba, the knowledge creation process is found to a low extent. However, the study concluded that a common pattern for Ba could not be identified, due to limited SME knowledge about the concepts. Philip (2018) mentioned that concepts like Ba and SECI do not have established scales in literature, and operationalization of concepts like Cyber Ba would involve capturing the underlying phenomenon while also giving ample consideration to the advancements in technology since the period these concepts were originally fathomed; emphasized that an important next step for future studies is to collect qualitative (descriptive) or quantitative (numerical) data from organizations.

Conceptual Development

This research proposes Data Sharing Ba, Figure 2, which redefines Nonaka’s concept of Ba into a unified, digitally enabled space for knowledge creation and exchange. Instead of maintaining a separate Ba for each SECI stage, this model centralizes all knowledge interactions within a single “data sharing Ba.” It functions as a secure, intelligent data center where digital content - derived from individual, group, and organizational activities - is collected, anonymized, and analyzed systematically. This environment enables continuous knowledge flow by transforming tacit insights into structured digital data while preserving their contextual meaning. Contributors can share information confidently, knowing that their data remains anonymous and protected. The model simplifies knowledge capture by emphasizing natural data sharing over rigid documentation, making participation more intuitive and inclusive. By integrating digital analytics, contextual semantics, and user-centered design, the Data Sharing Ba bridges theoretical and practical gaps in SME KM. It facilitates the SECI spiral within a unified digital ecosystem, strengthening trust and accessibility while enabling dynamic conversion between tacit and explicit knowledge.

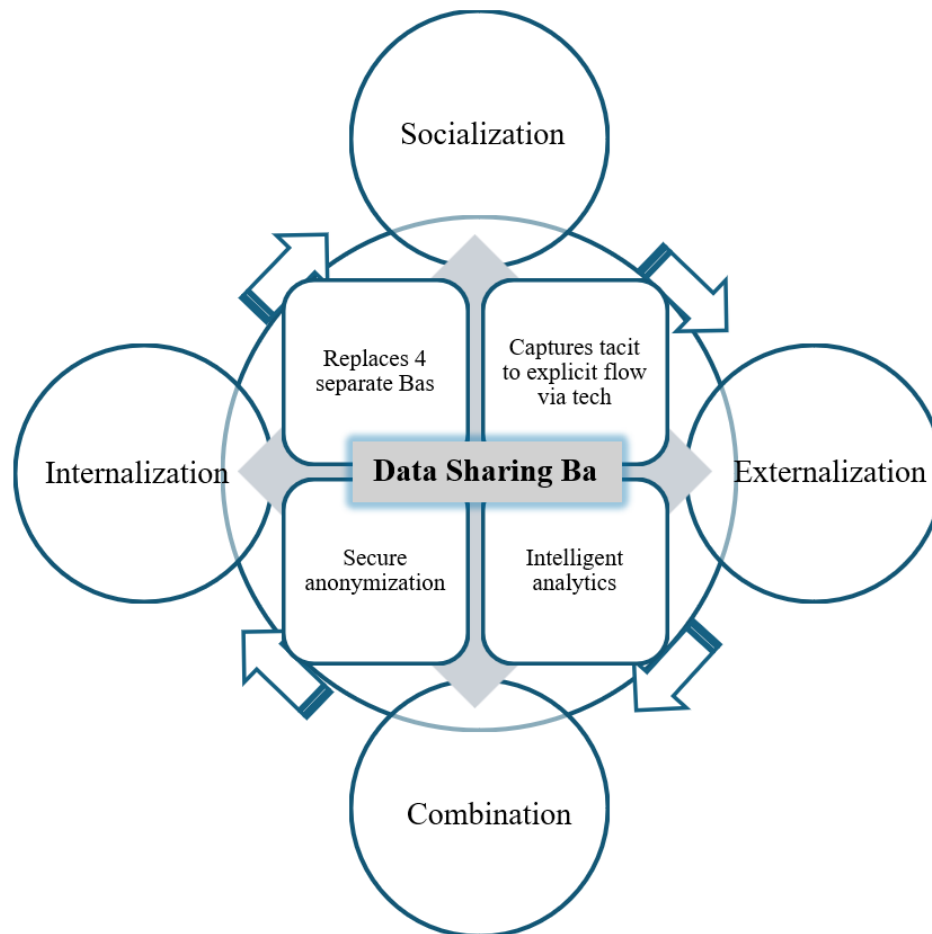


Figure 2. Data Sharing Ba
Note. Created by the authors

Unlike conventional KM systems that prioritize codified, document-centric knowledge, the proposed model focuses on tacit knowledge as the origin of value creation and structures the database around its conversion artifacts. It reconceptualizes the systemizing Ba not merely as a passive repository but as an active “data sharing Ba” that maintains contextual integrity and relational semantics of tacit insights. This approach directly addresses the cultural and technological gaps identified in SME KM adoption (Kianto et al., 2018; Rustemi, 2011) by embedding intuitive, dialogue-derived knowledge captured into the system’s core design. Furthermore, it responds to Philip’s (2018) call for operationalizing Ba in digital contexts by offering a concrete, implementable architecture that bridges SECI theory with modern database and user experience principles - thereby advancing both theoretical understanding and practical applicability in SME KM.

Building on the theoretical proposal of a unified Data Sharing Ba, Ford-Right Co., Ltd. provides a practical case study, Table 1, where IT-enabled virtual Ba operationalize the full SECI spiral, demonstrating the model's implementable architecture.

Table 1. Implementing the SECI Model through IT-Enabled Virtual Ba: A Case Study of Ford-Right Co., Ltd. (Hsiao, 2017).

SECI Mode	Knowledge Conversion	IT Tools Used	Virtual Ba Type	Example in Ford-Right
Socialization	Tacit → Tacit	Video conferencing, online chat	Virtual originating Ba	Cross-functional teams and customers share feelings, experiences, and product preferences in real-time virtual meetings.
Externalization	Tacit → Explicit	Web discussion forums, annotation apps	Virtual dialoguing Ba	Customer perceptions (e.g., satisfaction gaps) are articulated via questionnaires and transformed into explicit reports and forum discussions.
Combination	Explicit → Explicit	Issue Management (IM) system	Virtual systemizing Ba	Data on nonconformities and internal customer dissatisfaction are aggregated, analyzed, and turned into corrective action reports.
Internalization	Explicit → Tacit	Audio/video streaming, web conferencing	Virtual exercising Ba	Suppliers attend virtual training sessions to internalize documented technical know-how and process improvements.

Table 1 illustrates how Ford-Right applies to the SECI model in a virtual environment, using IT tools and virtual Ba types to facilitate knowledge conversion. It shows how employees and partners share, articulate, combine, and internalize knowledge through digital interactions, enhancing collaboration, learning, and continuous improvement across processes.

Theoretical Arguments and Propositions

Proposition 1: Centralized Knowledge Ecosystem

PR1: *The Data Sharing Ba model serves as a centralized ecosystem for KM, integrating all Bas into a unified platform.*

This proposition argues that consolidating tacit and explicit knowledge interactions within a single, shared digital space improves the efficiency of knowledge flows and cultivates a more substantive collaborative environment. The updated GenAI SECI formulation shows how "digital fragmented knowledge" - discrete, context-bearing knowledge fragments - can be managed in a unified cyberspace to support all four SECI processes without forcing full codification, preserving contextual relationships through a Digital Knowledge Twin architecture (Uchihira, 2026). Likewise, sociomaterial analyses of metaverse-enabled workplaces indicate that embodied, relational, and practice-based interactions between users and technological affordances sustain socialization, externalization, combination, and internalization in the same integrated environment, thereby strengthening context-sensitive collaboration and performative knowledge work (Albishri et al., 2026). Empirical work from digital education further shows that real-time content sharing and example-based learning within unified course platforms accelerates tacit-to-explicit transformation and produces replicable patterns for optimizing knowledge transformation across SECI stages, supporting the claim that integrated digital systems enhance both the speed

and fidelity of knowledge flows (Žatuchin, 2024). Collectively, these frameworks and findings deepen understanding of how unified digital systems sustain coherent, context-sensitive knowledge processes while improving the efficiency and substantive quality of collaborative knowledge creation.

Proposition 2: Anonymization and Trust in Knowledge Sharing

PR2: *The integration of anonymization mechanisms within the Data Sharing Ba promotes trust among contributors, facilitating open knowledge exchange.*

This proposition argues that guaranteeing contributor anonymity is essential for promoting participation and the disclosure of sensitive insights; research shows that privacy protections directly shape users' disclosure choices, with perceived ability to conceal encouraging more candid sharing (Shulman et al., 2024). By applying anonymization methods that remove identifying information while retaining semantic and contextual integrity, the model mitigates privacy concerns that otherwise suppress disclosure and preserves the utility of contributions (Patsakis & Lykousas, 2023). That combination - reduced perceived risk plus robust anonymization - raises willingness to contribute to online knowledge communities and supports richer collective knowledge creation, helping sustain contributors' long-term participation and retention of shared insights (Jiaxuan et al., 2025; Shulman et al., 2024).

Proposition 3: Tacit Knowledge as a Value Driver

PR3: *The Data Sharing Ba framework reconceptualizes tacit knowledge as the primary driver of value creation in KM, prioritizing its conversion artifacts over document-centric approaches.*

This proposition emphasizes the critical role of tacit knowledge in driving innovation and organizational progression and argues that designing information systems around the artifacts produced when tacit knowledge is externalized - prototypes, narratives, practice-derived heuristics, and similar outputs - makes hidden know-how reusable and strategically actionable. Empirical studies of SMEs show that practice-based mechanisms (training, brainstorming, dialogue) routinely externalize tacit insights into artifacts that are then stored and reused via electronic files and Information and Communication Technology (ICT) systems (Adesina & Ocholla, 2024). Framing knowledge-management and information systems to capture and structure these conversion artifacts using techniques from Artificial Intelligence (AI) and Natural Language Processing (NLP) to mine documents, reports, and narratives enables accessibility, reuse, and improved decision-making (Zaoui Seghroucheni et al., 2025). Making previously implicit know-how accessible in this way supports routine application, organizational learning, and enhanced innovation capability, consistent with findings that tacit-knowledge sharing and surfaced artifacts directly bolster SMEs' innovation performance and sustained competitive advantage (Mohd Nor et al., 2024).

Discussion

Theory Implications

The proposed concept of the Data Sharing Ba enhances the theoretical framework surrounding KM by integrating Nonaka's original Ba framework with contemporary digital practices.

Subsequent extensions of Ba, including virtual and Cyber Ba, demonstrate how digital environments can sustain knowledge creation beyond physical spaces (Attard et al., 2022). These studies provide empirical grounding for the feasibility of digitally enabled Ba, which informs the proposed model. By consolidating all Ba into a single, unified space, this model challenges existing assumptions about knowledge creation, emphasizing the fluidity and interconnectivity of tacit and explicit knowledge (Kucharska & Erickson, 2023; Zatuchin, 2024). For example, while empirical evidence from Jakobsen et al. (2024) demonstrated that systematically connecting diverse inputs and external inspiration to specific ideas increases radical innovation outcomes, this study validates the need to move beyond informal, isolated knowledge practices to a unified “Data Sharing Ba” framework that actively facilitates continuous interaction between tacit insights and explicit data artifacts. It highlights the significance of contextual integrity and relational semantics in knowledge sharing, thereby expanding existing theories to account for the digital transformation of KM (Albishri et al., 2026; Jarrahi et al., 2023). Additionally, by focusing on intuitive participation rather than rigid documentation, this model aligns closely with evolving theories in user-centered design and social cognition (Hu et al., 2023; Jiaxuan et al., 2025), offering a comprehensive theoretical foundation that bridges gaps between traditional KM theories and current technological advancements (Uchihira, 2026; Zaoui Seghroucheni et al., 2025).

Practical Implications

In practical terms, the Data Sharing Ba model offers a transformative approach for SMEs striving to enhance their KM practices (Durst et al., 2023; Escobar-Castillo & Velandia-Pacheco, 2024). By providing a secure, intelligent data center for digital content, it simplifies the process of knowledge capture and sharing, allowing employees to contribute insights without the burden of formal documentation. While the model assumes a willingness to share knowledge, knowledge hiding and distrust may persist even in interpersonal settings (Kucharska & Bedford, 2024). This model addresses these challenges by incorporating anonymization and minimal attribution to mitigate social and power-related barriers to sharing (Jiaxuan et al., 2025; Shulman et al., 2024). This model promotes a culture of collaboration and continuous learning, which can significantly enhance organizational efficiency and innovation (Adesina & Ocholla, 2024; Mohd Nor et al., 2024). Moreover, its emphasis on anonymity and data protection not only boosts participation but also fosters trust among users, making it easier for organizations to harness tacit knowledge effectively (Kucharska & Erickson, 2023; Patsakis & Lykousas, 2023). As such, implementing this model could lead to improved decision-making processes and better strategic alignment within SMEs, ultimately enhancing their competitive advantage in a rapidly evolving digital landscape (Albishri et al., 2026; Uchihira, 2026). Inspired by Jakobsen et al. (2024), who show that integrating artificial intelligence into idea-management systems increases the innovation potential of developed ideas, the Data Sharing Ba model can similarly incorporate AI tools to enhance knowledge discovery, refine contributions, and support innovation teams.

Limitations

This research presents a comprehensive exploration of the concept of Ba and its application in KM within SMEs. However, a notable limitation is the lack of empirical validation for the proposed “Data Sharing Ba” model. While the theoretical framework draws on existing literature and addresses the technological advancements in KM, it does not provide specific case studies or

examples to illustrate its practical implementation or effectiveness. This absence of real-world data makes it challenging to assess the model's viability and may weaken the argument for its necessity in enhancing knowledge creation and exchange. Additionally, the complexity of the concepts discussed may hinder broader understanding and adoption among practitioners who require more accessible insights and actionable guidelines.

Future Research

While this study establishes a theoretical foundation for the Data Sharing Ba framework, empirical validation is essential to assess its practical viability and effectiveness in real-world SME contexts. Future research should prioritize mixed methods approaches, including longitudinal case studies across diverse industries and geographic regions, to examine how the unified digital ecosystem performs under varying organizational cultures and resource constraints. Quantitative surveys measuring knowledge retention rates, innovation output, and employee participation before and after implementation would provide measurable indicators of the model's impact. Qualitative interviews could uncover nuanced insights into how anonymization mechanisms influence trust and disclosure behaviors among contributors. Moreover, given the rapid advancement of artificial intelligence, particularly generative AI and natural language processing, subsequent studies should investigate how AI-powered tools can enhance the automated capture, anonymization, and contextual analysis of tacit knowledge artifacts within the Data Sharing Ba. Research could explore the integration of AI-driven semantic analysis to preserve contextual integrity while protecting contributor identity, as well as machine learning algorithms that identify patterns in knowledge conversion across SECI stages. Comparative studies between traditional KM systems and the proposed unified framework would clarify relative advantages in knowledge retention and innovation capability. Additionally, experimental designs testing different levels of anonymization and attribution could determine optimal balances between privacy protection and accountability. Such empirical work would not only validate the three propositions advanced in this study but also refine them, ultimately contributing to more robust, scalable solutions for tacit knowledge management in the evolving digital economy.

Conclusion

In conclusion, this research has conceptualized a novel "Data Sharing Ba" database model designed to systematically manage tacit knowledge within SMEs (Adesina & Ocholla, 2024; Escobar-Castillo & Velandia-Pacheco, 2024), thereby addressing the critical gaps of unsystematic knowledge practices and the limited sharing of tacit knowledge that often leads to significant organizational knowledge loss (Durst et al., 2023; Firdaus & Amin, 2025). By redefining Nonaka's SECI model (Nonaka & Konno, 1998; Nonaka et al., 2000) into a unified, digitally enabled platform, the proposed model consolidates all stages of knowledge creation into a single, secure ecosystem that prioritizes the capture, anonymization, and contextual conversion of tacit insights (Albishri et al., 2026; Uchihira, 2026; Zaoui Seghroucheni et al., 2025), fostering a culture of trust and continuous collaboration (Kucharska & Bedford, 2024; Shulman et al., 2024). This model makes a significant theoretical contribution by integrating tacit-knowledge-focused practices with a systematic database design and extending the SECI framework to specify how tacit knowledge can be dynamically managed to fuel innovation (López-Meza et al., 2024; Zátuchin, 2024). Each

proposition is intended as a theory-driven statement grounded in KM, trust, and digital platform literature (Attard et al., 2022; Jiaxuan et al., 2025), specifying necessary conditions under which a unified Data Sharing Ba may enhance tacit knowledge management in SMEs (Mohd Nor et al., 2024). While the theoretical foundations are robust, the model's practical efficacy awaits future empirical validation through implementation in SME contexts (Salgado et al., 2022; Versiani et al., 2024), which would further refine its application and solidify its role in enhancing knowledge creation, retention, and competitive advantage for SMEs (Kucharska & Erickson, 2023).

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