

## Paradox of knowledge sharing and hiding in driving innovation capability: The intermediary of human capital within the resource-based view

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### Abstract

**Purpose:** This study investigates the knowledge paradox by examining the influence of knowledge sharing and knowledge hiding on innovation capability, with a specific focus on the mediating role of human capital through the lens of the Resource-Based View (RBV). It aims to resolve why knowledge hiding often yields inconsistent results in direct innovation tests.

**Design/methodology/approach:** A quantitative methodology approach was employed through the distribution of questionnaires to a saturated sample of 109 government service employees from the Special Region of Yogyakarta, Indonesia, and SmartPLS 4.1.1.4 was used as the testing tool.

**Findings:** The results reveal a significant dual mechanism. Knowledge sharing drives innovation through an accumulation mechanism, where human capital serves as a partial mediator. Conversely, knowledge hiding presents a paradox: it has no significant direct impact on innovation but acts as a latent inhibitor, degrading innovation solely by destroying human capital (full mediation). This confirms a depletion mechanism in which the damage caused by hiding behavior is structural rather than operational.

**Research limitations/implications:** The study is limited by its cross-sectional design and specific focus on the public sector. Future research should employ longitudinal methods to observe the long-term erosion of human capital and to explore moderating factors such as leadership styles.

**Practical implications:** Public sector managers must look beyond immediate innovation outputs and monitor human capital health (trust and competency growth) as early warning indicators of organizational toxicity. Cultivating psychological safety is essential to mitigate hiding behaviors and preserve the organization's core intellectual assets.

**Originality/value:** This study offers a novel resolution to the knowledge-hiding paradox. By identifying human capital as a full mediator, it explains why hiding behavior may seem "harmless" in direct tests while systematically impairing the organization's underlying resource base. It shifts the theoretical focus from immediate performance to long-term asset preservation in the context of bureaucratic innovation.

**Keywords:** Knowledge sharing, Human capital, Knowledge hiding, Innovation capability, Resource-based view

**Jel Codes:** M12, M51, O15, M14, M21

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**1. Introduction**

Innovation capability is increasingly recognized as a crucial determinant of sustaining a competitive advantage and driving long-term economic and organizational performance (Baláž, Jeck & Balog, 2023; Kim & Jin, 2022), even in the MSME sector (Kalathingal & Ambrammal, 2025; Olaleye, Lekunze, Sekhampu, Khumalo & Ayeni, 2024). Innovation capability refers to an organization's aptitude to allocate resources in novel ways to generate value through product/service development (Sutanto, Tjahjadi & Nadia, 2023). Within the public sector, this capability is essential for navigating digital transformation. Key drivers of this capability include knowledge sharing, which Aleksić, Ranguš and Slavec-Gomez (2022) identify as a beneficial influence, whereas knowledge hiding is often seen as a detrimental factor. Knowledge sharing is the exchange of knowledge, information, skills, and expertise through both formal and informal channels, such as facilitating training sessions, sharing information, and hosting group discussion forums. In comparison, non-formal activities include sharing in the lobby, participating in outbound activities, and social settings. When knowledge sharing becomes a culture within the organization, it can increase individual knowledge and encourage continuous innovation among its members. In addition, it can stimulate someone to think creatively and critically and will produce knowledge continuously (Aleksić et al., 2022; Le & Lei, 2019; Yao, Crupi, Di-Minin & Zhang, 2020; Fait, Magni, Perano, Farina-Briamonte & Sasso, 2022; Latifah, Setiawan, Aryani, Sadalia & Al-Arif, 2022; Donate, González-Mohino, Paolo-Appio & Bernhard, 2022), which are strategic factors in creating a sustainable competitive advantage.

Conversely, organizations must proactively address factors that undermine their ability to innovate, particularly knowledge concealment, to prevent organizational decline. Knowledge concealment is a deliberate effort by individuals to hide information, activities, concepts, and knowledge from others. Donate et al. (2022) argue that this type of behavior has a significant impact on individuals, groups, and organizations, primarily by inhibiting creativity and disrupting key processes of internal knowledge transformation and continuous innovation. This perspective is reinforced by a broad consensus in the literature, which shows that knowledge concealment negatively affects innovation capabilities by creating strategic barriers and systemic threats (Aleksić et al., 2022; Arias-Pérez & Huynh, 2023; Basri, Yasni, Al-Azhar, Hanif & Abdurrahman, 2021; Donate et al., 2022; Song, Yang, Zhang & Huang, 2023; Zhou, Fan & Son, 2019). These negative impacts are widespread; at the individual level, they reduce motivation to collaborate and learn, while at the group level, they undermine trust and hinder a collaborative climate. Consequently, identifying and reducing knowledge concealment is urgent for every organization, especially those seeking to maintain a trajectory of sustainable innovation.

The impetus for this research stems from the need to understand the complex mechanisms that can enhance or hinder innovation capabilities in the public service sector, particularly during the ongoing phase of digital transformation. At the heart of this issue are the paradoxes and empirical inconsistencies regarding the influence of knowledge behavior on innovation. Although most of the literature identifies knowledge sharing as a key catalyst for innovation (Aleksić et al., 2022; Donate et al., 2022; Fait et al., 2022; Latifah et al., 2022; Le & Lei, 2019; Yao et al., 2020), the effectiveness of this exchange is highly dependent on the nature of the knowledge involved. As suggested by Wang, Wang and Mardani (2023), while explicit knowledge is easy to disseminate, sharing tacit knowledge, which is personal and difficult to formalize, can produce conflicting effects on innovation outcomes, depending on the transformation process. Furthermore, the complexity of the knowledge ecosystem can both facilitate and hinder innovation capabilities, depending on its organization (Yuen & Lam, 2024). Therefore, the inconsistent findings in

previous studies highlight a critical theoretical gap: the need to examine the type of knowledge being shared, whether it is tacit or explicit. Explicit knowledge is directly related to increased innovation capabilities, but tacit knowledge requires an in-depth approach to facilitate effective sharing and prevent it from becoming a barrier to innovation.

This gap is even more pronounced regarding knowledge hiding, where the view of a linear negative impact is increasingly challenged. Recent studies, such as Duan, Yang, Huang, Chin, Fiano, de-Nuccio et al. (2022), underline that knowledge hiding has a complex relationship with innovation capability, resembling an inverted U-shaped curve. Moderate levels of knowledge hiding can initially stimulate innovation by creating competitive tension, but excessive levels can reduce capabilities. This finding corroborates prior research by Škerlavaj, Černe and Batistič (2023) and Sulistiawan, Moslehpour, Diana and Lin (2022), which suggests that knowledge hiding is not always detrimental but can provide individual benefits in the short term. In the specific context of public sector organizations, this dynamic presents a unique paradox. Unlike in commercial environments, concealing sensitive policy plans or administrative secrets can be functional for maintaining stability, yet, in theory, it risks eroding long-term innovation. The research gap, therefore, lies in the lack of a mediating framework that explains why these behaviors appear “harmless” in direct tests while potentially acting as latent inhibitors of organizational health.

To resolve this paradox, this study positions Human Capital as a strategic filter. Employees with high cognitive abilities and expertise possess the professional wisdom to distinguish between knowledge that drives innovation and sensitive data that must be protected. This study proposes that Human Capital mediates this conflicting behavior through accumulation and reduction mechanisms. Knowledge sharing enriches the organization’s “intellectual bank” to generate new ideas (Innovation Capability), Fayyaz, Chaudhry and Fiaz (2021), Zhang, Wang and Chun (2022), and Wang et al. (2023), while excessive concealment damages this collective expertise. By testing Human Capital as a mediator, this research addresses the “black box” in the literature clarifying how behavioral inputs translate into structural innovation outcomes. Grounded in the Resource-Based View (RBV), Human Capital represents a strategic asset that meets the VRIN criteria: valuable for public service innovation, rare due to specialized knowledge, inimitable due to complex social interactions, and non-substitutable due to its dependence on human judgment, which cannot be fully replicated by technology. By positioning Human Capital as the link, this study moves beyond direct-effect assumptions and offers a sharper articulation of the ‘hidden costs’ of knowledge behaviors. Ultimately, prioritizing high-quality Human Capital enables public agencies to navigate the paradox of knowledge management, ensuring they remain competitive and focused on creating a lasting advantage in the public service sector (Zhang, Wang, Tse & Tse, 2024; Kalathingal & Ambrammal, 2025). This research moves beyond linear assumptions, proposing that knowledge hiding causes a “latent erosion” of intellectual foundations. By framing Human Capital as a victim of concealment, we argue that bureaucratic stability often masks a silent decay in strategic capacity. This study thus redefines the structural role of human behavior in safeguarding the future resilience of public agencies.

## **2. Literature Review and Theoretical Framework**

### **2.1. Knowledge Sharing**

Knowledge sharing is the process of distributing ideas and skills among colleagues and divisions to enhance organizational performance and competitive edge. This behavior is intrinsically linked to intellectual capital, a crucial asset for navigating organizational crises efficiently (Xu & Wei, 2023). Recent scholarship highlights that integrating sharing with modern technology, including virtual platforms and AI, accelerates innovation by overcoming physical barriers and optimizing performance rapidly (Chaudhuri, Vrontis & Chatterjee, 2024; Yuen & Lam, 2024; Chandran & Alammari, 2021; Olan, Ogiemwonyi-Arakpogun, Suklan, Nakpodia, Damij & Jayawickrama, 2022). However, sustainable exchange requires a supportive climate fostered by trust, communication, autonomy at work, and strong organizational support (Cormican, Meng, Sampaio & Wu, 2021; Wu, Hu, Wei & Marinova, 2023; Lo, Tian & Ng, 2021; Zieba, Durst, Foli & Gonsiorowska, 2024). In the government sector specifically, knowledge sharing enables employees to learn from failures and formalize these lessons into continuous improvement processes (Natarajan & Kumar, 2025). Ultimately, knowledge sharing

serves as a strategic factor, increasing efficiency, preparing institutions to address evolving challenges, and ensuring long-term sustainability.

## **2.2. Knowledge Hiding**

Knowledge hiding is the deliberate withholding of requested knowledge, generally viewed as a violation of moral principles that hinders organizational sustainability (Xie, Xia, Song, Hu & Liu, 2024). However, this behavior is nuanced; scholars argue that hiding is not always malicious but can be 'rationalized' when employees withhold information to maintain confidentiality or comply with policies (Zhi, Lockett & Zhou, 2025). The antecedents of this behavior are inextricably linked to leadership style and individual characteristics. Research indicates that while effective leadership fosters moral behavior and reduces cynicism (Xie et al., 2024; Scutto, Nespoli, Tran & Cappiello, 2022), leaders with 'dark triad' traits provoke hiding behaviors as a coping mechanism against perceived threats (Soral, Pati & Kakani, 2022; Yang & Lee, 2021). Additionally, individual factors such as work experience significantly influence this dynamic (Issac, Baral & Bednall, 2020). Consequently, given the potential for hiding to escalate into organizational sabotage, proactive HR governance strategies, particularly job rotation, are critical to mitigate these adverse effects and encourage sharing (Zulfiqar, Garavan, Huo, Akhtar & Sarwar, 2025).

## **2.3. Innovation Capability**

Innovation capability is defined as the ability to transform explicit concepts into economically valuable outcomes, driving wealth creation and sustainable growth (Heenkenda, Xu, Kulathunga & Senevirathne, 2022). It serves as a vital strategic asset for generating and executing innovative ideas to maintain organizational relevance and a competitive edge (Singh, Del-Giudice, Nicotra & Fiano, 2022). Current developments suggest that this capability is significantly influenced by technology, patent security, and predictive tools such as machine learning to safeguard production and distribution processes (Ponta, Puliga, Oneto & Manzini, 2022). To strengthen this advantage, organizations often rely on external mechanisms, including R&D and university collaborations (Novillo-Villegas, Ayala-Andrade, Lopez-Cox, Salazar-Oyaneder & Acosta-Vargas, 2022). However, maintaining such capability requires a strong focus on absorptive capacity to ensure that research efforts are executed effectively rather than wasted by organizational constraints. Ultimately, innovation capability must remain a dynamic asset, continuously adapting to environmental shifts through ongoing research and development to sustain long-term growth and market differentiation.

## **2.4. Human Capital**

Human capital encompasses the skills and knowledge held by individuals and serves as a fundamental driver of organizational sustainability. While often identified through formal education, its assessment requires diverse indicators to capture a broader range of professional competencies (Friderichs & Correa, 2022). From an economic perspective, human capital is essential for enhancing workplace productivity and fostering sustainable innovation (Leoni, 2025). However, dynamic environmental shifts necessitate continuous development of individual capacity to ensure survival and growth (Zhou & Qi, 2023), providing long-term benefits for individuals (Deming, 2022). To anticipate talent gaps, organizations must employ standardized metrics and lexicons for precise measurement (Demers, Wang & Wu, 2024). Evidence demonstrates that human capital improves organizational performance and competitiveness, and influences the relationship between financial factors and economic growth (Kucharcikova, Durisova & Staffenova, 2024; Saroj, Shastri, Singh, Tripathi, Dutta & Chaubey, 2024). Therefore, strategic investment and management are vital to optimizing human capital and promoting economic stability and societal progress.

## **2.5. Knowledge Sharing, Knowledge Hiding, and Human Capital on Innovation Capability**

Innovation capabilities are highly dependent on the availability and flow of strategic resources. Knowledge sharing serves as the primary channel for accumulating these resources. Extensive literature confirms that knowledge sharing significantly enhances innovation capabilities across various sectors, ensuring organizational sustainability (Awawdeh, Harb & Zhang, 2024). In the industrial context, knowledge sharing creates superior organizational value (Yao et al., 2020; Yousaf, Panait, Tanveer, Cretu, Hrebenciuc & Zahid, 2022), while in the health sector, knowledge sharing improves patient service performance (Yuen & Lam, 2024). Knowledge

transformation processes, such as inter-organizational benchmarking, have also been shown to improve corporate innovation performance by indirectly increasing innovation capabilities (Dongling, Yuming, Xinmin, Chen, XiaoYi & Chang, 2022). Furthermore, knowledge transformation processes improve innovation performance by increasing organizational absorption capacity (Chatterjee, Chaudhuri & Vrontis, 2022; Wang et al., 2023). Thus, the smooth exchange of explicit and tacit knowledge is a fundamental driver of product and process innovation.

The impact of knowledge hiding on innovation presents a theoretical paradox. On one hand, scholars argue for an inverted U-shaped relationship, suggesting that at moderate levels, concealing knowledge might stimulate “constructive competitive tension,” allowing employees to develop unique ideas without premature interference (Duan et al., 2022; Jin & Yu, 2022). However, this perspective is often situated within highly competitive private-sector environments. In the context of the public sector bureaucracy, which relies heavily on collaboration and transparency for effective service delivery, the negative implications are likely to outweigh any potential benefits. Knowledge concealment in this setting tends to obstruct information flow, limit the creativity that should arise from shared insights, and erode the trust necessary for collaborative problem-solving (Donate et al., 2022; Haar, O’Kane & Cunningham, 2022; Nauman, Tahir, Ali & Sumbal, 2025; Zhang & Wang, 2021). Furthermore, once concealment exceeds a critical threshold, it becomes dysfunctional, leading to systemic stagnation rather than fostering competition (Yang, Dong, Yang & Mardani, 2023). Consequently, we argue that within the government sector, knowledge hiding predominantly acts as a barrier to innovation.

Amid this behavior, human resources are VRIN’s irreplaceable core resource. Valuable for public service innovation, rare due to specialized knowledge, inimitable due to complex social interactions, and non-substitutable due to its dependence on human judgment that cannot be fully replicated by technology. Despite the growing development of artificial intelligence, human resources contribute more to innovation capabilities than physical capital (Wu, Wang, Qi, Wu, Zhao & Zhou, 2023; Zhang, 2023). Aligning human resources with environmental developments increases organizational resilience and encourages breakthrough and progressive innovation (Chao, Wang & Wang, 2025; Liu, 2021). In an era of disruption and digitalization, human resources play a crucial role in addressing challenges in the service and cultural sectors that significantly impact workplace innovation (Blaque, Abu-Salim & Mir, 2024; Chaudhuri, Chatterjee, Vrontis & Vicentini, 2023). Evidence from the education sector shows that human resources directly influence patent production and long-term corporate innovation (Kang, Li, Zhao, Zheng & Wu, 2022). Ultimately, complementary human resources assets strengthen the development of sustainable innovation (Sun & Zhou, 2024). In conclusion, human resources are a fundamental strategy for enhancing innovation capabilities and driving strategy.

*Hypothesis 1: Knowledge sharing positively impacts innovation capacity*

*Hypothesis 2: Knowledge Hiding has a negative effect on Innovation Capability*

*Hypothesis 3: Human capital positively impacts innovation capability*

## **2.6. Knowledge Sharing and Knowledge Hiding on Human Capital**

Within the Resource-Based View (RBV) framework, this study explicitly identifies human capital as a strategic resource, representing the collective knowledge stock that requires continuous renewal through knowledge flows to maintain its competitive value. Knowledge sharing serves as the primary mechanism for accumulating this resource. When employees actively exchange tacit experiences and explicit information, individual-level expertise is internalized by others, thereby enhancing collective intelligence and organizational cognitive capacity (Sheehan, Garavan & Morley, 2025). This process ensures that the organization’s human resource stock is not static but continuously evolves to meet complex challenges. The literature consistently notes that a strong knowledge-sharing climate acts as a strategic incentive that strengthens employee commitment and sustains the intellectual capital base (Lakshman, Rai & Lakshman, 2022). Empirical evidence shows that such sharing is particularly vital during employee rotation or promotion, ensuring that critical expertise is successfully transferred and preserved within the organization (Oliveira, Curado, Balle & Kianto, 2020), facilitating an environment for meaningful exchange has been shown to enhance the social and emotional capital of the workforce, which is essential for long-term organizational ambidexterity (Pham & Khanh, 2024; Z. Zhang et al., 2022).

Conversely, knowledge hiding is positioned as a depletion mechanism that erodes the quality and integrity of the organization's strategic assets. From a theoretical standpoint, hiding knowledge creates "knowledge gaps" and functional barriers that impede the optimal utilization and development of human potential. When individuals deliberately withhold information, they deprive their peers of the learning opportunities necessary for skill acquisition, leading to a stagnation of the organization's collective expertise (Kmieciak, 2024). Within the RBV lens, this behavior signals a breakdown in the resource-building process, in which the quality of the strategic resource (Human Capital) is gradually diminished by internal friction and a lack of intellectual input. Previous studies highlight that chronic knowledge hiding generates significant psychological stress and workplace discomfort, which directly degrades the cognitive and emotional performance of human capital (Xiao, 2024). At the organizational level, withholding vital information prevents the effective distribution of expertise, often leading to systemic inefficiencies and suboptimal policy decisions (Haar et al., 2022). This negative behavior undermines the trust and collaborative climate required for the HR department to effectively optimize and align the workforce's potential with organizational goals, thereby positioning human capital as a critical mediating mechanism whose quality is dictated by these opposing knowledge behaviors (El-Kassar, Dagher, Lythreatis & Azakir, 2022; Islam, Naqshbandi, Bashir & Ishak, 2024; Kmieciak, 2024).

*Hypothesis 4: Knowledge sharing has a positive impact on human capital*

*Hypothesis 5: Knowledge hiding has a negative impact on human capital*

## **2.7. The Impact of Knowledge Sharing and Hiding on Innovation Capability with Human Capital as a Mediator**

Drawing from the Resource-Based View (RBV), this study posits that knowledge sharing does not automatically translate into innovation capability without the development of a high-quality resource stock. Human capital is explicitly positioned as the strategic resource stock that facilitates this transformation. Knowledge sharing serves as the primary mechanism for accumulating this stock of expertise and cognitive ability. Within the RBV logic, it is the human capital comprising the skills, cognitive agility, and expertise of employees that acts as the necessary intermediary to process shared information into tangible innovative outcomes. Without a robust human resource base, knowledge-sharing activities may remain at the level of information exchange rather than be converted into organizational capabilities. Therefore, we anticipate a mediating effect, suggesting that the positive influence of sharing on innovation is channeled through the systematic enhancement of the organization's human assets (Zhang et al., 2022; Fayyaz et al., 2021). Previous empirical investigations, such as those by Latifah et al. (2022), support this ex-ante reasoning by demonstrating that human capital strengthens the impact of knowledge exchange on innovation. Furthermore, Blaique et al. (2024) emphasize that human capital allows organizations to navigate uncertainty by transforming diverse knowledge streams into innovative solutions. Without this strategic resource base, the theoretical link between sharing behaviors and innovative performance is expected to remain underdeveloped (Saleem, Pinto & Malik, 2024).

The mediating role of human capital in the relationship between knowledge hiding and innovation is explained through a resource depletion mechanism. From an RBV perspective, knowledge hiding does not merely obstruct information flow; it is predicted to actively degrade the organization's strategic assets by creating knowledge gaps and increasing psychological strain. When employees hide knowledge, they impede the collective learning process, which is theorized to degrade human capital quality over time. In this conceptual framework, human capital is the critical asset at risk; as hiding behavior increases, the quality and readiness of the organization's human resources diminish, leading to a decline in innovation capability. Thus, the detrimental impact of hiding on innovation is theorized to primarily be channeled through the erosion of employees' capacity to solve complex problems and generate new ideas (Yang et al., 2023). Research by Haar et al. (2022) and Kmieciak (2024) aligns with this prediction, finding that the damaging effects of knowledge hiding manifest as cognitive stagnation among personnel. When vital expertise is withheld, the organization's human capital loses its innovative potential, resulting in a decrease in innovative output. This reinforces the theoretical argument that human capital is the essential intermediary that explains why dysfunctional behaviors, such as knowledge hiding, inevitably lead to failure in maintaining a sustainable competitive advantage (Sheehan et al., 2025; Blaique et al., 2024).

*Hypothesis 6: The impact of knowledge sharing on Innovation capability with Human Capital as a Mediator*

*Hypothesis 7: The impact of knowledge hiding on Innovation capability with Human Capital as a Mediator*

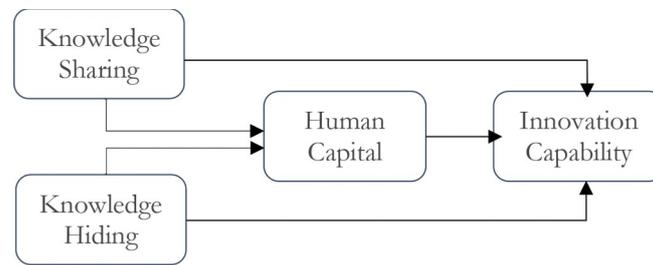


Figure 1: The study's theoretical framework

### 3. Methods

#### 3.1. Study Setting and Sampling Procedure

This research utilizes a quantitative methodology with a saturated sample (census) of 109 public sector employees in the Special Region of Yogyakarta, Indonesia. Critically, this research is primarily explanatory, aiming to uncover the complex underlying mechanisms of the knowledge paradox within a specific institutional and cultural framework. Data collection was conducted through questionnaires distributed via official digital internal channels to the entire population of the targeted units. To ensure data quality, the inclusion criteria required participants to be active civil servants with at least 1 year of tenure. While focusing on a single regional agency limits external validity, this deliberate focus was necessary to provide a context-specific analysis that accounts for the nuances of Indonesian public administration, where factors like high power distance and bureaucratic collectivism significantly shape employee behavior. Addressing concerns regarding sample size, an a priori power analysis using G\*Power 3.1 shows that for a model with four predictors and a medium effect size ( $f^2 = 0.15$ ), a sample of 109 achieves a statistical power of 0.88, exceeding the 0.80 threshold required for robust PLS-SEM analysis.

#### 3.2. Measure

Each research variable was measured using dimensions developed from previous research. Innovation capability was measured using the following indicators: Idea Generation, Exploratory Idea, Fight for Ideas, and Implementation of Ideas (Moreira, Navaia & Ribau, 2024). Knowledge Sharing was measured using the following indicators: Knowledge Donating and Knowledge Collection (Wang, Chen, Feng & Chen, 2024). Knowledge Hiding was measured using the following indicators: Evasive Hiding, Playing Dumb, and Rationalizing (Kucharska & Rebelo, 2022). Human Capital was measured using the following indicators: Knowledge, Expertise, Ability, and Skill (Kucharska & Rebelo, 2022). All items were measured on Likert scales ranging from strongly disagree (1) to strongly agree (5).

#### 3.3. Data Analysis Strategy

Inferential analysis was performed using SmartPLS 4.1.1.4. The use of PLS-SEM is justified over covariance-based methods given the exploratory nature of this study, which aims to maximize the explained variance of innovation capability. Additionally, PLS-SEM offers superior power in analyzing small, saturated samples ( $n=109$ ) and demonstrates robustness in estimating complex mediation models without requiring strict distributional assumptions. Evaluation of the measurement model included **convergent validity** (factor loadings  $> 0.60$  and AVE  $> 0.50$ ), **discriminant validity** via HTMT ( $< 0.90$ ) and Fornell-Larcker (the square root of the AVE  $> r$ ), and **reliability** via Cronbach's alpha and Composite Reliability ( $> 0.60$ ). For the structural model, we reported  $f^2$  effect sizes,  $Q^2$  predictive relevance, and Full Collinearity VIF values to assess Common Method Bias (CMB) formally. All VIF values remained below the threshold ( $< 3.0$ ), confirming that the self-reported, single-source design is free of substantial common-method contamination. While the NFI value was below the 0.90 threshold, the model fit is deemed acceptable based on the SRMR below the 0.08 limit. This lower NFI is attributed to the relatively small census sample and model complexity rather than a lack of validity.

Finally, bootstrapping with 5,000 resamples was used to test the significance of both direct and indirect effect hypotheses

## 4. Results

### 4.1. Respondent Profile

The descriptive statistical summaries indicate that the male respondent count ( $n = 56$ , 51.4%) marginally exceeded that of females ( $n = 53$ , 48.6%). A significant proportion of respondents were under 31 years old ( $n = 43$ , 39.4%), followed by those aged 31–40 years ( $n = 34$ , 31.2%). Fewer participants were aged 41–50 ( $n = 26$ , 23.9%), and those aged 50 years or older ( $n = 6$ , 5.5%). Regarding work experience, almost half of the respondents ( $n = 49$ , 45.0%) reported having between one and five years of work experience, whereas 23 respondents (21.1%) had six to ten years, and 37 respondents (33.9%) possessed over a decade of professional experience. In terms of academic credentials, the largest group of respondents held a bachelor's degree (D-4/S-1) ( $n = 68$ , 62.4%), followed by those with a high school diploma ( $n = 18$ , 16.5%), an associate degree (D-3) ( $n = 13$ , 11.9%), and a master's degree (S-2) ( $n = 10$ , 9.2%), see Table 1.

Characteristics	Amount	% of sample
<b>Gender</b>		
ML	56	51,4%
FML	53	48,6%
<b>Age</b>		
<31 years	43	39,4%
31-40 years	34	31,2%
41-50 years	26	23,9%
>= 50 years	6	5,5%
<b>Work Experience</b>		
1-5 years	49	45,0%
6 - 10 years	23	21,1%
> 10 years	37	33,9%
<b>Education</b>		
High School	18	16,5%
Diploma 3	13	11,9%
Diploma 4/S1	68	62,4 %
Master's Degree	10	9,2%

Note: Percentage of sample computed for  $n = 109$

Table 1. The Demographic Characteristics of respondents

### 4.2. Measurement Model Assessment

Figure 2 displays the PLS Algorithm's graphical output for the research model.

Figure 2 shows that the outer model test results indicate that all constructs meet the reliability and convergent validity criteria. The assessment of the measurement model confirmed robust validity and reliability across all constructs. Convergent validity was established as the Average Variance Extracted (AVE) values ranged from 0.678 to 0.753, surpassing the 0.50 threshold. Although one indicator for Knowledge Sharing exhibited a loading of 0.612, it was retained because the construct's AVE (0.678) remained high, ensuring content validity. Internal consistency was demonstrated with Cronbach's Alpha ranging from 0.834 to 0.953 and Composite Reliability from 0.892 to 0.961, all exceeding the required 0.70 criterion. Discriminant validity was rigorously verified using two approaches: first, based on the Fornell-Larcker criterion, the square root of each construct's AVE was greater than its highest correlation with any other construct; second, all Heterotrait-Monotrait (HTMT) ratios were below the 0.90 threshold, with the highest observed value being 0.864, confirming that all constructs are empirically distinct. Tables 2 and 3 present comprehensive results.

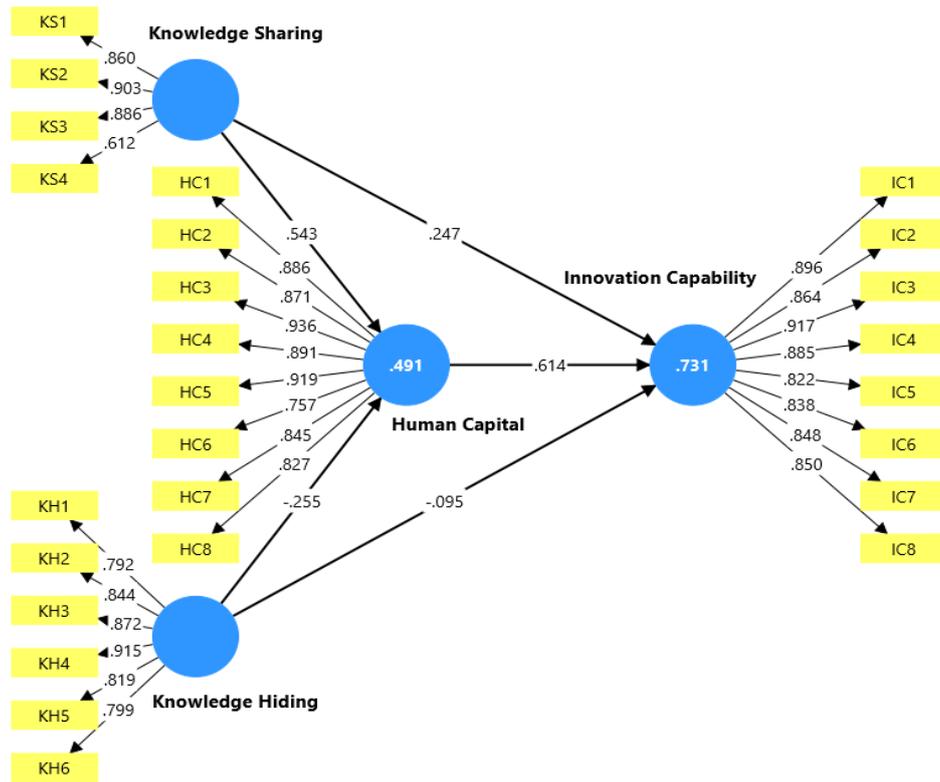


Figure 2. Graphical Output of Research Model

Variable/Item	Cronbach's Alpha	Composite Reliability	Factor Loading	AVE
Knowledge Sharing (KS)	0.834	0.892		0.678
Upon acquiring novel knowledge, I disseminate it among my peers.			0.860	
I share information about my work with my colleagues.			0.903	
When seeking specific knowledge, I consult my colleagues for instruction.			0.886	
I seek to ascertain my colleagues' knowledge.			0.612	
Knowledge Hiding (KH)	0.917	0.935		0.708
I gave incomplete information to my coworkers.			0.792	
I gave my coworkers incorrect information.			0.844	
I feigned ignorance regarding organizational information.			0.872	
I pretended not to know the information my coworkers requested.			0.915	
I feigned ignorance regarding the information sought by my colleagues.			0.819	
I wanted to share information even though it was confidential.			0.799	
Human Capital (HC)	0.953	0.961		0.753
I have knowledge about my job.			0.886	
I have experience related to my job.			0.871	
I have the skills to support my job.			0.936	
I have skills relevant to my field of work.			0.891	
I have the technical skills to complete the job.			0.919	
I have the ability to make decisions/solve problems.			0.757	
I am highly skilled in my job.			0.845	
I am highly skilled in the training provided by the organization.			0.827	
Innovation Capability (IC)	0.952	0.96		0.749
I generate ideas to improve work.			0.896	
I have a passion for improving things at work.			0.864	

Variable/Item	Cronbach's Alpha	Composite Reliability	Factor Loading	AVE
I seek new methods to complete work.			0.917	
I generate ideas to solve work problems.			0.885	
I help coworkers innovate.			0.822	
I can encourage my coworkers to innovate.			0.838	
I implement new ideas into my work.			0.848	
I strive to develop new things.			0.850	

Table 2. Summary of Composite Reliability, Factor Loading, Average Variance Extracted (AVE) and Cronbach's Alpha

	Fornell-Larcker				Heterotrait-Monotrait Ratio (HTMT)			
	Human Capital	Innovation Capability	Knowledge Hiding	Knowledge Sharing	Human Capital	Innovation Capability	Knowledge Hiding	Knowledge Sharing
Human Capital	0,868							
Innovation Capability	0,827	0,866			0,864			
Knowledge Hiding	-0,513	-0,527	0,841		0,542	0,557		
Knowledge Sharing	0,664	0,7	-0,475	0,824	0,734	0,783	0,535	

Table 3. Summary of Fornell-Larcker, Heterotrait-Monotrait Ratio (HTMT)

### 4.3. Structural Model Assessment

The evaluation of the structural model began with an assessment of collinearity issues. As shown in Table 4, all Variance Inflation Factor (VIF) values for the inner model ranged from 1.291 to 1.964, well below the conservative threshold of 3.0, indicating that multicollinearity is not a concern in this study. Subsequently, the model fit was examined. The Standardized Root Mean Square Residual (SRMR) was 0.066, below the recommended threshold of 0.08, indicating a satisfactory model fit. While the Normed Fit Index (NFI) value of 0.757 falls below the preferred 0.90 threshold, this is acknowledged as a limitation of the study, likely stemming from the model's inherent complexity and the specific nature of the census sample. Following established PLS-SEM protocols, the SRMR is the primary criterion for assessing overall model fit. The model's explanatory power was evaluated using the Coefficient of Determination ( $R^2$ ) and predictive relevance ( $Q^2$ ). The model explains 73.1% ( $R^2 = 0.731$ ) of the variance in Innovation Capability, indicating substantial explanatory power, whereas Human Capital shows a moderate  $R^2$  of 0.491. Furthermore, the  $Q^2_{\text{predict}}$  values for Human Capital (0.446) and Innovation Capability (0.491) are both greater than zero, confirming the model's strong predictive relevance. Finally, the effect size ( $f^2$ ) assessment reveals that Human Capital has a large effect on Innovation Capability ( $f^2 = 0.713$ ) and Knowledge Sharing has a similarly substantial impact on Human Capital ( $f^2 = 0.448$ ). In contrast, other significant paths demonstrate small to medium effect sizes, indicating that, while these relationships are statistically significant, their individual contributions to the variance of the dependent constructs are more modest. Tables 4 and 5 present these comprehensive results, aligning the theoretical discussion with the observed empirical magnitude of each effect.

	Effect Size ( $f^2$ )		Collinearity (VIF)		Determination Coefficient ( $R^2$ )	$Q^2_{\text{predict}}$
	Human Capital	Innovation Capability	Human Capital	Innovation Capability		
Human Capital		0,713		1,964	0,491	0,446
Innovation Capability					0,731	0,491
Knowledge Hiding	0,099	0,024	1,291	1,419		
Knowledge Sharing	0,448	0,121	1,291	1,869		

Table 4. Determination Coefficient ( $R^2$ ), Effect Size ( $f^2$ ),  $Q^2_{\text{predict}}$ , Collinearity (VIF)

	Saturated model	Threshold
SRMR	0.066	< 0.08
NFI	0.757	< 0.90

Table 5. Summary of model fit SEMR/NFI

#### 4.4. Hypothesis Testing

The findings derived from the hypothesis testing are presented in Table 6. Direct effects analysis, the analysis confirms that (H1) Knowledge Sharing has a positive and significant direct impact on Innovation Capability ( $\beta = 0.247$ ,  $p = 0.000$ ) and Human Capital (H4) ( $\beta = 0.543$ ,  $p = 0.000$ ). This suggests that sharing behaviors directly fosters both the organization's resource base and its innovative output. Conversely, regarding Knowledge Hiding, the results present a nuanced finding. The direct relationship between Knowledge Hiding and Innovation Capability (H2) was found to be insignificant ( $\beta = -0.095$ ,  $p = 0.125$ ), meaning H2 is unconfirmed. However, knowledge hiding significantly and negatively impacts Human Capital (H5) ( $\beta = -0.255$ ,  $p = 0.025$ ). This indicates that while hiding behaviors may not immediately halt innovation projects, they significantly degrade the quality of the organization's human assets. Finally, Human Capital demonstrates a strong positive influence on Innovation Capability (H3) ( $\beta = 0.614$ ,  $p = 0.000$ ), confirming its role as a critical driver of innovation.

Hypothesis	Original sample (O)	T statistics	P values	Information
H1: Knowledge Sharing → Innovation Capability	0.247	3.542	0.000	Confirmed
H2: Knowledge Hiding → Innovation Capability	-0.095	1.15	0.125	Unconfirmed
H3: Human Capital → Innovation Capability	0.614	8.834	0.000	Confirmed
H4: Knowledge Sharing → Human Capital	0.543	4.465	0.000	Confirmed
H5: Knowledge Hiding → Human Capital	-0.255	1.953	0.025	Confirmed
H6: Knowledge Sharing → Human Capital → Innovation Capability	0.333	3.578	0.000	Confirmed
H7: Knowledge Hiding → Human Capital → Innovation Capability	-0.157	2.14	0.016	Confirmed

Table 6. Results of Hypothesis Testing

The mediation analysis aimed to clarify the role of Human Capital as a “strategic bridge”. (H6) The indirect effect of Knowledge Sharing on Innovation Capability through Human Capital is positive and significant ( $\beta = 0.333$ ,  $p = 0.000$ ). Since both the direct effect (H1) and indirect effect (H6) are significant, this indicates Partial Mediation (Complementary). (H7) The indirect effect of Knowledge Hiding on Innovation Capability through Human Capital is negative and significant ( $\beta = -0.157$ ,  $p = 0.016$ ). Crucially, since the direct effect of knowledge hiding on Innovation (H2) is insignificant ( $p = 0.125$ ), Human Capital acts as a Full Mediator. This implies that the detrimental impact of knowledge hiding on innovation is entirely transmitted through the erosion of human capital quality.

## 5. Discussion and Implication

### 5.1. Knowledge Sharing, Knowledge Hiding, and Human Capital on Innovation Capability

This study empirically proves that knowledge sharing plays a central role and has significant positive implications for improving innovation capabilities. In the public sector, this mechanism is crucial because bureaucracies are often trapped in a “silo mentality.” Knowledge sharing, as a mechanism that breaks down these barriers, enables the flow of information to form the basis for new service innovations. The consistency of these findings aligns with cross-sector evidence. In the MSME sector, Yao et al. (2020) and Yousaf et al. (2022) highlight that knowledge sharing enables organizations with limited resources to combine partial knowledge into new solutions. Similarly, in the health sector, Yuen and Lam (2024) found that sharing clinical knowledge directly enhances performance in patient care. In the context of this study, these positive effects indicate that when public sector employees are actively involved in donating and collecting knowledge, they

essentially create a “collective brain” that is much more capable of solving complex administrative problems, as noted by Chatterjee et al. (2022) and Wang et al. (2023), the effectiveness of this knowledge sharing is reinforced by the organization’s absorptive capacity. It is not enough to share; organizations must recognize the value of new information, assimilate it, and apply it. This study confirms that in the government sector, knowledge sharing acts as fuel, while absorptive capacity acts as the engine that converts that fuel into innovation capabilities. Furthermore, cultural support is identified as a critical boundary condition. Research by Awawdeh et al. (2024) and Dongling et al. (2022) emphasizes that knowledge sharing cannot thrive in a vacuum; it requires an organizational learning culture that values openness over secrecy. When supported by a strong learning orientation, the process of knowledge transformation becomes faster (Stelmaszczyk, 2020), enabling public agencies to adapt more nimbly to regulatory changes and public demands. Thus, this study makes a theoretical contribution by positioning knowledge sharing not only as a behavioral variable but as a dynamic strategic capability that enables organizations to reconfigure their resource base for sustainable innovation. Practically, public agencies should institutionalize sharing forums and integrate collaboration indicators into Employee Performance Targets (SKP). Implementing post-training dissemination SOPs and digital repositories is also crucial to maintain absorptive capacity and prevent strategic knowledge loss from staff rotations or retirements.

The Paradox of Knowledge Hiding, a critical finding of this study, is that Knowledge Hiding does not appear to have a significant direct negative impact on innovation capabilities. Although this finding runs counter to the common assumption that “hiding is bad,” it offers profound theoretical implications. It suggests that hiding knowledge does not necessarily instantly reduce innovation capabilities. This phenomenon can be explained through the perspective of the “Inverted U-Curve” proposed by Duan et al. (2022). In this view, knowledge concealment has a complex, nonlinear relationship with innovation, in which a moderate level of concealment may inadvertently stimulate innovation by creating “constructive competitive tension.” When employees withhold specific information, it may force others to think more independently, seek alternative solutions, or develop unique ideas without the interference or intervention of “groupthink.” This is consistent with the idea that a certain level of friction can stimulate cognitive processing (Jin & Yu, 2022). In the context of the local public agencies studied, it makes sense that the observed knowledge concealment behavior is still at a “moderate” stage, such as playing dumb or hiding for rational reasons (rationalized hiding). Therefore, this behavior has not yet reached a “critical point” where it becomes dysfunctional and completely destroys the innovation process. These findings challenge the rigid views of Zhang and Wang (2021), Arain, Bhatti, Hameed, Khan and Rudolph (2024), Chen, Luo, Zhou and Zhang (2022), and Donate et al. (2022), who assume a strict negative linear relationship. Instead, our results align with Škerlavaj et al. (2023) and Sulistiawan et al. (2022), who argue that concealing knowledge is not always detrimental in the short term. Theoretically, this implies that the effect of knowledge hiding on innovation depends heavily on the organizational climate and the intensity of the behavior. However, these “insignificant” direct results should not be misinterpreted as “harmless.” As we will discuss in the mediation section, the danger of knowledge concealment is latent: it does not stop innovation, but it degrades its actors (human capital). Thus, this study contributes to expanding the theory by characterizing knowledge concealment in the public sector as a “latent inhibitor” rather than a direct barrier. Practically, public agencies must implement ‘psychological safety audits’ to detect early concealment and shift toward team-based performance evaluations. These structural interventions mitigate ‘rationalized hiding’ and prevent the latent erosion of human capital, ensuring that organizational friction remains a constructive driver of innovation rather than a destructive force.

This study confirms that human capital has a substantial positive impact on organizational innovation capabilities. This is in line with the Resource-Based View (RBV), which argues that human capital, which includes knowledge, skills, and abilities (VRIN attributes), is a valuable, rare, inimitable, and non-substitutable strategic asset. In the innovation process, human capital is the executor. No matter how sophisticated the technology is, it ultimately depends on employees’ cognitive abilities to generate new ideas. In line with Carvache-Franco, Carvache-Franco, Carvache-Franco and Bustamante-Ubilla (2022), highly educated and skilled employees contribute significantly to innovation capabilities because they possess the “cognitive surplus” necessary for R&D. In the public sector, this human capital must increasingly be technological. As noted by Karadag, Sahin

and Bulut (2025) and Wu, Wang et al. (2023), the skills possessed must be strategic and integrated with digital competencies to be genuinely effective. This is crucial for creating innovative solutions that are not only new but also efficient and implementable (Chaudhuri et al., 2023; Taleb, Hashim, Ahmad & Abu-Bakar, 2024; Zane, 2023). In practical terms, this implies that governments should view training and competency development not as an operational cost, but as a capital investment (Kelvin-Iloafu, Monyei, Ukpere, Obi-Anike & Onyekwelu, 2023). The ability to digitize public services depends entirely on the quality of human capital (Sun, Li & Ghosal, 2020). Therefore, maintaining a high level of human capital is non-negotiable for any agency seeking to sustain a competitive advantage. Practically, public agencies must develop a “Digital Competency Roadmap” and allocate dedicated budgets for specialized technical certifications. Leaders should implement “Skill Inventories” to monitor human capital health, ensuring that recruitment and training programs are strategically aligned with the specific technological demands of modern public service innovation.

## 5.2. Knowledge Sharing and Knowledge Hiding on Human Capital

Knowledge sharing has been shown to have a significant positive impact on human capital and to serve as a mechanism for accumulation. From a theoretical perspective, these findings reinforce the view that knowledge sharing is a key mechanism for the reproduction and expansion of intellectual capital (Al-Tit, Al-Ayed, Alhammedi, Hunitie, Alsarayreh & Albassam, 2022; Lakshman et al., 2022). Human capital is not static; it will shrink if it is not renewed. Knowledge sharing acts as that renewal process. When senior employees share their tacit knowledge (experience, intuition) with junior employees, they are essentially “uploading” their expertise into the organization’s memory, thereby collectively increasing human capital. This process is vital for organizational sustainability, especially in bureaucratic structures where rotation and promotion are frequent. As noted by Oliveira et al. (2020), knowledge sharing ensures that an employee’s expertise does not leave the organization when that employee leaves. This transforms individual intelligence into organizational intelligence. Furthermore, a climate that supports knowledge sharing strengthens the impact of training investments (Sheehan et al., 2025). If an organization invests in training but employees do not share what they have learned, the ROI (Return on Investment) on human capital remains low. Conversely, with active sharing, the value of training multiplies across the workforce (Pham & Khanh, 2024). In the context of Social Exchange Theory, this sharing behavior creates a reciprocal environment in which employees feel obligated to improve their own competencies to contribute to the group (Naim, Shehzad, Al-Nahyan, Jabeen & Usai, 2024). This creates a positive cycle: sharing leads to greater competencies, which in turn lead to higher-quality sharing. Practically, this suggests that organizations should institutionalize sharing activities through mentorship programs, communities of practice, or digital knowledge repositories to continuously improve human capital capacity (Hanifah, Abd-Halim, Vafaei-Zadeh & Nawaser, 2022). Practically, public agencies should institutionalize ‘peer-to-peer’ learning cycles and integrate knowledge-sharing benchmarks into formal performance appraisals. Implementing mandatory post-training briefings and centralized digital repositories ensures that individual insights are systematically converted into organizational capital, maximizing developmental ROI and safeguarding institutional memory against staff turnover.

Conversely, knowledge hiding has been shown to have a significant negative impact on human capital, confirming the “Depletion Mechanism.” This is a profound finding that explains the “hidden costs” of information-hiding behavior. When employees withhold information, feign ignorance, or provide incomplete explanations, they actively degrade the organization’s intellectual resources. Theoretically, knowledge concealment creates a “knowledge vacuum” where skills are not transferred. These findings are consistent with Kmiecik (2024) and Nauman et al. (2025), who show that concealment behavior negatively impacts employee creativity and signals workplace deviance. More critically, hiding behavior consumes cognitive resources. The act of hiding determines what to hide and how to hide it, and remembering the lies increases cognitive load, leaving less mental energy for learning and skill development (Human Capital). Over time, a culture of concealment leads to skill obsolescence because employees are cut off from the flow of new information needed to update their expertise (Arain et al., 2024; Haar et al., 2022). The interaction between knowledge hiding and human capital is also moderated by leadership (Batistič & Poell, 2022; Xie et al., 2024). If leaders fail to sanction hiding behavior, human capital will decline more rapidly. In practice, this implies that HR departments must recognize that knowledge hiding is a competency issue. Organizations filled with “hidiers” will ultimately become organizations

with low “human capital,” regardless of the individual degrees held by employees (Wang et al., 2024). To mitigate this, creating a psychological safety net where employees do not feel the need to hoard knowledge for job security is essential (El-Kassar et al., 2022; Islam et al., 2024; Kmiecik, 2024). By reducing the competitive pressure that triggers hiding behavior, organizations can protect their human capital assets from this internal erosion. Practically, public agencies should implement “Psychological Safety Audits” to identify concealment triggers and transition toward team-based performance incentives. By rewarding collective problem-solving and normalizing mistake-sharing, leaders can de-escalate internal competition that drives hoarding, effectively halting the latent depletion of strategic human capital.

### **5.3. The Mediating Role of Human Capital in the effect of Knowledge Sharing and hiding on Innovation capability**

The mediation analysis in this study provides the most significant theoretical contribution by clarifying how knowledge behavior translates into innovation outcomes. By testing Human Capital as a mediator, this study opens the “black box” between behavioral inputs (sharing vs. hidden) and performance outputs (innovation). The results reveal two distinct pathways: Partial Mediation for Knowledge Sharing and Full Mediation for Knowledge Hiding. This research confirms that Human Capital partially mediates the relationship between Knowledge Sharing and Innovation Capability. This “partial” status indicates a “complementary” effect. That is, Knowledge Sharing enhances innovation through two channels, either directly or through mediation. These findings support the work of Zhang et al. (2022) and Fayyaz et al. (2021), which emphasizes that human capital serves as a bridge that transforms raw information into actionable innovation capabilities. Theoretically, this suggests that organizations cannot rely solely on sharing; they need human capital to process the knowledge they share. Without adequate human capital (absorptive capacity), shared knowledge only creates noise, not innovation (Chaudhuri et al., 2023; Latifah et al., 2022; Sheehan et al., 2025). Thus, a combination of high sharing and high-quality human capital creates “ambidextrous” capabilities, i.e., the ability to exploit and explore simultaneously (Blaique et al., 2024).

The most critical and novel finding of this study is the role of Full Mediation of Human Capital in the relationship between Knowledge Concealment and Innovation Capabilities. As discussed in section 5.1, the direct effect of Knowledge Concealment on Innovation is not significant. However, the indirect effect through Human Capital is significant and negative. This leads to a strong theoretical conclusion: These findings resolve the paradox of why concealment behavior appears “harmless” in direct tests. Hiding behavior acts like a “slow poison” or “termites” in a building structure. It does not immediately cause the building (innovation project) to collapse. However, it relentlessly erodes its foundation (employee competence, trust, and skill transfer). Once the foundation (Human Capital) is sufficiently eroded, the innovation capability will inevitably collapse. This finding significantly advances the literature by shifting the focus from the immediate consequences of knowledge hiding to its long-term structural consequences. It challenges the views of Haar et al. (2022) and Kmiecik (2024) by adding nuance: hiding is not just a barrier to information flow; it destroys asset value. Practically, this is a wake-up call for organizational governance. Managers should not assume that because a project is still running, knowledge hiding is not occurring. They must monitor the health of their Human Capital, employee engagement, skill growth, and collaborative trust, as accurate early warning indicators of innovation failure (Kmiecik, 2024; Sheehan et al., 2025). If human capital metrics are declining, knowledge-hiding behavior is likely widespread, even if innovation output has not yet decreased. Therefore, mitigating knowledge-hiding behavior is not just about improving communication; it is about preserving the organization’s most valuable asset for the future. Practically, public agencies should implement ‘Human Capital Health Audits’ focusing on trust and skill-sharing frequency as early-warning indicators. Prioritizing these metrics over short-term output allows leadership to detect latent hiding behaviors, enabling intervention before the structural foundation of innovation capability is irreversibly damaged.

## **6. Conclusion**

This study concludes that the dual engines of knowledge sharing and human capital drive innovation capability in the public sector. While knowledge sharing fosters innovation directly and indirectly (partial mediation), knowledge hiding presents a critical paradox. It does not immediately paralyze innovation projects, making its

direct impact statistically insignificant. However, it acts as a “Latent inhibitor,” significantly depleting the organization’s human capital. The mediation analysis shows that human capital fully mediates knowledge hiding; thus, hiding behavior destroys innovation solely by eroding the workforce’s competencies and trust (depletion mechanism). Conversely, sharing behavior systematically builds these assets (accumulation mechanism). Theoretically, this research shifts the focus from immediate performance outputs to long-term structural health. In practice, managers must monitor human capital metrics, such as trust and skill development, as early warning indicators of organizational toxicity. Mitigating hiding is not merely about improving communication, but about preserving the organization’s most valuable assets for future sustainability.

## 7. Limitations and Further Direction

This study has several limitations that provide directions for future research. First, the cross-sectional nature of the data provides only a snapshot of knowledge dynamics; therefore, future studies should employ longitudinal designs to capture better the long-term structural damage caused by the “depletion mechanism” of knowledge hiding. Second, as the research was conducted within a specific public sector context, future investigations could conduct comparative analyses between government agencies and private firms to test the consistency of the full mediation effect across different organizational cultures. Additionally, since the data rely on self-reported questionnaires, future research might benefit from utilizing multi-source data or qualitative approaches to mitigate potential social desirability bias regarding sensitive behaviors. Finally, while human capital was the primary focus of this model, exploring additional variables, such as transformational leadership, organizational politics, and digital readiness, could offer a more comprehensive understanding of the factors that buffer the negative impacts of counterproductive knowledge behaviors on organizational innovation.

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