STRUCTURAL CAPITAL MEDIATION TO INCREASING THE INFLUENCE OF KNOWLEDGE SHARING ON SUSTAINABLE HIGHER EDUCATION PERFORMANCE

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Abstrak

Background: Universities today are navigating increasingly complex challenges, including shifting policy landscapes, technological disruption, and constrained resources. Within this context, knowledge sharing (KS) is recognized as a valuable strategic asset, yet the pathways through which it enhances institutional performance particularly sustainable operational outcomes remain insufficiently articulated.

Objective: This research investigates how explicit knowledge sharing (KSE) and tacit knowledge sharing (KST) affect sustainable operational performance (SOP), and whether structural capital (SC) serves as a key intermediary that enables this transformation.

Research Methods: A survey-based quantitative design was adopted, targeting both academic and administrative staff in various Indonesian higher education institutions. PLS-SEM was adopted to model the proposed relationships and assess the significance of mediating variables, offering a practical solution for data with complex interdependencies.

Research Results: The results demonstrate three core findings. First, both KSE and KST significantly bolster SC, with KST exerting a stronger direct influence. Second, KSE has a notable direct impact on SOP, while the influence of KST on SOP operates predominantly through SC. Third, SC emerges as a critical mediating variable—fully bridging the link between KSE and SOP, and partially mediating the pathway from KST to SOP. These outcomes underscore SC's central role in converting shared knowledge into operational sustainability.

Originality/Novelty of Research: The present study contributes new perspectives to the Knowledge-Based View (KBV) by conceptualizing and validating a model that distinguishes the roles of explicit and tacit knowledge in developing organizational capital. It delivers practical insight for academic leaders by highlighting how strengthening structural capital can enhance the long-term performance of higher education institutions.

Keywords: Knowledge Sharing, Tacit Knowledge, Explicit Knowledge, Structural Capital, Sustainable Performance, Higher Education, Knowledge Based View

Introduction

Knowledge sharing (KS) has been significant in improving research productivity. By encouraging collaboration, the emergence of new ideas, and active involvement in research activities, KS forms the foundation for scientific progress (Fauzi et al., 2019). Moreover, KS helps organizations develop by promoting innovation and reducing rigid bureaucratic barriers (Almuqrin et al., 2020). For individuals,

knowledge sharing fosters creativity and critical thinking skills needed in the research and development process (Lee, 2018). The positive impact of KS is also seen in strengthening intellectual capital, which directly contributes to improving organizational performance. Specifically, tacit KS affects three main dimensions of intellectual capital, while explicit KS mainly impacts human and structural capital (Z. Wang et al., 2014). Among the three, SC, which includes organizational procedures and routines, plays a central role in the process of codifying and disseminating knowledge. This element is an important foundation to support the creation and operationalization of strategies based on knowledge resources, including the use of methods such as storytelling, which have proven effective in higher education contexts (Cheng, 2020).

SC plays a vital role in enhancing organizational operational performance by providing an essential framework that supports structured knowledge management processes, ultimately contributing to the creation of corporate value (Sutandar & Apriwenni, n.d.). When knowledge is effectively codified and stored, it significantly contributes to the long-term development of higher education institutions (Budur et al., 2024). Interestingly, however, the study involving small and medium enterprises uncovered that SC can hurt KS practices. This finding emphasizes that the relationship between SC and KS is highly contextual and influenced by the organizational setting (Kusumawijaya & Astuti, 2023).

Integrating knowledge management with intellectual capital development is crucial for driving overall organizational performance (Attar et al., 2018). When knowledge is strategically managed, it not only fosters innovation but also leads to operational efficiency two essential components for sustaining higher education institutions over time (Suparwadi et al., 2024). One of the most effective strategies to strengthen both the understanding and application of knowledge management is by investing in staff training. With the right training, personnel are better equipped to utilize knowledge resources effectively, thereby contributing to sustained improvements in operational outcomes and institutional resilience (Budur et al., 2024).

Numerous prior studies have emphasized the importance of KS lies in its ability to support organizational effectiveness and stimulate innovation (Arsawan et al., 2022). However, its success largely depends on an institution's readiness to manage the structures, processes, and infrastructure related to knowledge (Zulkifli et al., 2023). Within the knowledge-based view (KBV) framework, intellectual capital is positioned as a strategic asset capable of generating competitive edge, particularly in the higher education sector (Pedro et al., 2020). In this context, structural capital (SC), which encompasses databases, systems, policies, and organizational culture, functions as a critical foundation for facilitating knowledge flow and internal collaboration (Lee, 2018). Even though the immediate connection between KS and organizational performance has been widely discussed, the mediating role of SC in this relationship remains underexplored, especially within higher education institutions. Moreover, there is limited research that

specifically investigates how internal knowledge sharing contributes to policy enhancement, process improvement, and the utilization of technology investments, key elements of SC that support long-term sustainable operational performance.

In recent years, the demand for sustainable performance in higher education institutions (HEIs) has intensified, driven by growing societal expectations, environmental accountability, and the pursuit of long-term institutional competitiveness. However, despite this global momentum, many HEIs particularly in developing countries continue to face difficulties in transforming individual academic knowledge into strategic institutional assets. Reports from agencies such as UNESCO and the World Bank highlight that while academic personnel often exhibit high knowledge ownership, institutional mechanisms for knowledge sharing and codification remain underdeveloped and fragmented.

Grounded in the Knowledge Based View (KBV), which emphasizes organizational knowledge as a core driver of sustained performance, this study explores how knowledge sharing can be effectively leveraged to improve institutional sustainability. More specifically, it examines whether structural capital defined as the formal systems, procedures, and technological infrastructure that support knowledge flows acts as a mediator in this relationship.

This issue is particularly evident in Indonesia. Over the past five years, research outputs from Indonesian universities have increased significantly, driven by initiatives such as the national research index (SINTA) and competitive research funding (e.g., DRTPM). Yet, this upward trend has not been accompanied by proportional improvements in institutional performance indicators, such as curriculum innovation, stakeholder collaboration, or internal governance. This suggests that academic knowledge remains largely individualistic, failing to be systematically institutionalized possibly due to weak structural capital, such as non-integrated IT systems, outdated procedures, or the absence of formal knowledge management policies (UNESCO, 2022; World Bank, 2023).

The World Development Report 2025 further underscores the role of institutional standards and infrastructure in enabling sustainable development, especially in developing contexts (World Bank, 2024). Similarly, WDR 2024 calls for the infusion of modern technologies and best practices into institutional systems. The World Intellectual Property Organization (2024) adds that while knowledge can, in theory, be easily shared, it often fails to translate into practice without the presence of robust structural mechanisms.

National evaluations also confirm this institutional gap. The Indonesian Ministry of Education (2023) has acknowledged the absence of systems capable of institutionalizing academic knowledge across many universities. Likewise, BAN-PT (2023) reports deficiencies in structural elements such as standard operating procedures (SOPs), inter-unit documentation practices, and integrated digital systems that hinder quality assurance and sustainable operations.

These global and national findings jointly point to an urgent need to explore the mediating role of structural capital in converting knowledge sharing into sustainable higher education performance. This study contributes to both theory and practice by empirically testing a KBV informed model, offering new insights into how universities can enhance performance through strengthened institutional infrastructure and knowledge-based strategies.

Literature Review

Knowledge Sharing (KS) and Structural Capital (SC)

Knowledge sharing (KS) is the cornerstone of organizational knowledge management, involving the exchange of experiences, insights, and information among individuals to foster innovation and performance (Al-Husseini et al., 2021). In higher education institutions (HEIs), KS transcends the academic realm, it encompasses administrative, strategic, and operational dimensions. Effective KS contributes not only to pedagogical quality but also to institutional governance and service excellence.

KS is often classified into two main forms: refers to the transmission of structured and documented knowledge, including materials such as reports, manuals, guidelines procedures, and digital content; and tacit knowledge sharing (KST), which involves informal, experiential knowledge transmitted through social interaction, mentoring, and shared practice (Nonaka & Takeuchi, 1995; Nonaka & Yamaguchi, 2022). These two dimensions contribute differently to institutional development. While explicit KS supports standardization and efficiency, tacit KS enhances adaptability and innovation through collective sense-making.

However, the implementation of KS in HEIs faces cultural and structural challenges. Prior research highlights issues such as lack of incentives, hierarchical barriers, and isolated practices that hinder effective KS (Al-Kurdi et al., 2020; Olan et al., 2019). Despite these barriers, KS remains a critical enabler for value creation when supported by appropriate organizational mechanisms (Lee, 2018; Xue et al., 2021).

Structural capital (SC) refers to the institutionalized knowledge assets embedded in an organization's infrastructure, processes, and systems (C. Wang & Hu, 2020). It includes formal policies, IT systems, databases, routines, organizational culture, and networks that support knowledge utilization beyond individual capabilities. As a central component of intellectual capital, SC provides the scaffolding for the systematic utilization of both tacit and explicit knowledge. A well developed SC allows knowledge to be stored, retrieved, and consistently applied an essential capability in knowledge intensive institutions like universities (Z. Wang & Wang, 2012).

From the KBV, knowledge represents a critical asset that enables organizational capabilities and fosters long-term advantage (Asiaei & Bontis, 2020). Although operationalizing the KBV can be complex, organizations that effectively convert individual knowledge into structural resources are better positioned for sustainable development (Duarte Alonso et al., 2022; Ujwary-Gil, 2017).

Within the domain of explicit knowledge sharing, which is typically transferred through codified means such as documentation and digital repositories, the processes help build managerial systems that support collaborative decisions and knowledge reusability (Appel-Meulenbroek et al., 2018; Tan, 2016). Explicit KS enriches structural capital by embedding standardized practices into technological systems, procedures, policies, and work culture (Asiaei & Bontis, 2020; Beltramino et al., 2020). Thus, it is expected that:

H_1. Explicit knowledge sharing has a positive effect on structural capital.

Conversely, tacit KS involves personal, context-rich knowledge such as subconscious reasoning, personal reflections, emotional awareness, and operational know-how (Okyere Kwakye et al., 2020). While more difficult to codify, tacit KS can be shared through interpersonal channels, such as mentoring, discussion, training programs, and informal socialization. When effectively harnessed, tacit KS promotes the emergence of new routines, mindsets, and collaborative cultures, which facilitate the formation and strengthening of structural capital (Budur et al., 2024; Cheng, 2020; Wen & Wang, 2021). Therefore, the following hypothesis is proposed:

H_2. Tacit knowledge sharing has a positive effect on structural capital.

Knowledge Sharing (KS) and Sustainable Operational Performance (SOP)

Sustainable operational performance (SOP) refers to an institution's ability to sustain long-term efficiency, service quality, and adaptability in responding to both internal and external challenges. In higher education institutions (HEIs), SOP encompasses effective delivery of academic programs, administrative agility, technological integration, and stakeholder satisfaction (Asiaei & Bontis, 2020).

Research suggests that integrating KS into intellectual capital strategies significantly enhances SOP by fostering institutional agility, learning capacity, and innovation (Cheng, 2020). Nevertheless, the mechanisms by which KS influences performance, particularly through organizational enablers remain underexplored, especially within complex governance structures in developing economies (Budur et al., 2024; Pedro et al., 2020).

Within the framework of the Knowledge Based View, organizations rely on both explicit and tacit knowledge as foundational elements of strategic sustainability (Bloodgood, 2019). Explicit knowledge sharing, typically facilitated through training, information systems, documentation, and cross-functional

collaboration, can enhance quality, responsiveness, and innovation, key components of SOP (Singh et al., 2021). Moreover, by enabling widespread access to knowledge, explicit KS supports shared understanding, strengthens organizational values, and promotes commitment and managerial consistency (Asiaei & Bontis, 2020). In higher education settings, explicit KS has been positively linked to improved institutional outcomes (Al-Kurdi et al., 2020; Wen & Wang, 2021). Based on this reasoning, the following hypothesis is proposed:

H_3. Explicit knowledge sharing has a positive effect on sustainable operational performance.

In parallel, tacit knowledge sharing involves the diffusion of personal, context specific knowledge such as insights, intuition, and experience which is typically undocumented and difficult to articulate (Lee, 2018). Tacit KS plays a vital role in promoting collaboration, cross-functional learning, and collective problem-solving within the organization (Castellani et al., 2021). It also contributes to operational efficiency by reducing errors and enabling continuous improvement in service delivery and innovation processes (Grant & Phene, 2022). Accordingly, it is hypothesized that:

H_4. Tacit knowledge sharing has a positive effect on sustainable operational performance.

Structural Capital (SC) and Operational Performance

From a Knowledge-Based View perspective, knowledge is regarded as the most vital component of strategic value within organizations, shaping capabilities, strategic advantage, and organizational identity (Liu et al., 2020). Within this framework, organizational effectiveness depends not only on knowledge creation and sharing but also on how well knowledge is embedded and leveraged through structural mechanisms. Within the setting of higher education institutions (HEIs), this perspective highlights the interplay between knowledge sharing (KS) and structural capital (SC). While KS serves as the foundation for organizational learning and innovation, SC acts as a systematizing force that institutionalizes knowledge and transforms it into operational capability (Ratnawati et al., 2024). Thus, SC is not merely a passive repository, but an active enabler through which shared knowledge can generate sustained performance outcomes.

SC encompasses the non-human knowledge assets within an organization, including systems, routines, databases, standard operating procedures, communication infrastructure, and technological platforms (Saraswati et al., 2024). These elements facilitate knowledge codification, coordination, and dissemination, which enhance institutional efficiency, reduce operational costs, improve service delivery, and support continuous improvement (Alkaf et al., 2023; Beltramino et al., 2020).

Furthermore, integrating SC into institutional strategies allows for consistent decision-making, improved problem-solving, and enhanced adaptability to environmental change (Ahmed et al., 2022).

However, despite its potential, many HEIs still face challenges in deploying SC effectively due to limited managerial capacity and reliance on informal knowledge systems (Yang & Horak, 2019). Given its central role in institutionalizing knowledge and supporting systematic operations, SC is expected to be a key determinant of sustainable operational performance in HEIs. Accordingly, the following hypothesis is proposed:

H_5. Structural capital has a positive effect on sustainable operational performance.

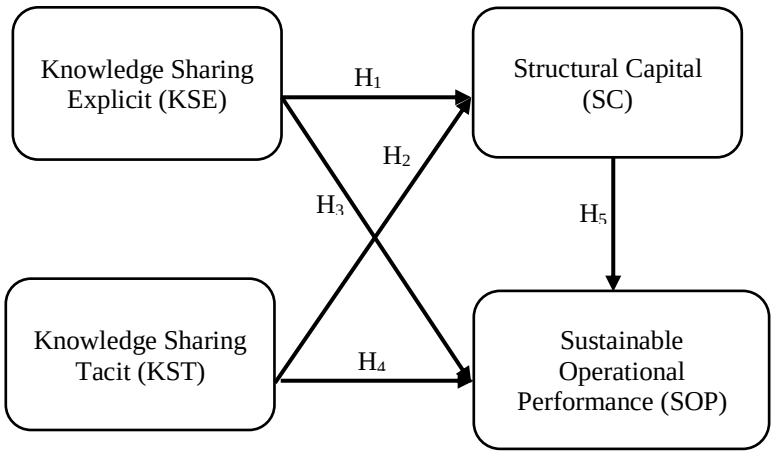

Figure 1 Research Model

Research Methods

To assess the interrelations among knowledge sharing, structural capital, and sustainable operational performance, this study applies a quantitative research design supported by survey data from higher education institutions. The research design is explanatory in nature, as it aims to elucidate both direct and indirect effects among variables through a mediation model.

The population of this study consists of permanent lecturers working at higher education institutions in the Banten region of Indonesia. A purposive sampling technique was employed with the following inclusion criteria: (1) Active lecturers with a minimum of two years of work experience, (2) Actively involved in the university's tri dharma (teaching, research, and community service) activities, and (3) Having access to the institution's knowledge management systems. A sample of 191 individuals was retained for the final stage of analysis.

Data collection was carried out through a web-based questionnaire using a five-point agreement scale (1 = strongly disagree to 5 = strongly agree). The items were drawn from established studies and assessed for both validity and reliability. The measurement of explicit and tacit knowledge sharing, as well as operational performance, was adapted from prior research. Knowledge Sharing (KS) was measured

through indicators of communication, participation, motivation, and knowledge sharing systems (Al-Husseini et al., 2021; Singh et al., 2021). Structural Capital (SC) included components such as processes, systems, infrastructure, and organizational databases (Wang et al., 2014), while Sustainable Operational Performance (SOP) was assessed based on process efficiency, innovation, adaptability, and service sustainability (Olan et al., 2019).

Model estimation was carried out by applying Partial Least Squares-Structural Equation Modeling (PLS-SEM) using Lisrel version 8.80. PLS-SEM was employed due to its effectiveness in analyzing intricate models containing latent constructs and its appropriateness for moderate sample conditions. The analytical procedure involved three steps: validating the measurement model, assessing structural relationships, and examining hypothesis significance.

Results and Discussion

Measurement Model

To assess the measurement model, a Confirmatory Factor Analysis (CFA) was conducted using SEM. This procedure examined convergent and discriminant validity across constructs. Convergent validity was evaluated through factor loadings (> 0.60), Composite Reliability (> 0.80), and Average Variance Extracted (> 0.50), ensuring that all indicators consistently represented their respective latent variables. (Ghozali & Latan, 2013).

Table 1 presents an overview of the descriptive statistics (mean and standard deviation), along with the factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha for all measured constructs.

Table 1. Internal Consistency and Reliability Metrics

Constructs	***Mean***	***SD***	***Items***	***Loading***	***CR***	***AVE***	***C-a***
KS Explicit (KSE)	5.66	1.07	KSE1	0.64	0.89	0.63	0.84
			KSE2	0.94			
			KSE3	0.68			
			KSE4	0.99			
			KSE5	0.65			
KS Tacit (KST)	4.44	0.97	KST1	0.81	0.91	0.71	0.84
			KST2	0.95			
			KST3	0.88			
			KST4	0.72			
Structural Capital (SC)	6.09	1.00	SC1	0.82	0.93	0.77	0.79
			SC2	0.89			
			SC3	0.90			
			SC4	0.89			

Constructs	***Mean***	***SD***	***Items***	***Loading***	***CR***	***AVE***	***C-a***
Operational Performance (SOP)	6.32	0.91	SOP1	0.96	0.94	0.75	0.86
			SOP2	0.73			
			SOP3	0.87			
			SOP4	0.94			
			SOP5	0.82			

All items (Table 1) showed significant factor loadings above 0.60, with values ranging from 0.64 to 0.99. The constructs exhibited Composite Reliability (CR) values between 0.89 and 0.94, and AVE values ranging from 0.63 to 0.77, demonstrating satisfactory convergent validity across all latent variables. Subsequently, Cronbach's Alpha (α) was utilized to assess the internal consistency of the measurement scales. All constructs exhibited alpha values between 0.71 and 0.86, indicating high internal reliability as they exceeded the threshold of 0.70.

Discriminant validity indicates how well a construct can be differentiated from other constructs, both in terms of conceptual definition and empirical data (Hair, Jr. et al., 2022). The criterion for establishing discriminant validity is that a construct's AVE value be greater than the squared correlations it has with other constructs.

Table 2 shows that all constructs in the measurement model have met the criteria for discriminant validity. The AVE values (shown in bold diagonal elements) are consistently higher than the squared correlations between other constructs (shown outside the diagonal). Therefore, it can be concluded that the measurement model exhibits adequate discriminant validity.

Table 2. Inter-Construct Correlations

Constructs	**KSE**	**KST**	**SC**	**OP**
KSE	1	0.28	0.31	0.58
KST	0.28	1	0.60	0.41
SC	0.31	0.60	1	0.32
OP	0.58	0.41	0.32	1

The fitness of the measurement model was further evaluated using a range of model fit indices categorized into: (1) absolute fit indices (e.g., χ^2/df, GFI, RMSEA), (2) incremental fit indices (e.g., NFI, AGFI, CFI), and (3) parsimony-based fit indices (e.g., PGFI, PNFI). As indicated in Table 3, all model fit indices are within acceptable thresholds, fulfilling the established model fit criteria. Thus, the measurement model demonstrates a good fit with the data and is deemed appropriate for hypothesis testing.

Table 3. Summary of CFA Model Fit Indices

Fit Index	*Scores*	*The accepted limit value*
Absolute Fit Measures		
X^2/df	1.98	$\leq 2^a$; $\leq 5^b$
GFI	0.99	$\geq 0.90^a$; $\geq 0.80^b$
RMSEA	0.072	$< 0.08^a$; $< 0.01^b$
Incremental Fit Measures		
NFI	0.98	$\geq 0.90^a$
AGFI	0.98	$\geq 0.90^a$; $\geq 0.80^b$
CFI	0.99	$\geq 0.90^a$
Parsimonies Fit Measures		
PGFI	0.62	The higher, the better
PNFI	0.69	The higher, the better

Notes: Acceptability: [a] acceptable; [b] marginal

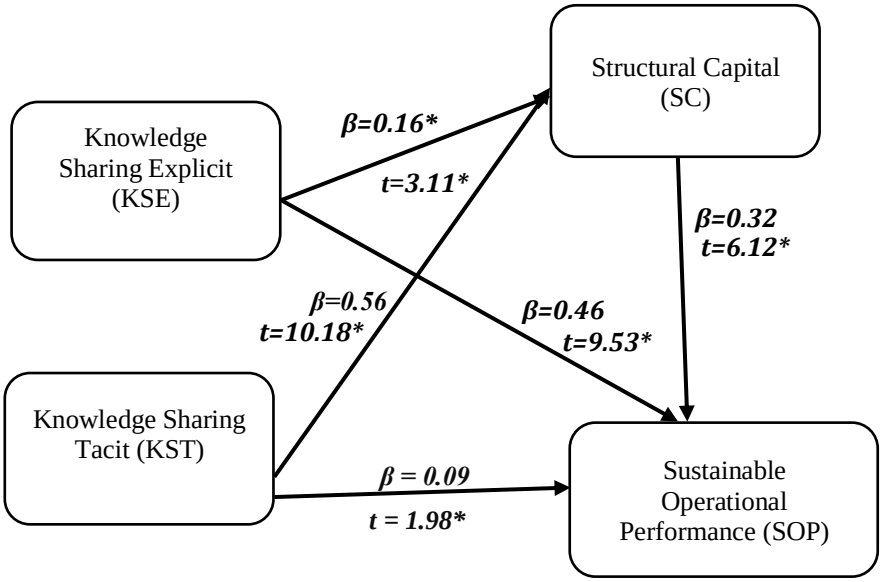

Figure 2. Structural Relationships

Structural Model

The outcomes of the hypothesis testing regarding the structural paths among latent constructs are displayed in Table 4 and Figure 2. The initial two hypotheses address the relationships between knowledge

sharing (KS) and structural capital (SC). The effect of explicit KS on SC is 0.16 ($\rho < 0.05$), supporting H_1. Similarly, tacit KS has a significant impact on SC ($\beta = 0.56$; $\rho < 0.05$), thus empirically supporting H_2.

Hypotheses three and four address the effects of knowledge sharing on operational performance of higher education institutions. Empirical results indicate that explicit knowledge sharing contributes positively to operational outcomes ($\beta = 0.46$; $\rho < 0.05$), while tacit KS also significantly impacts operational performance in higher education ($\beta = 0.09$; $\rho < 0.05$). Our analysis confirms that structural capital contributes positively and significantly to enhancing operational performance in the context of higher education, thus supporting H_5 ($\beta = 0.32$; $\rho < 0.05$).

Table 4. Standardized Path Coefficients

Hypothesis		***Estimate***	***t***	***Remarks***
H_1	KSE → SC	0.16**	3.11	Supported
H_2	KST → SC	0.56**	10.18	Supported
H_3	KSE → SOP	0.46**	9.53	Supported
H_4	KST → SOP	0.09**	1.98	Supported
H_5	SC → SOP	0.32**	6.12	Supported

Note: *Significant at the 0.10 level (two-tailed), * *significant at the 0.05 level (two-tailed)

Table 5. Estimated Effects from Structural Equation Modeling

Predictor/dependent	***SC***	***SOP***
Direct Effects		
KSE	0.0256	0.2116
KST	0.3136	0.0081
SC		0.1024
Indirect Effects		
KSE	0.0251	0.0351
KST	0.0251	0.0277
SC		0.0397
Total Effects		
KSE	0.0507	0.2467
KST	0.3387	0.0358
SC		0.1421

Contributions of Explicit and Tacit Knowledge Sharing to Structural Capital

The structural model reveals a nuanced pathway through which tacit and explicit knowledge sharing contribute differently to the formation of structural capital (SC) in higher education institutions (HEIs). Tacit knowledge sharing (KST) exhibits a strong direct influence on SC ($\beta = 0.3136$), consistent

with the KBV assertion that embedded, experience-based knowledge flows through informal conversations, mentoring, and peer collaboration are critical in shaping institutional norms, routines, and procedural memory (Allameh, 2018; Z. Wang & Wang, 2012). In contrast, the direct impact of explicit knowledge sharing (KSE) on SC is relatively minor (β = 0.0256), indicating that the transformation of codified knowledge into organizational infrastructure may depend more heavily on intermediary mechanisms. This result underscores the importance of fostering communities of practice and non-formal interaction spaces within academic organizations.

Conversely, the relatively weak direct effect of explicit knowledge sharing (KSE) on SC (β = 0.0256) suggests that codified knowledge alone may not suffice to influence institutional structures unless it is supported by formal integration mechanisms such as policy alignment, centralized knowledge repositories, or governance protocols. This divergence may reflect the often-observed gap between documented knowledge availability and its actual institutional assimilation, particularly in HEIs developing countries where knowledge infrastructures remain underdeveloped or fragmented.

The Effect of Knowledge Sharing on Operational Performance

Explicit knowledge sharing demonstrates a significant direct effect on sustainable operational performance (SOP) (β = 0.2116), highlighting its strategic relevance in facilitating task efficiency, compliance, and service delivery through structured training, SOPs, and digital systems (Wang et al., 2014). This affirms that formal knowledge flows support measurable performance outputs, particularly in administrative and academic support units.

In contrast, the negligible direct effect of tacit knowledge sharing on SOP (β = 0.0081) reflects its indirect and latent nature. Tacit knowledge tends to influence performance through social learning, trust-based communication, and adaptive decision-making, which are not immediately quantifiable. This supports (Tan, 2016) argument that tacit knowledge primarily drives organizational resilience and long-term adaptability outcomes that are often mediated through enabling structures like SC.

Structural Capital as a Mediator

The mediating role of SC becomes central in explaining how knowledge resources translate into performance. Both explicit and tacit knowledge exert significant indirect effects on SOP through SC (β = 0.0351 and β = 0.0277, respectively). The total effect of KSE on SOP (β = 0.2467), compared to KST (β = 0.0358), reinforces the notion that explicit knowledge—when coupled with robust structural capital serves as a more immediate performance driver.

Meanwhile, SC itself exhibits both direct (β = 0.1024) and cumulative (β = 0.1421) effects on SOP, confirming its strategic function as a knowledge enabler. In other words, structural capital does not only absorb knowledge it also amplifies it, translating intangible knowledge into executable processes and measurable outcomes. This finding is especially relevant for HEIs seeking to align knowledge management with institutional Key Performance Indicators (KPIs) (Adhikari & Shrestha, 2023; Santos et al., 2024).

Theoretical Contributions to the Knowledge-Based View

This study extends the Knowledge-Based View (KBV) by validating the mediating role of structural capital in transforming knowledge resources into operational performance. While prior KBV studies have primarily focused on commercial firms, this research confirms that knowledge dynamics in HEIs exhibit similar mechanisms, albeit shaped by distinct organizational and cultural characteristics (Inkinen et al., 2017).

Furthermore, the contrasting effects of explicit and tacit knowledge highlight the importance of contextual and infrastructural considerations in the KBV framework. In HEIs—especially within developing economies the path from tacit knowledge to performance is less direct and depends heavily on enabling structures. These findings suggest that SC functions not merely as a passive repository but as an active conduit that shapes and channels knowledge toward institutional value creation.

Conclusion

This research demonstrates, through empirical analysis, the critical value of knowledge sharing (KS) and structural capital (SC) in enhancing operational performance within higher education institutions. Three key findings emerged: first, both explicit and tacit forms of KS significantly contribute to the development of SC; second, these knowledge-sharing practices positively affect operational performance either directly or indirectly; and third, SC functions as a critical mediating mechanism fully mediating the relationship between explicit KS and performance, and partially mediating the effect of tacit KS.

The theoretical contribution lies in extending the Knowledge Based View (KBV) by presenting SC not merely as a static resource, but as a dynamic capability that translates knowledge inputs into actionable performance gains. This integrated model enriches the understanding of how knowledge processes are embedded in and supported by institutional structures, particularly in the higher education sector.

From a practical standpoint, these findings underscore the necessity for higher education leaders to strategically cultivate SC as a means to unlock the value of both tacit and explicit knowledge. Institutions

should invest in formal knowledge systems such as learning management platforms, documentation protocols, and structured training programs to optimize the benefits of explicit KS.

Simultaneously, cultivating a culture that supports tacit KS is equally essential. This involves promoting informal knowledge exchange through collaborative work environments, team-based learning, mentoring, and social interactions among academic staff. Leadership must also play a proactive role in policy-making, facilitating interdepartmental knowledge flows, and aligning digital infrastructure with knowledge management goals.

In the digital era, leveraging information technology (IT) becomes increasingly vital. University leaders particularly rectors and deans are advised to enact institutional strategies that foster both structured and informal knowledge sharing, supported by digital tools that enhance connectivity, storage, and access to knowledge.

While this study contributes meaningfully to knowledge management literature, several limitations must be acknowledged. First, the research does not explicitly examine the influence of organizational culture, routine processes, or knowledge creation and accumulation strategies. Future research should explore how these factors interact with KS and SC in shaping performance outcomes.

Second, environmental uncertainty and external dynamics were not included in the current model. Incorporating such contextual variables in future models could provide a more comprehensive understanding of how knowledge-based resources perform under varying institutional conditions. Lastly, expanding the study across different types of institutions and national contexts could enhance the generalizability of the findings.

Appendix

Research Instruments
Respondent Data

Gender *	:	☐ Male		☐ Female			
Age	:	……..					
Education*	:	☐ D3		☐ S1		☐ S2	☐ S3
Position	:	…….					
Experiences*	:	☐ < 1 year				☐ 1 – 10 years	
		☐ 11 – 20 years				☐ > 20 years	

The training undertaken is related to your duties/profession * :

☐ 2 times ☐ 4 times ☐ > 5 times

☐ 3 times ☐ 5 times

**** Put a check mark (✓) in the box provided.***

How to Complete the Questionnaire:

Sir/Madam, simply check the box (√) next to the answer choices provided in the table based on your opinion. Each statement requires only one answer, by selecting:

Strongly Disagree **Strongly Agree**

1 **2** **3** **4** **5**

A. Explicit Knowledge Sharing

No.	Statements	Score				
		1	**2**	**3**	**4**	**5**
1.	Lecturers and staff at my university frequently share reports and official documents among faculty members.					
2.	Lecturers and staff at my university frequently share reports and official documents they prepare themselves with their faculty members.					
3.	Lecturers and staff at my university frequently collect reports and official documents from others in their work.					
4.	Lecturers and staff at my university frequently encourage knowledge sharing mechanisms.					
5.	Lecturers and staff at my university frequently offer various training and development programs.					
6.	Lecturers and staff at my university are facilitated by IT systems invested in knowledge sharing.					

Source: Wang and Wang (2014)

B. Tacit Knowledge Sharing

No.	Statements	Score				
		1	**2**	**3**	**4**	**5**
1.	Faculty and staff at my university frequently share knowledge based on their experiences.					
2.	Faculty and staff at my university frequently gather knowledge from others based on their experiences.					
3.	Faculty and staff at my university frequently share knowledge with others about know-where or know-whom.					

No.	Statements	Score				
		1	2	3	4	5
4.	Faculty and staff at my university frequently gather knowledge with others about know-where or know-whom.					
5.	Faculty and staff at my university frequently share knowledge based on their expertise.					
6.	Faculty and staff at my university frequently gather knowledge from others based on their expertise.					
7.	Faculty and staff at my university will share lessons learned from past failures when they feel it is still necessary.					

Source: Wang and Wang (2014)

C. Capital Structure

No	Statements	Score				
		1	2	3	4	5
1.	Our college's overall operating procedures are highly efficient.					
2.	Our college responds quickly to change.					
3.	Our college has an easily accessible information system.					
4.	Our college's systems and procedures support innovation.					
5.	Our college culture and atmosphere are flexible and welcoming.					
6.	Our college emphasizes investment in new market development.					
7.	Our college provides support across different departments.					

Source: Wang and Wang (2014)

D. Kinerja Operasional

No	Statements	Score				
		1	2	3	4	5
1.	Our college's customer satisfaction is superior to that of our major competitors.					
2.	Our college's quality development is superior to that of our major competitors.					
3.	Our college's cost management is superior to that of our major competitors.					
4.	Our college's responsiveness is superior to that of our major competitors.					
5.	Our college's productivity is superior to that of our major competitors.					

Source: Wang and Wang (2014)

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