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# ARTIFICIAL INTELLIGENCE, KNOWLEDGE SHARING, AND ORGANIZATIONAL PERFORMANCE IN INDONESIA: A SOCIO-TECHNICAL PERSPECTIVE

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## ABSTRACT

***Artificial intelligence (AI) has become a central driver of organizational digital transformation, yet empirical evidence regarding its impact on organizational performance remains mixed, particularly in emerging economies. Prior studies increasingly suggest that AI does not generate value in isolation, but through complementary organizational processes such as knowledge sharing. Drawing on the knowledge-based view of the firm and a socio-technical systems perspective, this study examines how AI influences organizational performance through knowledge sharing in Indonesian organizations. Using Miles' (2017) taxonomy of research gaps, the study identifies critical knowledge, theoretical, empirical, methodological, and population gaps in the existing literature. A conceptual model is developed in which knowledge sharing mediates the relationship between AI and organizational performance. The study proposes four hypotheses and is designed for empirical testing using Structural Equation Modeling (SEM). This research contributes to AI and knowledge management literature by reframing AI as a socio-technical enabler whose performance effects depend on organizational knowledge-sharing behavior, offering context-specific insights from an under-researched emerging economy.***

**KEYWORDS:** Artificial Intelligence, Knowledge Sharing, Organizational Performance, Socio-Technical Systems, Indonesia.

## 1. INTRODUCTION

Artificial intelligence (AI) has become a central pillar of organizational digital transformation, reshaping how organizations generate insights, coordinate activities, and achieve performance outcomes. AI technologies enable automation, advanced analytics, and intelligent decision support, allowing organizations to process large volumes of data and support more informed decision-making. As a result, AI is increasingly viewed as a strategic resource capable of enhancing organizational efficiency, innovation, and competitiveness (Olan et al., 2022; Mohd et al., 2026). In emerging economies such as Indonesia, AI adoption is strongly encouraged as part of national digital transformation agendas and long-term economic development strategies. Indonesian organizations have begun integrating AI across functional areas such as human resource management, marketing, and operations, with the expectation that AI will improve productivity and organizational performance (Wirawan et al., 2024; Hendrayati et al., 2024). However, despite these investments, empirical evidence regarding the performance outcomes of AI adoption remains mixed and uneven.

A growing body of research suggests that the inconsistency in AI-related performance outcomes stems from an overemphasis on technological capability and an underestimation of organizational and behavioral processes. Much of the existing literature implicitly assumes that AI capability directly improves organizational performance, reflecting a techno-deterministic perspective (Olan et al., 2022). However, recent studies argue that AI creates value only when embedded within effective knowledge management systems and supported by organizational practices that enable learning and collaboration (Gelashvili-Luik et al., 2025; Medina García et al., 2025). From a knowledge-based and socio-technical perspective, AI should be understood not merely as an automation tool, but as a system that generates informational resources requiring human interpretation and collective sensemaking. Knowledge sharing plays a critical role in this process by enabling AI-generated insights to be disseminated, contextualized, and applied across organizational units (Li et al., 2022). Without effective knowledge sharing, AI outputs risk remaining siloed, underutilized, or mistrusted, thereby limiting their impact on organizational performance.

This issue is particularly salient in Indonesian organizations, which are often characterized by hierarchical authority structures, high power distance, and functional silos. These structural and cultural characteristics may constrain voluntary knowledge exchange and reduce the effectiveness of AI-enabled systems (Bangun et al., 2025). In such contexts, AI may enhance data processing and monitoring capabilities but fail to translate into meaningful performance improvements unless employees are willing and able to share and apply AI-generated knowledge. Recent empirical studies provide initial support for this argument. Research in Indonesia indicates that AI experience can improve employee engagement and well-being, but only when AI is perceived as supportive rather than controlling (Adyatma Djoenaid et al., 2025). Conversely, poorly governed AI adoption may blur work–life boundaries and generate resistance, undermining collaboration and knowledge-sharing behavior (Soerya Atmaja et al., 2025). These findings highlight the importance of examining AI not only as a technological innovation, but also as a socio-technical system embedded within organizational contexts.

Prior studies further demonstrate that AI facilitates knowledge sharing through mechanisms such as intelligent knowledge mapping, automated knowledge retrieval, and AI-enabled collaboration platforms (Al Hakim et al., 2021; Anisha Estherita & Vasantha, 2024). At the same time, knowledge sharing has been shown to mediate the relationship between AI capability and organizational outcomes, including creativity and competitive advantage (Li et al., 2022; Setyanti et al., 2026). Despite these insights, empirical research integrating AI, knowledge sharing, and organizational performance within a single explanatory framework remains limited, particularly in emerging-economy contexts. Accordingly, this study seeks to address this gap by examining how AI influences organizational performance through knowledge sharing in Indonesian organizations. By adopting a socio-technical and knowledge-based perspective, the study moves beyond techno-deterministic assumptions and provides a more nuanced understanding of AI-driven performance. In doing so, it contributes to the growing literature on AI and knowledge management by offering context-sensitive empirical evidence from an under-researched setting.

## 2. THEORETICAL BACKGROUND

### *2.1. Artificial Intelligence and Organizational Performance*

From a strategic management perspective, organizational performance reflects an organization's ability to use its resources effectively

and efficiently to achieve strategic objectives. AI enhances performance by improving operational efficiency, reducing human error, and supporting data-driven decision-making. Empirical studies across various sectors demonstrate that AI capabilities positively influence productivity, service quality, and competitive advantage (Olan et al., 2022; Jayarathne et al., 2025). In Indonesian organizations, AI adoption has been linked to performance improvements in human resource management, marketing, and operational decision-making. AI-driven HR analytics support employee performance monitoring and talent management (Wirawan et al., 2024), while AI-enabled digital marketing improves customer engagement and conversion rates (Hendrayati et al., 2024). However, these benefits often remain localized within specific functions and do not automatically translate into organization-wide performance improvements.

### *2.2. Knowledge Sharing as a Core Organizational Capability*

The knowledge-based view of the firm posits that knowledge is the most strategically significant resource within an organization. Organizational performance depends not merely on the possession of knowledge, but on the ability to share and integrate knowledge across individuals and units. Knowledge sharing enables collective learning, coordination, and innovation, thereby enhancing performance outcomes (Li et al., 2022). In hierarchical and bureaucratic organizational contexts, such as those commonly found in Indonesia, knowledge sharing is often constrained by structural silos and cultural norms. These constraints limit the organization's ability to leverage both human expertise and AI-generated insights. As a result, knowledge sharing emerges as a critical mechanism through which AI can create organizational value.

### *2.3. How AI Facilitates Knowledge Sharing*

AI facilitates knowledge sharing through multiple socio-technical mechanisms. First, AI enables intelligent knowledge mapping by analyzing digital footprints, organizational databases, and communication patterns. Empirical research in Indonesia shows that AI-supported knowledge mapping enhances the visibility and accessibility of organizational knowledge, reducing duplication and fragmentation (Al Hakim et al., 2021). Second, AI strengthens core knowledge management processes—knowledge creation, storage, retrieval, and dissemination—through machine learning, neural networks, and expert systems (Gelashvili-Luik et al., 2025; Medina García et al., 2025). These systems automate classification and recommendation, lowering the cognitive cost of knowledge sharing. Third, AI-driven collaboration platforms facilitate real-time communication and interaction. AI chatbots, recommendation systems, and AI-generated content enable seamless knowledge exchange within and across organizational boundaries (Anisha Estherita & Vasantha, 2024; Cheng et al., 2025). Fourth, AI supports personalized learning and development by tailoring training content to individual competencies and performance needs. Personalized learning enhances absorptive capacity and engagement, increasing employees' willingness to share knowledge (Anisha Estherita & Vasantha, 2024).

### *2.4. Organizational Impacts and Challenges*

AI-enabled knowledge sharing has been shown to enhance organizational creativity, innovation, and competitive advantage. Knowledge sharing mediates the relationship between AI capability and organizational creativity, enabling the transformation of analytical outputs into novel solutions (Li et al., 2022; Aljuwaiber, 2025). In Indonesian creative industries, AI adoption strengthens competitive advantage primarily through knowledge-sharing behavior and human resource competence (Setyanti et al., 2026). However, AI integration also introduces challenges related to employee well-being, work engagement, and governance. While AI can reduce workload and stress, excessive monitoring and poorly governed AI adoption may undermine trust and knowledge-sharing behavior (Adyatma Djoenaid et al., 2025; Soerya Atmaja et al., 2025). Leadership alignment and ethical governance are therefore essential for sustaining AI-enabled knowledge sharing (Herlina et al., 2024).

### *2.5. Research Gap Identification Using Miles' (2017) Taxonomy*

To systematically position this study, Miles' (2017) taxonomy of research gaps is applied. Rather than claiming a generic "lack of studies," this approach identifies multiple, interlocking gaps that justify the present research.

*Table 1: Research Gap Identification Based on Miles (2017).*

| Gap Type | Description | Evidence from Literature | Gap Addressed in This Study |
|---|---|---|---|
| Knowledge Gap | Fragmented understanding | AI, knowledge sharing, and performance studied separately | Integrated AI–KS–Performance framework |
| Theoretical Gap | Techno-deterministic bias | Knowledge sharing treated as peripheral | Knowledge sharing as central mediator |
| Empirical Gap | Limited empirical testing | Few mediation tests in Indonesia | SEM-based empirical validation |
| Methodological Gap | Limited causal modeling | Dominance of qualitative/descriptive studies | Structural equation modeling |
| Practical–Knowledge Gap | Theory–practice disconnect | AI adoption without knowledge governance | Managerial implications for AI value creation |
| Population Gap | Under-researched contexts | Focus on developed economies | Indonesian organizational context |
| Evidence Gap | Mixed findings | Inconsistent AI–performance results | Mediation logic resolves contradictions |

### *2.6. Research Contribution*

By addressing multiple research gaps simultaneously, this study makes four key contributions. First, it advances theory by repositioning knowledge sharing as the central mechanism linking AI to organizational performance. Second, it provides empirical evidence from an under-researched emerging economy. Third, it strengthens methodological rigor through SEM-based testing of mediation effects. Finally, it offers practical guidance for managers and policymakers, emphasizing that AI-driven performance depends on organizational learning and knowledge governance rather than technology alone.

## 3. HYPOTHESES DEVELOPMENT

### *3.1. Artificial Intelligence and Organizational Performance*

Artificial intelligence (AI) enhances organizational performance by improving operational efficiency, decision quality, and strategic responsiveness. AI enables organizations to automate routine tasks, analyze large and complex datasets, and support predictive and prescriptive decision-making, which collectively contribute to superior performance outcomes. Empirical evidence shows that AI capability positively influences organizational performance by strengthening analytical capacity and resource utilization (Olan et al., 2022; Jayarathne et al., 2025).

In the Indonesian context, AI adoption has been associated with improved performance across functional domains, including human resource management and digital marketing. AI-driven HR analytics support performance monitoring and talent management (Wirawan et al., 2024), while AI-enabled digital marketing enhances customer engagement and competitive positioning (Hendrayati et al., 2024). These findings suggest that AI can directly contribute to organizational performance, although the magnitude of this effect may vary depending on organizational conditions.

H1: Artificial intelligence has a positive effect on organizational performance.

### *3.2. Artificial Intelligence and Knowledge Sharing*

Knowledge sharing refers to the exchange of task-relevant information, expertise, and insights among organizational members. AI facilitates knowledge sharing by enhancing knowledge discovery, codification, and dissemination through intelligent knowledge management systems, recommendation algorithms, and collaborative platforms. Empirical research in Indonesia demonstrates that AI-supported knowledge mapping improves the visibility and accessibility of organizational knowledge (Al Hakim et al., 2021).

Furthermore, AI-driven collaboration tools and personalized learning systems promote employee engagement and interaction, thereby encouraging knowledge-sharing behavior (Anisha Estherita & Vasantha, 2024). AI adoption also reduces structural barriers to information exchange in hierarchical organizations by providing technology-mediated channels for communication (Hu et al., 2025). These mechanisms indicate a positive relationship between AI and knowledge sharing.

H2: Artificial intelligence has a positive effect on knowledge sharing.

### *3.3. Knowledge Sharing and Organizational Performance*

From the knowledge-based view of the firm, organizational performance depends on the organization's ability to transform individual knowledge into collective organizational knowledge.

Knowledge sharing enables collective learning, coordination, and innovation, which are essential for sustained performance. Prior studies consistently report a positive relationship between knowledge sharing and organizational performance across industries and contexts (Li et al., 2022; Wongmahesak et al., 2025).

In emerging economies such as Indonesia, knowledge sharing plays a particularly important role in mitigating the negative effects of hierarchical structures and functional silos. When employees actively share knowledge, organizations are better able to integrate AI-generated insights into decision-making and operational processes, leading to improved performance outcomes.

H3: Knowledge sharing has a positive effect on organizational performance.

### *3.4. The Mediating Role of Knowledge Sharing*

Although AI enhances an organization's capacity to generate and process information, its performance impact is largely indirect and contingent upon human interaction and knowledge processes. AI produces insights, but these insights must be interpreted, shared, and embedded into organizational routines to influence performance. Empirical studies demonstrate that knowledge sharing mediates the relationship between AI capability and organizational outcomes such as creativity, competitive advantage, and performance (Li et al., 2022; Setyanti et al., 2026). From a socio-technical perspective, AI functions as an enabling technology, while knowledge sharing represents the behavioral mechanism that converts AI-generated outputs into collective action. This mediating role is especially salient in Indonesian organizations, where cultural and structural constraints limit direct technology-to-performance effects.

H4: Knowledge sharing mediates the relationship between artificial intelligence and organizational performance.

## 4. METHODOLOGY

### *4.1. Research Design*

This study adopts a quantitative, cross-sectional research design to examine the relationships between artificial intelligence (AI), knowledge sharing, and organizational performance in Indonesian organizations. The research design is explanatory in nature, aiming to test theoretically derived hypotheses and assess both direct and indirect effects among constructs. Given the exploratory yet theory-driven nature of AI adoption research in emerging economies, Partial Least Squares Structural Equation Modeling (PLS-SEM) was selected as the primary analytical technique. PLS-SEM is appropriate for this study for several reasons. First, it is well suited for research models that emphasize prediction and theory development rather than strict theory confirmation. Second, PLS-SEM performs well with complex models involving mediation effects. Third, it does not require multivariate normality and is robust for Likert-scale survey data, which characterizes the present dataset. These characteristics make PLS-SEM particularly suitable for organizational and information systems research in emerging contexts.

### *4.2. Sample and Data Collection*

Data were collected using a structured questionnaire administered to employees working in Indonesian organizations that have implemented or are currently using AI-enabled systems in their operations. Respondents represented diverse functional areas and organizational roles, ensuring adequate variation in AI exposure and knowledge-sharing practices. A total of 207 valid responses were obtained and included in the final analysis after data screening. This sample size exceeds commonly recommended minimum thresholds for PLS-SEM, particularly for mediation models with three latent constructs. According to the "10-times rule" and more recent power-based guidelines, the sample size is sufficient to estimate the proposed structural relationships reliably. Respondent Profile consists of gender, which are 57.5% female, and 42.5% male, and age is between early-career and mid-career categories. For tenure, most respondents had between 1 and 6 years of organizational experience. This demographic distribution reflects the composition of Indonesia's digitally active workforce and supports the relevance of the findings for organizations undergoing digital transformation.

### *4.3. Measurement Instruments*

All constructs were measured using multi-item reflective scales adapted from prior validated studies and contextualized to the Indonesian organizational setting. Responses were captured using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). AI was operationalized as a higher-order construct capturing employees' perceptions of AI usage and support within their organization. It comprised four dimensions: AI Utilization, Perceived Usefulness of AI, Trust in AI, and AI-enabled Knowledge Support. These dimensions collectively reflect how AI systems are adopted, trusted, and leveraged to support work

processes and knowledge activities. Knowledge sharing was measured as a composite construct consisting of two dimensions: Knowledge Donating (sharing one's own knowledge with others) and Knowledge Collecting (seeking and acquiring knowledge from colleagues). This operationalization captures both outbound and inbound knowledge-sharing behaviors, consistent with the knowledge management literature. Organizational performance was measured using employee-reported indicators reflecting task accomplishment, work effectiveness, and contribution to organizational outcomes. The scale captures perceived performance at the individual level as a proxy for broader organizational performance, which is common in organizational behavior and IS research.

### *4.4. Data Screening and Preparation*

Before analysis, the dataset was screened for missing values and inconsistencies. Responses with incomplete data on any measurement item were excluded. All indicators were converted to numeric format and standardized before PLS-SEM estimation to ensure comparability across constructs. Descriptive statistics indicated no extreme outliers or abnormal response patterns. Variance inflation factor (VIF) values were examined at the construct level and were well below conservative thresholds, indicating that multicollinearity was not a concern.

### *4.5. Measurement Model Assessment*

The reflective measurement model was evaluated following established PLS-SEM guidelines using the following criteria. Indicator reliability was assessed through outer loadings. Most indicators exhibited loadings above or close to the recommended threshold of 0.70, indicating acceptable item reliability for theory testing in an emerging research domain. Internal consistency was evaluated using Composite Reliability (CR) rather than Cronbach's alpha, as CR is considered more appropriate for PLS-SEM. All constructs exceeded the minimum recommended threshold of 0.70, indicating satisfactory reliability. Convergent validity was assessed using Average Variance Extracted (AVE). While AVE values were below the conservative threshold of 0.50, the constructs demonstrated strong composite reliability and theoretical coherence. Following established guidance, constructs with AVE slightly below 0.50 can be retained when CR is high, and indicators are theoretically grounded, particularly in exploratory or emerging research contexts. Discriminant validity was assessed using the Fornell–Larcker criterion, and Heterotrait–Monotrait (HTMT) ratio. Both criteria indicated adequate discriminant validity, with HTMT values well below recommended thresholds, confirming that the constructs are empirically distinct.

### *4.6. Structural Model Assessment*

The structural model was evaluated by examining Path coefficients (β), Coefficient of determination ($R^2$), Effect sizes ($f^2$), and Predictive relevance through bootstrapping. To assess the statistical significance of hypothesized relationships, a bootstrapping procedure with 1,000 resamples was employed. This non-parametric approach allows robust estimation of standard errors, t-values, confidence intervals, and indirect effects without relying on distributional assumptions. The mediating role of knowledge sharing was tested using bootstrapped indirect effects. Mediation was considered supported when the confidence interval for the indirect effect did not include zero. All analyses were conducted using a Python-based PLS-SEM workflow, implementing iterative PLS path modeling algorithms and non-parametric bootstrapping procedures. This approach ensures transparency, reproducibility, and consistency with contemporary SEM-PLS methodological standards. Final results were formatted into journal-ready tables for reporting.

### *4.7. Ethical Considerations*

Participation in the study was voluntary, and respondents were informed of the academic purpose of the research. No personally identifiable information was collected, and all responses were analyzed in aggregate form to ensure confidentiality and anonymity.

## 4.8. RESULTS

### *4.8.1. Measurement Model Assessment*

| Constructs | HTMT |
|---|---|
| AI – Knowledge Sharing | 0.534 |
| AI – Performance | 0.287 |
| Knowledge Sharing – Performance | 0.304 |

The measurement model was assessed using indicator loadings, internal consistency reliability, convergent validity, and discriminant validity. Outer loadings indicated moderate indicator reliability across constructs, with loadings ranging from 0.518 to 0.768 for AI, 0.569 to 0.769 for knowledge sharing (KS), and 0.555 to 0.765 for organizational performance (OP). Composite reliability (CR) values exceeded acceptable thresholds, indicating

satisfactory internal consistency (AI = 0.918; KS = 0.871; OP = 0.761). Convergent validity, assessed via AVE, was marginal as AVE values fell below 0.50 (AI = 0.414; KS = 0.460; OP = 0.393), suggesting that the constructs explain less than half of the variance in their indicators. Given the strong CR values and theoretical grounding of the indicators, the measures were retained for structural model testing, while the marginal AVE was treated as a measurement limitation and an opportunity for future scale refinement. It can be seen in Table 1 below that the measurement model assessment.

Discriminant validity was supported. HTMT ratios were below conservative thresholds (AI–KS = 0.534; AI–OP = 0.287; KS–OP = 0.304), indicating that constructs are empirically distinct. The Fornell–Larcker criterion also supported discriminant validity as the square roots of AVE exceeded the inter-construct correlations. It can be seen below in Table 2 that the discriminant validity.

***Table 2. Discriminant Validity.***

| Construct | CR | AVE | √AVE |
|---|---|---|---|
| AI | 0.918 | 0.414 | 0.643 |
| Knowledge Sharing | 0.871 | 0.460 | 0.679 |
| Organizational Performance | 0.761 | 0.393 | 0.627 |

### *4.8.2. Structural Model Assessment*

The structural model was evaluated using path coefficients, bootstrapped significance testing, and explained variance ($R^2$). The model explained 22.1% of the variance in knowledge sharing ($R^2 = 0.221$) and 9.9% of the variance in organizational performance ($R^2 = 0.099$). Bootstrapping results showed that AI had a strong positive effect on KS ($\beta = 0.470$, $t = 7.748$, $p < 0.001$). KS had a positive effect on OP ($\beta = 0.218$, $t = 2.355$, $p = 0.019$). The direct effect of AI on OP was positive but marginal ($\beta = 0.147$, $t = 1.804$, $p = 0.071$). Mediation analysis indicated a significant indirect effect of AI on OP through KS ($\beta_{indirect} = 0.102$, $t = 2.128$, $p = 0.033$), with a bootstrapped 95% confidence interval excluding zero [0.020, 0.199]. The total effect of AI on OP was significant ($\beta_{total} = 0.250$, $t = 3.835$, $p < 0.001$), suggesting that AI contributes to performance primarily through the knowledge-sharing pathway. It can be seen in Table 3 below that the structural path coefficients and Table 4 that the mediation analysis.

***Table 3: Structural Path Coefficients.***

| Hypothesis | Path | β | t-value | p-value | Decision |
|---|---|---|---|---|---|
| H2 | AI → Knowledge Sharing | 0.470 | 7.75 | <0.001 | Supported |
| H3 | Knowledge Sharing → Performance | 0.218 | 2.36 | 0.019 | Supported |
| H1 | AI → Performance | 0.147 | 1.80 | 0.071 | Marginal |

***Table 4. Mediation Analysis.***

| Effect | β | 95% CI |
|---|---|---|
| Indirect (AI → KS → OP) | 0.102 | [0.020, 0.199] |
| Total Effect (AI → OP) | 0.250 | [0.147, 0.385] |

## 5. DISCUSSION

This study examined how AI influences organizational performance through knowledge sharing in Indonesian organizations, responding to concerns that AI-driven performance effects are often inconsistent and context-dependent (Olan et al., 2022; Bangun et al., 2025). The findings support a socio-technical interpretation: AI appears to strengthen performance not primarily as a standalone technological capability, but through its capacity to intensify organizational knowledge-sharing processes. First, AI demonstrated a strong positive association with knowledge sharing (H2 supported). This aligns with evidence that AI can facilitate knowledge discovery, mapping, and dissemination via intelligent knowledge management infrastructures (Al Hakim et al., 2021; Gelashvili-Luik et al., 2025). In the Indonesian context—where structural silos and hierarchical communication patterns may constrain voluntary knowledge exchange—AI-enabled systems likely reduce transaction costs for knowledge sharing by making expertise, documentation, and task-relevant information more visible and accessible (Anisha Estherita & Vasantha, 2024). The results also resonate with arguments that AI adoption promotes employee knowledge-sharing behavior under enabling conditions (Hu et al., 2025), implying that AI can become a catalyst for collaborative knowledge processes rather than simply a tool for automation.

Second, knowledge sharing positively predicted organizational performance (H3 supported). This supports the knowledge-based view that performance gains are achieved when knowledge is shared, combined, and embedded into routines that shape decision quality, coordination, and problem-solving. The result is consistent with prior work

linking knowledge processes to performance outcomes through innovation or technological innovation pathways (Li et al., 2022; Wongmahesak et al., 2025). For Indonesian organizations, this finding is important because it suggests that the "value realization" of digital initiatives depends on whether AI-generated insights are collectively interpreted and operationalized rather than remaining localized within specific teams or systems. Third, mediation analysis confirmed that knowledge sharing significantly transmits the effect of AI to performance (H4 supported). The indirect effect was statistically significant and the confidence interval excluded zero, suggesting that the pathway AI → KS → OP is a credible value-creation mechanism. Substantively, this finding challenges techno-deterministic claims that AI automatically enhances performance and instead supports the view that AI becomes performance-relevant when it generates insights that are shared and acted upon across the organization. This is consistent with studies showing that knowledge sharing mediates AI capabilities and organizational outcomes, including creativity and competitive advantage (Li et al., 2022; Setyanti et al., 2026).

Notably, the direct AI → performance path was only marginal (H1 partially supported in the direct sense), while the total effect remained significant. This pattern is theoretically meaningful: it indicates that AI's performance contribution is more strongly realized through knowledge-sharing dynamics than through a large direct effect. In practice, this implies that organizations may not obtain substantial performance gains from AI investments if they focus primarily on technical deployment (e.g., automating tasks or implementing AI tools) without concurrently strengthening governance, routines, and incentives that institutionalize knowledge sharing. This interpretation aligns with evidence that AI benefits are contingent upon organizational capability and HR competence (Setyanti et al., 2026), and that AI can alter employee experiences and engagement in ways that shape adoption and learning processes (Adyatma Djoenaid et al., 2025; Soerya Atmaja et al., 2025). It also supports the view that leadership conditions can shape how AI affects engagement and knowledge practices (Herlina et al., 2024).

However, explained variance for performance was modest ($R^2 = 0.099$), indicating that performance is influenced by additional factors beyond AI and knowledge sharing. This is consistent with the broader Indonesian AI ecosystem context, where infrastructural limitations, skill shortages, and governance fragmentation may constrain performance impacts (Bangun et al., 2025). Future research should extend the model by incorporating boundary conditions such as leadership, communication culture, trust climate, AI governance, or HR capability—factors that may strengthen the KS → OP link and increase predictive power. Finally, convergent validity was marginal (AVE < 0.50), despite acceptable composite reliability. This suggests that while the constructs are internally consistent and empirically distinct, future refinement is warranted—especially for performance, where items may capture both in-role and contextual behaviors (e.g., initiative/helping). Researchers may improve measurement precision by separating performance dimensions or refining indicators to better align with the specific performance definition used in the study.

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