

REVIEWER'S REPORT

Manuscript No.: JNHST- 080

Title: Artificial Intelligence-Augmented Open Innovation and Knowledge Management: An extension of the Integrated OIKM framework for Telecommunication Organizations.

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity			✓	
Significance	✓			

Reviewer's ID: JPR- Abdul Haseeb

Detailed Reviewer's Report

This conceptual manuscript extends Prashanthan's (2025) Integrated Open Innovation and Knowledge Management (OIKM) framework by integrating recent literature (2024–2026) on Generative AI (GenAI) and Agentic AI. Positioned within the knowledge-based view (KBV) of the firm, the paper introduces the AI-Augmented OIKM (AI-OIKM) model. It formulates four theoretical propositions (P1–P4) that frame AI capabilities—Agentic Open Innovation, GenAI-Mediated Knowledge Flow, AI-Enabled Absorptive Capacity, and AI/Digital Intellectual Capital—as boundary conditions and layer-level moderators/mediators, rather than independent variables. Additionally, the paper outlines a proposed mixed-methods empirical validation design using PLS-SEM and qualitative case study methodology.

The paper addresses a timely topic at the intersection of AI integration, knowledge management, and open innovation, specifically tailoring its conceptual claims to the telecommunications sector. The underlying logic of overlaying an "AI-mediated layer" onto an established, previously validated framework (Prashanthan, 2025) while preserving construct identity and comparability is sound and conceptually clean.

However, the manuscript has key areas that require improvement prior to publication. These include clarifying theoretical mechanisms in the proposition statements, refining the visual model to eliminate diagrammatic inconsistencies, strengthening the methodological section, and correcting several typographical and citation errors.

REVIEWER'S REPORT**Key Areas for Improvement****1. Conceptual Rigor and Proposition Formulation**

- **Alignment Between Conceptual Diagram and Proposition Logic:** In Figure 2, the AI-Mediated Layer is depicted as directly feeding into or moderating all lower constructs via dashed arrows. However, the individual propositions (P1–P4) describe nuanced interactions. For instance, P2 states that AI-enabled absorptive capacity amplifies the original moderating effect of absorptive capacity on the relationship between open innovation and intellectual capital, whereas P4 focuses on organizational readiness factors as contingent moderating conditions. The authors should ensure that the graphical notation in Figure 2 (e.g., solid vs. dashed lines, bidirectional vs. unidirectional arrows) strictly matches the formal narrative of P1–P4.
- **Conceptual Boundary of AI/Digital Intellectual Capital (AI-IC):** In Table 1, AI-IC is defined as embedded within human, structural, and relational capital rather than standing as a fifth separate capital. Yet in P3 and Figure 2, AI-IC is discussed alongside Intellectual Capital in a way that risks confusing whether it is an antecedent, a sub-dimension, or a moderator of the mediation path. Clarifying the precise structural path of AI-IC within the mediation chain (OIP $\rightarrow$ IC $\rightarrow$ KM) will significantly strengthen the conceptual contribution.

2. Methodological Precision for Future Validation

- **Sample Size Determination for PLS-SEM:** Section 4.2 suggests a quantitative sample size of $n = 50\text{--}100$ based on the original pilot study guidance. For a structural equation model involving four complex constructs with moderated mediation pathways, $n = 50$ may lack adequate statistical power. The authors should explicitly justify sample size requirements using formal power analysis (e.g., $G^*\text{Power}$ software or Hair et al., 2019 minimum sample size guidelines for PLS-SEM) rather than relying solely on pilot study heuristics.
- **Construct Operationalization:** While Table 1 provides theoretical definitions for the four extended constructs, adding a short table of sample measurement items or construct indicators would provide concrete guidance for researchers seeking to execute the empirical agenda.

3. Sector-Specific Contextualization

- **Telecommunications Focus:** The paper argues that telecommunications is a unique sector for agentic AI due to network operations (AI-RAN) and customer service automation. However, much of the foundational logic in Section 2.6 is drawn from manufacturing and cross-industry panels (e.g., He & Yang, 2026; Han et al., 2026). The authors openly acknowledge this in the limitations. To strengthen the conceptual background, the Discussion or Introduction should more

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clearly articulate why telecommunication infrastructure and regulatory environments present unique knowledge-boundary dynamics compared to general manufacturing.

4. Editorial, Typographical, and Formatting Revisions

- **Duplicate Text in Managerial Implications:** In Section 5.2 (lines 230–235), there is verbatim repetition of the text regarding agentic AI deployment in bounded vs. coupled open innovation activities. Sentence structures beginning with "Third, bound open-innovation processes..." and "Thirdly, agentic AI should be adopted..." must be consolidated.
- **Reference and Text Inconsistencies:**
 - In the Abstract (line 7), "Open Innovation and Knowledge Manager ST (OIKM)" contains a stray "Manager ST" artifact.
 - In Section 1 (line 33), "Prashanthan (2025) for a Telecommunication Operator based on Sri Lanka" contains minor phrasing awkwardness ("based in Sri Lanka").
 - Standardize spacing and punctuation in citations throughout the text (e.g., missing spaces in reference list entries and inline citations).

Recommendation**Minor Revision Required.**

This manuscript offers an insightful conceptual extension to an integrated open innovation and knowledge management framework, adapting it to the rapidly emerging realities of generative and agentic AI in the telecommunications sector. The conceptual framing is timely and well-anchored in KBV literature. The manuscript will be suitable for publication after the authors address the following revisions:

1. **Reconcile Conceptual Model and Propositions:** Ensure Figure 2's visual notation precisely mirrors the structural paths and moderating mechanics articulated in P1–P4.
2. **Refine Methodological Guidance:** Update the quantitative sample size justification with formal PLS-SEM statistical power parameters (Power).
3. **Eliminate Textual Redundancies:** Fix the repeated paragraph in Section 5.2 and correct minor typographical artifacts in the Abstract and body text.
4. **Clarify Operational Boundaries:** Briefly expand on how AI/Digital Intellectual Capital (AI-IC) is measured as an embedded dimension within standard IC categories.