

Role of Knowledge Sharing in Enhancing Innovative Performance Through High-Performance Work Systems

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Abstract

In today's competitive business landscape, fostering employee innovation is essential for organizational success. High-Performance Work Systems (HPWS) have emerged as a strategic approach to enhance employee capabilities, motivation, and engagement, ultimately driving innovative performance. This study examines the mediating role of knowledge-sharing in the relationship between HPWS and creative outcomes, drawing on social exchange theory to explore how organizational practices foster knowledge-sharing behaviours that enhance innovation. The findings reveal that knowledge sharing is a critical mechanism through which HPWS translates into higher levels of innovative performance, as employees effectively utilize shared knowledge to generate new ideas and solutions. By highlighting the importance of knowledge sharing as a bridge between HPWS and innovation, the study contributes to the literature on human resource management and organizational performance, offering valuable insights for organizations seeking to build sustainable competitive advantages through enhanced employee-driven innovation.

Keywords: High-Performance Work Systems (HPWS), Knowledge Sharing, Innovative Performance, Social Exchange Theory, Innovation Performance.

Introduction

Innovation is widely acknowledged as a fundamental pillar of sustainable competitive advantage, particularly within knowledge-intensive industries where the generation and application of novel ideas serve as key drivers of organizational success (Chen et al., 2022; Siddiqui et al., 2024). Employee innovative performance, defined as the capability to conceptualize, adopt, and implement new ideas, plays a pivotal role in fostering organizational innovation (Janssen, 2000, 2003; Kianto et al., 2017; Singh et al., 2021). Despite the extensive body of literature examining the antecedents of innovative performance, the specific influence of human resource management (HRM) practices on this outcome remains underexplored. This gap underscores the need for further investigation into how strategic HRM systems can effectively nurture and enhance employee innovation.

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High-Performance Work Systems (HPWS), comprising practices such as selective recruitment, comprehensive training programs, performance-based incentives, and employee empowerment, have been widely recognized for their potential to stimulate innovative behaviour (Bhayana et al., 2024; Dorta-Afonso et al., 2021; Gürlek, 2021). However, the mechanisms through which HPWS translates into enhanced innovative performance are not fully understood (Agirre-Aramburu et al., 2023; Al-Ajlouni, 2021). This lack of clarity necessitates a closer examination of the processes and pathways that link HPWS to employees' innovative performance.

One such pathway is knowledge sharing, wherein employees actively exchange and leverage knowledge to generate innovative solutions and ideas (Azeem et al., 2021; Singh et al., 2021). Knowledge sharing facilitates the integration of diverse perspectives and expertise, creating a fertile environment for creativity and problem-solving (Abbasi et al., 2021; Capestro et al., 2024). Increasingly, knowledge sharing is recognized as a critical mediator in the relationship between organizational practices and innovation (Gürlek, 2021; Singh et al., 2021). Drawing upon social exchange theory, this study posits that HPWS fosters a culture of trust, collaboration, and reciprocity, which encourages employees to engage in knowledge-sharing behaviours (Bhayana et al., 2024; Han et al., 2020). These behaviours, in turn, catalyze innovative performance.

This research seeks to address a critical gap in the literature by investigating the interplay among HPWS, knowledge sharing, and innovative performance. The findings are expected to provide theoretical contributions and actionable insights for practitioners aiming to enhance organizational innovation through strategic HRM practices.

Literature Review

Social exchange theory provides a valuable lens for understanding the interplay between HPWS, knowledge sharing, and innovative performance (Bhayana et al., 2024; Fu et al., 2013; Han et al., 2020). According to this theory, social relationships are governed by principles of reciprocity, where individuals respond to favourable treatment with positive behaviours (Cook & Rice, 2006). In the context of HPWS, employees perceive practices such as training, recognition, and empowerment as organizational investments in their well-being and professional growth (Huang et al., 2023; Wang et al., 2021). These perceptions elicit reciprocal behaviours, including knowledge sharing and collaboration, contributing to organizational goals.

Furthermore, social exchange theory highlights the role of trust and mutual obligation in fostering a collaborative culture (Alfes et al., 2012; Xi et al., 2021). HPWS, by promoting transparency, inclusivity, and equitable rewards, builds trust among employees, thereby encouraging them to share their knowledge without fear of exploitation or loss of individual recognition (Escribá-Carda et al., 2023; Singh, Gupta et al., 2021). This dynamic creates a virtuous cycle where shared knowledge becomes a resource for collective innovation.

High-Performance Work Systems (HPWS) and Innovative Performance

HPWS is a cohesive set of HRM practices which maximize employee skills, motivation and employee opportunities to contribute to organizational goals (Fragoso et al., 2022; Heffernan & Dundon, 2016; Pichler et al., 2014). The practices include recruitment, intense training, performance-dependent rewards, employee empowerment, and group decision-making. HPWS has been consistently linked to positive organizational outcomes, such as enhanced productivity, employee engagement, and organizational agility (Huang et al., 2023; Oh & Kim, 2022). In the context of innovation, HPWS is theorized to provide the structural and cultural support necessary for fostering creative and innovative behaviours among employees.

The connection between HPWS and innovative performance, defined as employees' ability to generate, implement, and refine new ideas, has attracted considerable scholarly attention (Bhayana et al., 2024; Kakakhel & Khalil, 2022; Siddiqui et al., 2024). Existing research suggests that HPWS can influence innovative performance by equipping employees with the skills and motivation required for creative problem-solving (Gürlek, 2021; Siddiqui et al., 2024). However, the direct causal mechanisms through which HPWS leads to improved innovation outcomes remain a subject of ongoing inquiry. Scholars have argued that while HPWS creates a foundation for innovation, its effectiveness is contingent upon mediating factors that facilitate the transformation of individual competencies into collective innovation (Gürlek, 2021; Zhang et al., 2013; Zhou et al., 2019).

H1: HPWS has a positive relationship with innovative performance.

HPWS and Knowledge Sharing

HPWS and knowledge sharing are synergistic, fostering innovation and adaptability, particularly in knowledge-intensive sectors (Huang et al., 2023; L'Écuyer et al., 2019; Siddiqui et al., 2024). HPWS enhances employee skills, motivation, and opportunities for collaboration, creating an environment that supports trust and open knowledge exchange (Bhatti et al., 2021; Escribá-Carda et al., 2023). Practices like team-based structures, participatory decision-making, and performance-based rewards incentivize sharing and break down silos (Siddiqui, Anwer, John, & Rabie, 2024).

By promoting trust and psychological safety through transparent HR practices and inclusive leadership, HPWS empowers employees to share insights without fear. Structured opportunities, such as mentoring and cross-training, enable the transfer of critical tacit knowledge (Anser et al., 2020; Bhatti et al., 2021). Additionally, HPWS addresses barriers like knowledge hoarding by aligning individual goals with organizational objectives, reinforcing the value of collaboration.

This relationship enhances organizational learning, adaptability, and innovation while strengthening intellectual capital (Gürlek, 2021; Siddiqui et al., 2024). HPWS serves as both catalyst and facilitator, positioning organizations to harness their knowledge assets effectively for sustained competitive advantage.

H2: HPWS has a positive relationship with knowledge sharing.

Knowledge Sharing and Innovative Performance

Knowledge sharing is crucial for enhancing employees' innovative performance by enabling the exchange and application of ideas and expertise (Escribá-Carda et al., 2023; Saleem et al., 2023; Singh et al., 2021). It broadens employees' understanding, fosters collaboration, and encourages the creation of novel solutions by integrating diverse perspectives. Access to shared knowledge enhances problem-solving capabilities and supports continuous improvement, key elements sustaining innovation in dynamic environments.

Trust and psychological safety are essential for effective knowledge sharing, as employees are more likely to share ideas in a supportive and inclusive culture (Fragoso et al., 2022; Lv & Xu, 2018). Leadership and structured practices, such as knowledge-sharing platforms and cross-functional collaborations, further strengthen this relationship by facilitating seamless communication and resource access. In essence, knowledge sharing catalyses innovative performance by enriching employees' creativity and adaptability. Organizations that cultivate a culture of trust and collaboration can better harness the creative potential of their workforce.

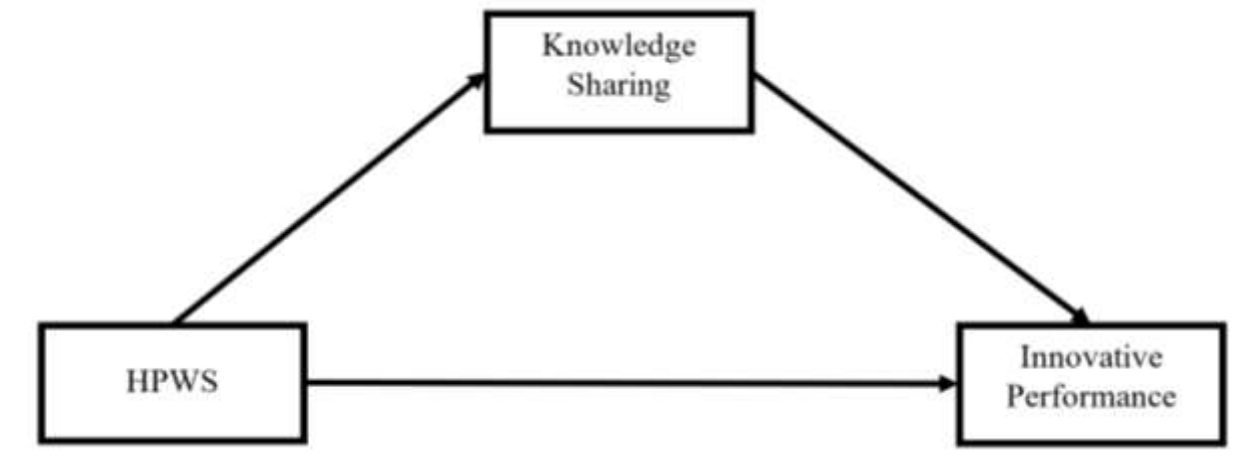
H3: Knowledge sharing has a positive relationship with innovative performance.

Linking HPWS, Knowledge Sharing, and Innovative Performance

Integrating HPWS and knowledge sharing provides a robust framework for understanding innovative performance. While HPWS lays the groundwork by enhancing employee capabilities and creating an enabling environment, knowledge sharing is the critical process through which these capabilities are transformed into tangible innovation outcomes. For example, employees equipped with advanced skills through training programs are better positioned to contribute to innovation when actively sharing and integrating their knowledge with colleagues. Studies have shown that organizations with a high knowledge-sharing culture are more likely to achieve superior innovation outcomes (Gürlek, 2021; Zhou et al., 2019). This mediating role underscores the importance of integrating HRM practices with knowledge management strategies to fully realize the potential of HPWS in driving innovation.

H4: Knowledge sharing mediates the relationship between HPWS and innovative performance.

Figure 1: Theoretical Framework



Methodology

Research Design

The philosophy of this study is positivism. Whereas quantitative research design is utilized in this study to examine the relationships between HPWS, knowledge sharing, and innovative performance. Data collection is performed through self-administered surveys. We target employees working in knowledge-intensive organizations, where innovation plays a pivotal role in performance.

Sample and Data Collection

Sample size of 300 is considered good by Comrey and Lee (2013). Therefore, the sample size for this study consists of 300 employees working in medium and large organizations within the technology sector. Convenient sampling is used for collecting data from participants (Farrokhi & Mahmoudi-Hamidabad, 2012). A structured questionnaire was used to measure the constructs under investigation.

Measurement

Measurement method used in the article has been derived from well-developed scales. The scale for HPWS is being adopted from Snell & Dean, (1992). Whereas scale for knowledge sharing and

innovative performance are sourced from Hsu et al., (2007) and Janssen, (2003), respectively. The constructs of this study were assessed by 5-point Likert scale. HPWS consists of 12 items, knowledge sharing consists of 5 items and innovative performance comprises of 9 items.

Data Analysis and Results

It is essential to perform structural equational modeling (SEM) and for that factor analysis is crucial. Below are discussed factor loadings of each variable (see table 1), its Cronbach's alpha values and confirmatory factor analysis (CFA).

Variables	Items	Factor Loadings
HPWS	HPWS1	0.824
	HPWS2	0.804
	HPWS3	0.781
	HPWS4	0.811
	HPWS5	0.814
	HPWS6	0.785
	HPWS7	0.749
	HPWS8	0.794
	HPWS9	0.778
	HPWS10	0.82
	HPWS11	0.842
	HPWS12	0.799
KS	KS1	0.835
	KS2	0.796
	KS3	0.786
	KS4	0.784
	KS5	0.746
IP	IP1	0.729
	IP2	0.752
	IP3	0.721
	IP4	0.778
	IP5	0.803
	IP6	0.772
	IP7	0.802
	IP8	0.926
	IP9	0.864

Mean, standard deviation and cronbach's alpha of the researching constructs are needed in order to be able to analyze the responses gained from the targeted population based on the measurement scale; the responses are to be based on the level of consistency and the level of interrelatedness of the scales items (Sekaran, 2003). After this we found that the participants had high levels of internality for HPWS, knowledge sharing (KS), and innovative performance (IP) metrics (Table 2).

Table 2: Mean, standard deviation and Cronbach's alpha

Variables	Mean	Std. Deviation	Cronbach's alpha
HPWS	3.37	1.12	0.95
KS	2.56	1.08	0.89
IP	2.60	1.01	0.94

Confirmatory Factor Analysis

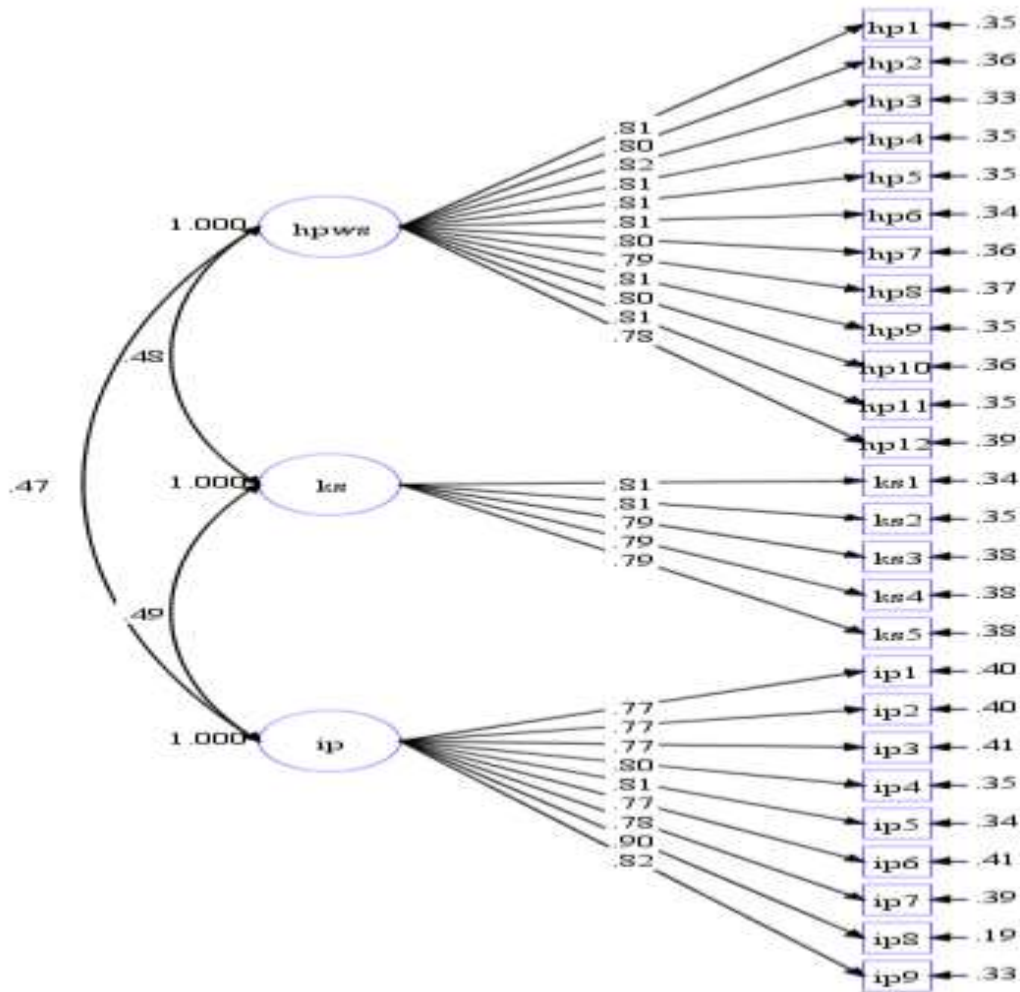
Scales used in this study were developed from western settings and hence need to be valid for the current situation of investigation. CFA is used to test whether the variables analyzed have convergent validity, discriminant validity and reliability. Data was analyzed using SPSS and Mplus software. Therefore, for the first step, a single factor analysis was performed in which all the items of variables constructed into a single factor. This resulted in poor fitness with data ($\chi^2/df = 15.32$; root mean square error of approximation [RMSEA] = 0.16; standardized root mean squared residual [SRMR] = 0.15; confirmatory fit index [CFI] = 0.62; Tucker-Lewis index [TLI] = 0.58) as shown in table 3. Whereas three-factor CFA represented a strong fit with data. With ($\chi^2/df = 2.23$; RMSEA = 0.05; SRMR = 0.03; CFI = 0.97; TLI = 0.96; Hence it outperformed the single-factor CFA model.

Table 3: Model fit indices of one factor model confirmatory factor analysis

	Model fit Index	Threshold Value	Actual Value	Result
One-factor CFA	χ^2/df	2.53-5	15.32	Not Good Fit
	SRMR	0.03-0.08	0.15	Not Good Fit
	CFI	≥ 0.9	0.62	Not Good Fit
	TLI	≥ 0.9	0.58	Not Good Fit
	RMSEA	≤ 0.08	0.16	Not Good Fit
Three-factor CFA	χ^2/df	2-5	2.23	Good Fit
	SRMR	0.03-0.08	0.03	Good Fit
	CFI	≥ 0.9	0.97	Good Fit
	TLI	≥ 0.9	0.96	Good Fit
	RMSEA	≤ 0.08	0.05	Good Fit

Note: All variables were merged

Figure 2: Confirmatory Factor Analysis



Correlations and Discriminant Validity

The objective of using correlation in research is to assess how correlated are two variables. It could be either a positive or negative value. If we have a positive correlation, this means constructs are correlated positively with each other, and if based on a negative correlation, constructs are negatively correlated to each other. Correlation analysis provides the extent of association of studied constructs and informs whether such relationship is linear or not (Field, 2009; Sekaran, 2003). Correlation coefficient takes value ranging from -1 to +1. This means that a number bigger than zero is a positive correlation, while a number smaller than zero is a negative correlation. The larger the number, the better correlation of the variables is given, the smaller the number, the worse the looseness of the given variables. Table 4 shows the correlation between the studied variables. The result from the analysis shows a high relationship between each of the variables, as a p value less than 0.01, which implies a significant relationship between the variables. Positive and significant correlations with KS ($r = 0.49$, $p < 0.05$) and IP ($r = 0.44$, $p < 0.05$) are found between HPWS and KS. There is a positive correlation of KS with IP, that is significant as well ($r = 0.46$,

$p < 0.05$). The relationships between all study variables need to be in one direction according to the direction of our study hypotheses.

The term discriminant validity denotes the idea of identifying and avoiding doing research with instruments that are basically similar and interrelated, which may cause problems with data. This is based on the idea behind different constructs being connected in different ways. Components are said to have independent discriminatory validity if the correlation between them is smaller or equal to 0.5 (Fornell & Larcker, 1981). The SPSS produced numbers, if they exceed the set threshold, say of 0.5, indicate very severe problems with the instrument used to gather a particular set of numbers. Table 4 documented the inter correlation data as well as the square root of the average variance extracted (AVE). The results indicate that there is no cause for worry in relation to the discriminant validity of the dataset.

Table 4: Correlation Matrix

Variables	1	2	3
1. HPWS	(0.62)		
2. KS	0.44**	(0.61)	
3. IP	0.45**	0.46**	(0.60)

Note: discriminant validity is in parenthesis

Hypotheses are tested with Mplus software. In table 5, all the relational hypotheses under investigation are listed with results. This study hypothesized that there is a significant and positive relationship between knowledge sharing and HPWS. Model fit indices (Chi-square = 661.34; $df = 296$; TLI = 0.976; CFI = 0.977; RMSEA = 0.04; SRMR = 0.030) prove that model is fit. It should be noted that the results did support H1 ($b = 0.48$, $SE = 0.03$, $p < 0.001$, LLCI = 0.41; ULCI = 0.55) and there is no zero value between the upper and lower limit of confidence interval.

Figure 3: Path Analysis of Theoretical Framework

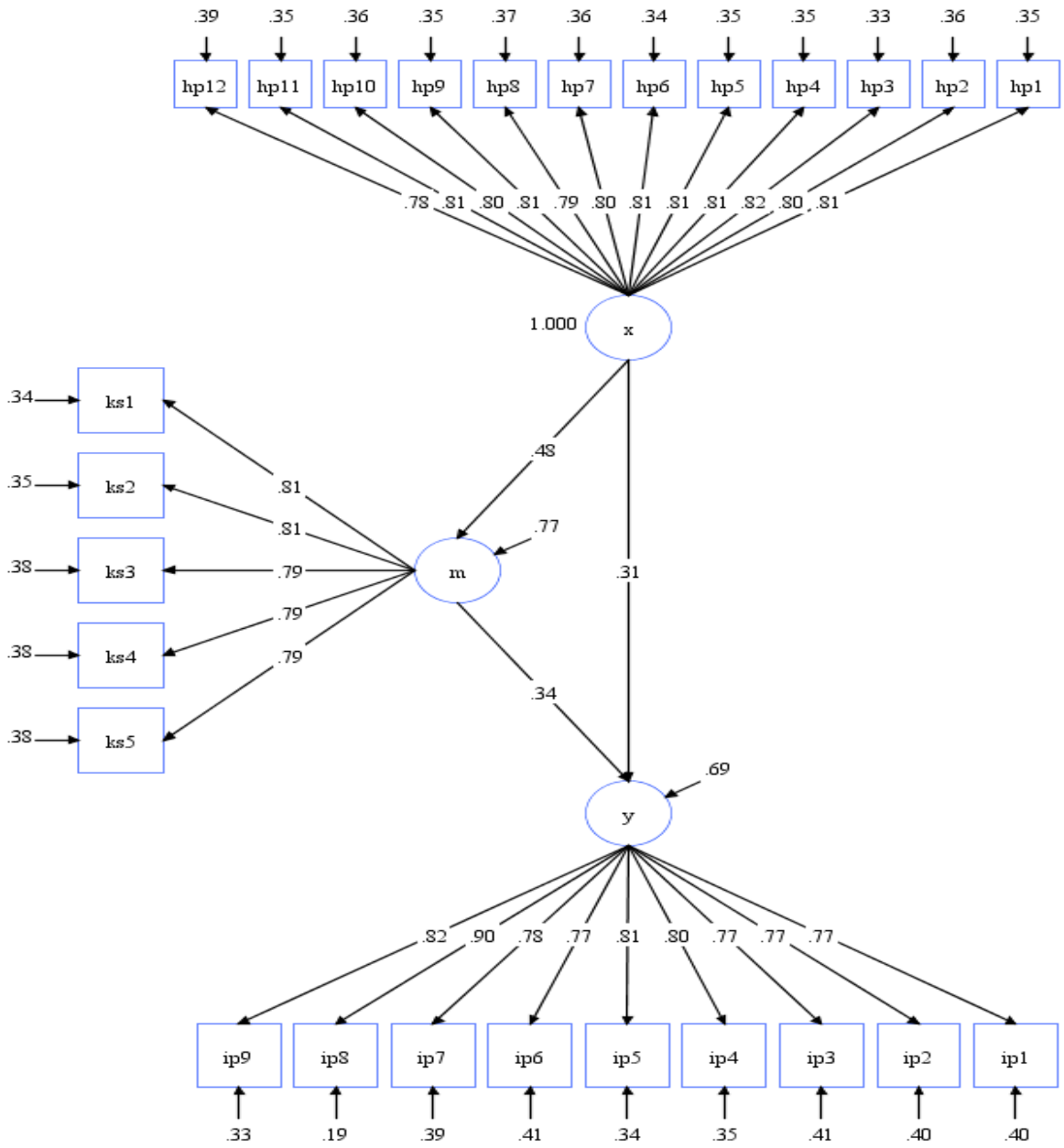


Table 5: Hypotheses Testing

Hypothesis	Relationship	Estimate	SE	95% CI	Remarks
H1	HPWS → KS	0.48***	0.03	(0.41, 0.55)	Supported H1
H2	KS → IP	0.33 ***	0.04	(0.44, 0.51)	Supported H2
H3	HPWS → KS → IP	0.16***	0.02	(0.25, 0.42)	Supported H3
H4	HPWS → IP	0.31***	0.04	(0.22, 0.39)	Supported H4

Similarly examining knowledge sharing with a positive influence on innovative performance as H2. It is statistically significant that H2 ($b = 0.33$, $SE = 0.04$, $p < 0.001$, $LLCI = 0.44$, $ULCI = 0.51$). H3 additionally suggests that HPWS and innovative performance have a positive significant relationship with the mediation of knowledge sharing. H3 is also supported ($b = 0.16$, $SE = 0.02$, $p < 0.001$, $LLCI = 0.25$, $ULCI = 0.42$) according to the empirical evidence. In addition, H4 is also confirmed to be positively supported because it indicates that HPWS is positively and significantly related to innovative performance ($b = 0.31$, $SE = 0.04$, $p < 0.001$, $LLCI = 0.22$, $ULCI = 0.39$).

Discussion

The findings in this study reinforce that knowledge-sharing practices should be complemented with more effective HRM practices in fostering innovative performance. This integration becomes even more essential because knowledge-intensive sectors characterize intellectual capital and information as the main assets.

HPWS emerged as a significant enabler of innovation in the study. These systems help build a supportive environment by giving employees the skills they need and a working culture in which trust and collaboration are fostered and fundamental to how the organization operates. Effective knowledge sharing requires trust and collaboration, especially in knowledge-intensive sectors where participation in generating new ideas and their practical application is predicated on the free flow of information among employees.

Realizing that technical expertise does not necessarily lead to innovation in such sectors is important. The results indicate that the soft factors (trust-building mechanisms, collaborative working environments, employee engagement) are likewise crucial. HPWS helps bridge this gap by integrating practices like performance-based incentives, team-building exercises, and participatory decision-making, collectively enhancing employees' willingness to share and apply knowledge.

The study highlights that knowledge-sharing strategies can amplify innovative performance when aligned with HRM practices. It introduces the idea that knowledge-sharing strategies aligned with HRM practices can amplify innovative performance. It was found vital to have training programs that addressed both technical skill and interpersonal skill issues. For knowledge-intensive sectors, these programs should go beyond skill development to promote the mindset of continuous learning and knowledge sharing.

Furthermore, technology plays a dual role in these sectors: it serves as a repository for explicit knowledge and facilitates real-time collaboration and communication. Investments in advanced knowledge-sharing platforms, such as intranets and collaborative tools, can provide employees with easy access to critical information, fostering innovation. However, as the findings suggest, technology alone is insufficient; leadership support is crucial in creating an organizational culture that values knowledge sharing.

Leadership emerged as a key factor in translating HRM practices into innovative outcomes. Leaders who actively promote knowledge-sharing initiatives and model collaborative behaviours set the tone for an inclusive organizational climate. In knowledge-intensive sectors, this leadership style encourages employees to contribute their knowledge and ensures that diverse perspectives are valued, leading to more innovative solutions.

The study also highlights the importance of psychological safety, wherein employees feel secure in sharing their ideas without fear of judgment. HPWS, when supported by transformational leadership, can enhance psychological safety by aligning organizational goals with individual aspirations, fostering a sense of belonging and commitment among employees.

Conclusion

The findings emphasize that innovative performance in knowledge-intensive sectors is not merely the outcome of individual brilliance or isolated efforts. Instead, it emerges as a complex interplay of multiple organizational factors. HPWS forms the foundation by equipping employees with essential skills, fostering motivation, and aligning individual goals with organizational objectives. However, HPWS alone is insufficient without integrating robust knowledge-sharing strategies that facilitate the seamless sharing and utilization of explicit and tacit knowledge. This combination ensures that employees have access to the right resources and information at the right time, enabling them to contribute to innovation effectively.

Leadership support further amplifies these efforts by setting the tone for an organizational culture that values trust, collaboration, and inclusivity. Transformational leaders are pivotal in championing knowledge-sharing initiatives, modelling collaborative behaviours, and ensuring psychological safety. In doing so, they create an environment where employees feel empowered to experiment, take risks, and share their ideas without fear of failure or judgment.

For organizations aiming to maintain a competitive edge, the strategic integration of HRM practices, knowledge-sharing strategies, and leadership support must be at the forefront of their innovation agenda. This integrated approach not only maximizes the potential of intellectual capital but also establishes a resilient framework for continuous learning and adaptation. Organizations prioritising such a holistic strategy in the rapidly evolving landscape of knowledge-intensive industries are better positioned to achieve sustained innovation and long-term success. This study reinforces that innovation is not an isolated outcome but a systemic result of organizational coherence and alignment, underscoring the need for deliberate, strategic efforts to foster an ecosystem conducive to innovation.

Theoretical Implications

This study enhances the theoretical understanding of how HPWS influences innovative performance through the mediating role of knowledge sharing. It shows how HPWS practices (training, empowerment, and performance-based rewards) both encourage and enable employees to share knowledge. Through these practices, an organizational culture is created filled with trust and reciprocity, which is inherent in the principles of social exchange theory.

Knowledge sharing is a critical mechanism for ensuring the linking between HPWS and innovative performance. It provides the opportunity for HPWS to enhance its implementation, problem-solving, and idea generation among employees, which effectively drives innovation. This process highlights the role of social exchange, where employees reciprocate organizational support by engaging in behaviours that contribute to shared goals.

The results of this study confirm that knowledge sharing significantly facilitates employees' ability to generate and implement novel ideas by improving overall innovative performance. It underscores the importance of fostering a collaborative and supportive environment to maximize the impact of HPWS. These results enhance the theoretical debate about HRM and innovation, disclosing the interrelationships between organizational practices, employee participation, and innovative results.

Practical Implications

The practical implications of this study are particularly relevant for organizations operating in knowledge-intensive sectors such as technology, pharmaceuticals, and consulting, where innovation is a key driver of success. These findings imply the need for strategic investment in

HPWS to construct a high-performance workforce that is technically skilled, highly motivated, and aligned with the organization's innovative objectives. Organizations need to sustain these competitive edges and practices, which include continuous feedback, targeted skill development, and equitable reward systems.

In addition, organizations should institutionalize robust knowledge-sharing mechanisms through well-structured training programs, advanced technology platforms, and proactive leadership support. Initiatives like cross-functional teams, communities of practice, and mentorship programs can facilitate the exchange of tacit knowledge, often serving as the foundation for groundbreaking innovations.

Finally, fostering a culture of collaboration and trust is essential in knowledge-intensive environments. Building this culture requires embedding values such as inclusivity and psychological safety into HR practices, with HPWS serving as a key enabler of this transformation. By implementing these strategies, organizations can better align their workforce capabilities with innovation goals, ensuring sustained success in competitive markets.

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