
The Impact of AI-Enabled HRIS System Quality on Job Involvement among Sri Lankan IT Sector Employees: The Mediating Role of System Satisfaction

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A B S T R A C T

Integrating Artificial Intelligence (AI) into Human Resource Information Systems (HRIS) has significantly transformed conventional, process-oriented human resource practices into more employee-centric and tailored HR services in modern workplaces. Despite the increasing attention of practitioners to integrating AI into HRIS in businesses, scholarly understanding is limited regarding the extent to which employees fully perceive the influence of system quality on their daily job involvement and the underlying mechanism by which they perceive AI-enabled HRIS system quality. This study aims to examine the effect of AI-enabled HRIS system quality on Job Involvement (JI) among employees in Sri Lankan organisations. The study focuses on four dimensions of AI-enabled HRIS system quality, i.e. AI-enabled HRIS system accuracy, AI-enabled HRIS system reliability, AI-enabled HRIS system flexibility, and AI-enabled HRIS system accessibility. To uncover the black box, the mediating role of System Satisfaction (SS) in the relationship between AI-enabled HRIS system quality and job involvement was examined. This study adopted a quantitative research approach and collected data from 123 employees working in four major IT firms in Sri Lanka using a structured online questionnaire. The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS version 4.1.1.4. The findings revealed that AI-enabled HRIS system accessibility and system reliability have a significant positive effect on system satisfaction, while AI-enabled HRIS system accuracy and system flexibility do not show a significant influence on system satisfaction. Importantly, the mediation analysis showed that system satisfaction fully mediates the relationship between AI-enabled HRIS system reliability and AI-enabled HRIS system accessibility and job involvement. The theoretical framework bridges the gap between how employees perceive AI-enabled HRIS system quality as a predictor of job involvement, while system satisfaction plays a significant role in uncovering the dynamics of system attributes. The implications of our findings for practice and future research are discussed.

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1. Introduction and Research Problem

Digital transformation has significantly reshaped organisational operations, increasing reliance on digital systems for efficiency, accuracy, and strategic decision-making. In Human Resource Management (HRM), Human Resource Information Systems (HRIS) have streamlined key functions such as recruitment, payroll, performance appraisal, training, and employee self-service (Bondarouk & Ruël, 2009; Kavanagh et al., 2015; Lengnick-Hall & Moritz, 2003). The integration of AI with HRIS has further transformed these systems into advanced platforms with predictive analytics, automation, and data-driven decision-making capabilities, enhancing HR efficiency and accuracy (Malik et al., 2021). As employees play a critical role in the success of digital transformation, system quality attributes such as accuracy, reliability, and flexibility are important determinants of user satisfaction and acceptance (Blanka et al., 2022; Wixom & Todd, 2005).

In Sri Lanka, the adoption of digital HR technologies has accelerated with the growth of digital transformation initiatives, post-pandemic workplace changes for cost-effectiveness, and moving towards a digital economy in 2030.

However, concerns regarding system reliability, accessibility, and employee adaptability remain. Job involvement, which reflects the degree to which employees psychologically identify with their work, is an important organisational outcome influenced by workplace technologies. Although prior studies suggest that effective HRIS implementation can improve employee attitudes and engagement (Maamari & Osta, 2021), limited empirical evidence exists on how AI-enabled HRIS system quality influences job involvement. System-related problems, such as recommendations being inaccurate, general system slowness, inflexible features, and limited access, could originate from an AI-enabled HRIS that automates critical HR tasks and provides insights to influence employee decisions, leading to dissatisfaction or reduced system relevance (Nguyen & Malik, 2022; Wixom & Todd, 2005). Such negative perceptions may impede HRIS use and decrease the degree of psychological engagement that employees maintain with their work. While system satisfaction is a critical component of IS success models and has been identified to impact work attitudes, it remains relatively unexplored in the AI-enabled HRIS context. Therefore, this study examines the impact of AI-enabled HRIS system quality on job involvement among Sri Lankan employees, with system satisfaction as a mediating mechanism to uncover the dynamics of how employees perceive AI-enabled HRIS system quality in the modern workplace.

2. Conceptualisation

The conceptual framework of this study is based on the Information System Success Model proposed by DeLone and McLean (2003), as well as the integrated perspective of user satisfaction and technology acceptance proposed by Wixom and Todd (2005). These theoretical foundations indicate that system quality impacts user evaluations, which then lead to Job Involvement. In this study, AI-enabled HRIS system quality is conceptualised through four dimensions. Those are AI-enabled HRIS System Accuracy, AI-enabled HRIS System Reliability, AI-enabled HRIS System Flexibility, and AI-enabled HRIS System Accessibility. System Satisfaction is considered a mediating variable, while Job Involvement serves as the endogenous dependent variable. The proposed model demonstrates that each system quality dimension directly impacts job involvement and also indirectly impacts job involvement

through system satisfaction. This structure allows for examining the mediation effects of system satisfaction. Figure 1 presents the conceptual framework of the study.

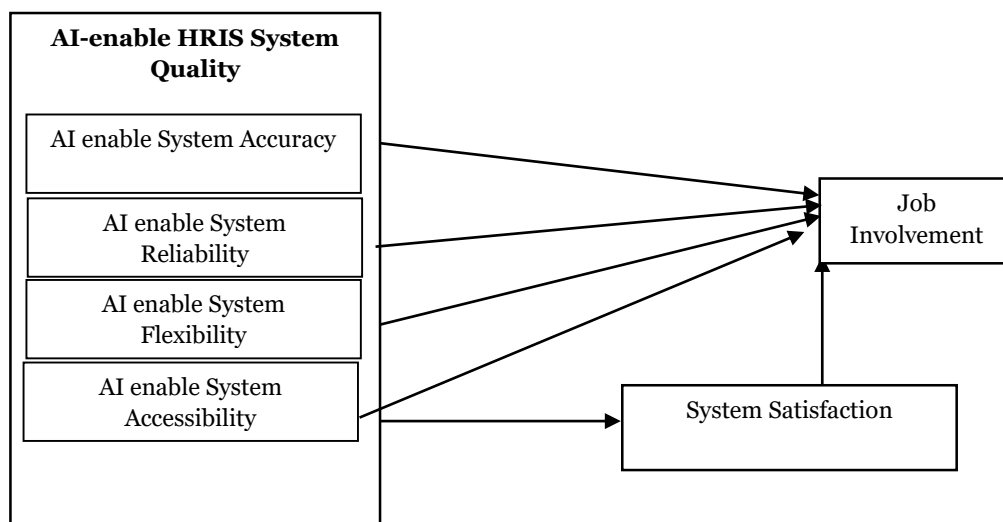


Figure 1. Conceptual Framework

2.1 Hypothesis Development

2.1.1 AI-enabled HRIS system accuracy and job involvement

AI-enabled HRIS system accuracy refers to the extent to which the system provides accurate and error-free information, influencing employees' trust and confidence in using the system for work-related tasks (Seddon, 1997; Wixom & Todd, 2005). When employees perceive AI-enabled HRIS outputs as reliable and relevant to their job tasks, they are more likely to integrate the system into their work processes, which can enhance their psychological involvement in work (Goodhue & Thompson, 1995). Therefore, H1 is derived as follows:

H1: AI-enabled HRIS system accuracy positively influences job involvement

2.1.2 AI-enabled HRIS system reliability and job involvement

AI-enabled HRIS system reliability refers to the consistent and stable performance of the system without interruptions, enabling employees to access HR processes efficiently (DeLone & McLean, 2003; Tarafdar et al., 2015). Reliable systems reduce workflow disruptions and support positive user experiences, allowing employees to focus more effectively on their job responsibilities, thereby enhancing job involvement (Venkatesh et al., 2003). Therefore, H2 is derived as follows:

H2: AI-enabled HRIS System Reliability positively influences job involvement.

2.1.3 AI-enabled HRIS system flexibility and job involvement

AI-enabled HRIS system flexibility refers to the adaptability of the system to changing organisational needs and diverse user requirements (Wixom & Todd, 2005). Flexible systems support employees in managing evolving work demands more effectively, while adaptable technologies can enhance employees' perception of the system as an enabling tool, thereby strengthening their psychological involvement in work (Hackman & Oldham, 1976; Vial, 2019). Therefore, H3 is derived as follows:

H3: AI-enabled HRIS system flexibility positively influences job involvement.

2.1.4 AI-enabled HRIS system accessibility and job involvement

AI-enabled HRIS system accessibility refers to the ease and convenience with which employees can access system features and information (DeLone & McLean, 2003). Easily accessible systems improve user attitudes and enhance the employee experience by enabling timely access to relevant information for task completion, which can positively influence job involvement (Davis, 1989; Verhoef et al., 2021). Therefore, H4 is derived as follows:

H4: AI-enabled HRIS system accessibility positively influences job involvement.

2.1.5 System satisfaction and job involvement

System satisfaction reflects employees' overall positive evaluation of their experience with an information system and is recognised as an important factor influencing broader work-related attitudes (DeLone & McLean, 2003). When employees are satisfied with an AI-enabled HRIS, they are more likely to trust the system, reduce task-related uncertainty, and integrate it into their daily work, which can strengthen their psychological involvement and commitment to their job roles (Kanungo, 1982). Therefore, H5 is derived as follows:

H5: AI-enabled HRIS System Satisfaction positively influences job involvement.

2.1.6 Mediating role of system satisfaction

In this study, employees' perceptions of AI-enabled HRIS system accuracy, reliability, flexibility, and accessibility are expected to influence their satisfaction with the system. This positive evaluative response may then influence their job involvement, consistent with the integrated perspective of user satisfaction and technology acceptance (Wixom & Todd, 2005). Therefore, system satisfaction is proposed to mediate the relationships between each AI-enabled HRIS system quality dimension and job involvement. Therefore, H6-H9 are derived as follows:

H6: System satisfaction mediates the relationship between AI-enabled HRIS system accuracy and job involvement.

H7: System satisfaction mediates the relationship between AI-enabled HRIS system reliability and job involvement.

H8: System Satisfaction mediates the relationship between AI-enabled HRIS System Flexibility and job involvement.

H9: System satisfaction mediates the relationship between AI-enabled HRIS system accessibility and job involvement.

3. Research Methods

This study adopted a quantitative research design to examine the impact of AI-enabled HRIS system quality on job involvement among Sri Lankan employees. As the study focuses on measuring relationships between variables and testing hypotheses objectively, a quantitative approach was considered appropriate for collecting and analysing measurable data (Shao & Peng, 2023). The study focused on employees in Sri Lankan IT sector organisations that use AI-enabled HRIS for Human Resource Management operations. Primary data were collected through a cross-sectional survey using a structured closed-ended questionnaire distributed over several weeks.

Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS version 4.1.1.4 to examine both direct and indirect relationships among variables.

PLS-SEM was used as it is suitable for studies aiming to identify key predictors in a research model (Sarstedt et al., 2017). Descriptive statistics were used to summarise respondent characteristics, while hypothesis testing and mediation analysis were conducted to assess the impact of AI-enabled HRIS system quality on job involvement through system satisfaction (Hair et al., 2017).

To ensure the accuracy of the outer (measurement) model, outer loadings of the items were examined, with values above 0.7 considered indicative of strong convergent validity. AVE values should be ≥ 0.5 to indicate sufficient convergent validity. All the AVE values of the constructs were above the threshold of 0.5, suggesting acceptable convergent validity (see Table 1). Additionally, the discriminant validity was assessed. A threshold value of HTMT 0.90 indicates the establishment of discriminant validity (Henseler et al., 2015). The HTMT values of the study constructs were lower than the required threshold of HTMT.90 (Zafar & Suseno, 2024) (see Table 2). Moreover, the cross-loadings of each indicator of the main constructs were assessed to ensure the discriminant validity. All indicators loaded are high on their respective construct (Hair et al., 2017). The reliability was assessed using the Cronbach Alpha ranged from 0.774 to 0.837, and composite reliability ranged from 0.791 to 0.849. According to this study, all Cronbach's alpha values are greater than 0.7, which indicates that these constructs are reliable.

Table 1: Validity and Reliability of the Constructs

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
JI	0.837	0.849	0.890	0.670
AI_SA	0.782	0.791	0.873	0.697
AI_SAC	0.801	0.805	0.883	0.716
AI_SF	0.774	0.780	0.869	0.688
AI_SR	0.784	0.793	0.874	0.698
SS	0.809	0.828	0.867	0.568

Note: AI_SA = AI-enable HRIS System Accuracy, AI_SAC = AI-enable HRIS System Accessibility, AI_SF = AI-enable HRIS System Flexibility, AI_SR = AI-enable HRIS System Reliability, SS = System Satisfaction, JI = Job Involvement

Table 2: Discriminant Validity – Heterotrait-monotrait ratio (HTMT) results

	AI_SA	AI_SAC	AI_SF	AI_SR	JI
AI_SA					
AI_SAC	0.746				
AI_SF	0.783	0.943			
AI_SR	0.885	0.842	0.947		
JI	0.847	0.764	0.719	0.759	
SS	0.671	0.829	0.826	0.842	0.777

Note: AI_SA = AI-enable HRIS System Accuracy, AI_SAC = AI-enable HRIS System Accessibility, AI_SF = AI-enable HRIS System Flexibility, AI_SR = AI-enable HRIS System Reliability, SS = System Satisfaction, JI = Job Involvement

However, AI_SF – AI_SAC = 0.943 and AI_SR – AI_SF = 0.947 slightly exceed the threshold, suggesting a potential concern. Despite this, since most of the values are within the acceptable range, discriminant validity is considered to be sufficiently established (Zafar & Suseno, 2024).

In this study, prior to hypothesis testing, the multicollinearity was assessed using Variance Inflation Factor (VIF) values obtained from SmartPLS (version 4.1.1.4). VIF values below 3.0 indicate that multicollinearity is not a serious problem, while values below 5.0 are considered acceptable (Hair et al., 2019) as presented in Table 3.

Table 3: Collinearity Statistics of the Inner Model

Construct	VIF
AI_SA -> JI	2.080
AI_SAC -> JI	2.703
AI_SF -> JI	2.966
AI_SR -> JI	3.133
SS -> JI	2.290

Note: AI_SA = AI-enable HRIS System Accuracy, AI_SAC = AI-enable HRIS System Accessibility, AI_SF = AI-enable HRIS System Flexibility, AI_SR = AI-enable HRIS System Reliability, SS = System Satisfaction, JI = Job Involvement

The predictive power of the structural model is assessed based on R^2 values (Hair et al., 2017). The R^2 value indicates the proportion of variance explained by each construct. R^2 values range from 0 to 1, where higher values represent greater accuracy in the model's predictions. As general parameters, R^2 values of 0.75, 0.50, and 0.25 are considered significant, moderate, and weak, respectively (Hair et al., 2017). Table 4 presents the R^2 values of the study's endogenous constructs. The results show that job involvement ($R^2 = 0.616$) and system satisfaction ($R^2=0.563$) have moderate predictive power according to the recommended thresholds.

Table 4: R-square Assessment

Endogenous construct	R-square	R-square adjusted
JI	0.616	0.600
SS	0.563	0.549

Note: JI = Job Involvement, SS = System Satisfaction

4. Results of the Hypothesis Testing

The hypothesis testing results revealed mixed findings regarding the impact of AI-enabled HRIS system quality on job involvement. H1 was supported, indicating that AI-enabled HRIS system accuracy has a significant positive influence on job involvement ($\beta=0.419$, $t=3.434$, $p<0.05$). This suggests that employees who perceive AI-enabled HRIS outputs as accurate and reliable are more psychologically involved in their work, consistent with Task-Technology Fit Theory, which emphasises the importance of technology effectiveness in supporting job performance (Goodhue & Thompson, 1995). However, H2, H3, and H4 were not supported, as AI-enabled HRIS system reliability ($\beta=0.016$, $t=0.134$, $p>0.05$), flexibility ($\beta=0.006$, $t=0.044$, $p>0.05$), and accessibility ($\beta=0.161$, $t=1.831$, $p>0.05$) did not show significant direct effects on job involvement. These findings suggest that although these system quality dimensions contribute to system usability, they do not independently drive stronger employee psychological involvement. H5 was supported, confirming that system satisfaction positively influences job involvement ($\beta=0.311$, $t=3.281$, $p<0.05$), aligning with the information systems success model, which identifies user satisfaction as a key driver of positive behavioural

outcomes (DeLone & McLean, 2003). Table 5 presents the results of the direct hypotheses, and Figure 2 presents the path model of the hypothesis testing.

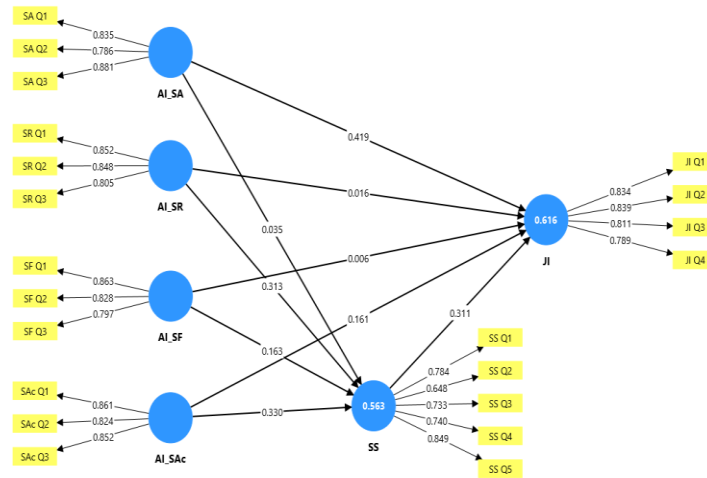


Figure 2. PLS Algorithm for Structural Model

Table 5: Results of Direct Effect of Hypotheses

Hyp.	Structural Path	Original sample (O)	t-Value	p-values	Sig.	Outcome
H1	AI_SA -> JI	0.419	3.434	0.001	Sig.	Accepted
H2	AI_SR -> JI	0.016	0.134	0.893	Not Sig.	Not Support
H3	AI_SF -> JI	0.006	0.044	0.965	Not Sig.	Not Support
H4	AI_SAc -> JI	0.161	1.831	0.067	Not Sig.	Not Support
H5	SS -> JI	0.311	3.281	0.001	Sig.	Accepted

Table 6: Results of Mediation Role of System Satisfaction

Hy p.	Structural Path	Direct Effect			Indirect Effect via Sys Satisfaction			Outcome
		β	t-value	p-value	β	t-value	p-value	
H6	AI_SA -> SS -> JI	0.419	3.434	0.001	0.011	0.289	0.772	No Mediation
H7	AI_SR -> SS -> JI	0.016	0.134	0.893	0.097	2.036	0.042	Full Mediation
H8	AI_SF -> SS -> JI	0.006	0.044	0.965	0.051	1.328	0.184	No Mediation
H9	AI_SAc -> SS -> JI	0.161	1.831	0.067	0.102	2.276	0.023	Full Mediation

Note: AI_SA = AI-enable HRIS System Accuracy, AI_SAc = AI-enable HRIS System Accessibility, AI_SF = AI-enable HRIS System Flexibility, AI_SR = AI-enable HRIS System Reliability, SS = System Satisfaction, JI = Job Involvement

The mediation analysis revealed full mediation effects of system satisfaction concerning H7 and H9. System satisfaction fully mediates the relationships between AI-enabled HRIS system reliability and job involvement and between AI-enabled HRIS system accessibility and job involvement, as the indirect effects were significant while the direct effects remained insignificant (see Table 6). In contrast, H6 and H8 were not supported, as AI-enabled HRIS system accuracy and flexibility did not show significant indirect effects through system

satisfaction. These findings suggest that system satisfaction serves as a key mechanism through which system reliability and accessibility influence job involvement, consistent with the information systems success model and the integrated user evaluation perspective (DeLone & McLean, 2003; Wixom & Todd, 2005).

5. Discussion and Implications

This study concludes that AI-enabled HRIS system quality influences job involvement among Sri Lankan employees in different ways depending on the specific system quality dimension. AI-enabled HRIS system accuracy and system satisfaction were found to have significant positive effects on job involvement, while system satisfaction fully mediated the relationships between system reliability and job involvement, and system accessibility and job involvement. However, system reliability, flexibility, and accessibility did not show significant direct effects on job involvement, while system flexibility also showed no significant indirect effect. These findings suggest that employee job involvement in AI-enabled workplaces is influenced not only by technical system characteristics but also by employees' evaluative responses to the system, highlighting the importance of designing accurate, reliable, and user-satisfying AI-enabled HRIS to improve employee engagement. The findings provide HR practitioners with insights on adopting a human-centric understanding of digital transformation, rather than assuming that adopting advanced systems automatically improves employee involvement, as the study shows that employee perceptions and satisfaction play a central role in translating digital system quality into higher work efficiency.

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