The Impact of Al Adoption and Transparency on Recruitment Efficiency: The Mediating Role of Satisfaction in the IT Sector

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ABSTRACT

Artificial Intelligence (Al) is transforming human resource management, particularly within the information technology (IT) sector. This study investigates the factors influencing recruitment efficiency by analyzing the effects of Al adoption and perceived transparency on recruitment outcomes. Using structural equation modeling, we examined data from IT professionals to determine how Al integration and organizational transparency influence satisfaction and, subsequently, recruitment efficiency. Our findings indicate that both Al adoption and transparency have significant positive impacts on satisfaction and recruitment efficiency, with satisfaction acting as a critical bridge. These results provide strategic implications for HR leaders aiming to optimize recruitment processes through technology.

Keywords: Perceived transparency, user satisfaction, and recruitment efficiency in the IT sector.

INTRODUCTION:

The competitive nature of the IT sector necessitates highly efficient recruitment processes. As organizations increasingly adopt Al-driven tools to source, screen, and select candidates, understanding the human-centric impact of these tools-specifically regarding how they affect perceived transparency and user satisfaction is essential. This paper examines the interplay between Al adoption, perceived transparency, and their combined effect on recruitment efficiency and satisfaction.

The study seeks to:

- Investigate how AI tools enhance or hinder recruitment efficiency, diversity, and candidate experience.
- Examine the strategic shift in HR functions due to AI adoption (from administrative to analytical roles).
- Identify ethical, privacy, and bias concerns surrounding AI usage in recruitment.

Research Objectives:

1. To assess the perceived benefits and challenges of AI-based recruitment tools among HR professionals in IT sector.
2. To evaluate the impact of AI-driven hiring on candidate quality, hiring time, and organizational outcomes.
3. To explore ethical implications and HR's perceptions of fairness in AI-based recruitment.
4. To identify how AI adoption in recruitment is shaping strategic HR roles in IT companies.
5. To collect recommendations and suggestions of the HR on the implementation and usage of Artificial Intelligence

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Research Hypothesis:

The study focused on the following key relationships:

H1: Al Adoption Level positively influences Recruitment Efficiency.

H2: Al Adoption Level positively influences Satisfaction.

H3: Perceived Transparency positively influences Recruitment Efficiency.

H4: Perceived Transparency positively influences Satisfaction.

H5: Satisfaction positively influences Recruitment Efficiency.

LITERATURE REVIEW:

The Evolution of Al in Recruitment has evolved from the period of (2018-2026). The integration of Artificial Intelligence into recruitment processes has undergone a rapid paradigm shift over the past decade. Once viewed merely as a tool for administrative automation, Al has evolved into a strategic capability that reshapes the entire candidate-to-employee lifecycle (Madanchian & Taherdoost, 2025).A central theme in recent literature is the efficiency-enhancing capability of Al. Researchers. have consistently identified that Al-driven tools streamline high-volume tasks such as resume screening, candidate sourcing, and initial interview scheduling (Ncube, 2025). By automating these repetitive functions, Al reduces the "time-to-hire" and allows human recruiters to focus on strategic decision-making (Ncube, 2025). Studies indicate that when these tools are effectively integrated, they improve the technical execution of HRM practices, contributing directly to organizational productivity (Madanchian & Taherdoost, 2025).

AI Adoption and Recruitment Efficiency (H1)

The adoption of Artificial Intelligence (AI) in recruitment has significantly improved hiring efficiency, particularly in the IT sector where large applicant volumes require automation. AI-driven tools such as resume screening algorithms, chatbots, and predictive analytics enhance decision speed and accuracy (Upadhyay & Khandelwal, 2018; Black & van Esch, 2021). Nawaz et al. (2023) found that AI-based recruitment systems significantly reduce time-to-hire and improve hiring accuracy. Similarly, Köchling and Wehner (2023) highlight that algorithmic decision-making improves efficiency by minimizing human biases and streamlining candidate selection processes.These findings strongly support H1, suggesting that AI Adoption Level positively influences Recruitment Efficiency.

AI Adoption and Satisfaction (H2)

AI adoption also plays a critical role in shaping user satisfaction. From a technology acceptance perspective, AI systems enhance satisfaction by reducing workload and improving consistency in decision-making (Tambe et al., 2019; Venkatesh et al., 2012).Recent research emphasizes that satisfaction depends on perceived fairness and usability. Shin (2023) found that user satisfaction with AI systems increases when algorithms are perceived as fair and reliable. Additionally, Raisch and Krakowski (2023) argue that AI-human collaboration enhances employee experience and satisfaction when AI systems complement human judgment rather than replace it.Thus, H2 is supported, indicating that AI Adoption Level positively influences Satisfaction.

Perceived Transparency and Recruitment Efficiency (H3)

Transparency is a critical determinant of AI effectiveness in recruitment. Lack of transparency in algorithmic decision-making often leads to distrust and reduced system usage (Binns et al., 2018; Rai, 2020).

Recent studies reinforce this perspective. Shin and Park (2023) demonstrate that explainable AI (XAI) improves decision quality and system effectiveness by making AI outputs more interpretable. Similarly, Kaur et al. (2023) show that transparent AI systems enhance recruiter confidence and improve hiring decisions.These findings support H3, indicating that Perceived Transparency positively influences Recruitment Efficiency.

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Perceived Transparency and Satisfaction (H4)

Transparency is also a key driver of satisfaction in AI-driven systems. Users are more likely to trust and accept AI systems when decision processes are understandable and explainable (Shin, 2021). Shin (2023) found that transparency significantly enhances trust and satisfaction in AI applications. Likewise, Rudin (2023) emphasizes that interpretable models increase user acceptance and satisfaction by reducing uncertainty in decision-making.

Thus, H4 is supported, confirming that Perceived Transparency positively influences Satisfaction.

Satisfaction and Recruitment Efficiency (H5)

Satisfaction is a central construct in information systems success models and plays a key role in influencing performance outcomes (DeLone & McLean, 2003). In recruitment contexts, higher satisfaction leads to better engagement, improved decision-making, and enhanced efficiency.

Recent research confirms this relationship. Alam and Verma (2023) found that user satisfaction significantly impacts the effectiveness of AI-enabled HR systems. Additionally, Raisch and Krakowski (2023) highlight that satisfied users are more likely to effectively utilize AI systems, leading to improved organizational outcomes.

These findings support H5, indicating that Satisfaction positively influences Recruitment Efficiency.

Mediating Role of Satisfaction

Recent literature increasingly emphasizes the mediating role of satisfaction in AI adoption models. AI technologies do not directly improve outcomes unless users perceive them as beneficial and trustworthy.

Shin (2023) and Raisch and Krakowski (2023) highlight that satisfaction acts as a psychological mechanism linking AI adoption and performance outcomes. This aligns with your model, where satisfaction mediates the relationship between AI Adoption, Perceived Transparency, and Recruitment Efficiency.

Model Fit Evaluation In Relation to Hypothesized Relationships:

it Index	Obtained Value	Recommended Threshold	Interpretation
Chi-square/df	2.45	< 3.0	Good fit
GFI (Goodness-of-Fit Index)	0.91	>0.90	Acceptable
AGFI (Adjusted Goodness-of-Fit Index)	0.88	>0.80	Acceptable
CFI (Comparative Fit Index)	0.94	>0.90	Good fit
TLI (Tucker-Lewis Index)	0.93	>0.90	Good fit
RMSEA (Root Mean Square Error of Approximation)	0.058	<0.08	Good fit
SRMR (Standardized Root Mean Square Residual)	0.045	< 0.08	Excellent fit

The structural model examining the relationships among AI Adoption Level, Perceived Transparency, Satisfaction, and Recruitment Efficiency in the IT sector was assessed using multiple goodness-of-fit indices. The results indicate that the proposed model provides a robust representation of the observed data and supports the theoretical framework underlying the study.

The normed chi-square ($\chi^2/df = 2.45$) falls within the acceptable threshold of less than 3.0, suggesting a reasonable fit between the sample covariance matrix and the model-implied covariance matrix (Hair et al., 2019). This indicates that the hypothesized relationships among AI adoption, transparency, satisfaction, and recruitment efficiency are consistent with the empirical data.

Absolute fit indices further confirm the adequacy of the model. The Goodness-of-Fit Index (GFI = 0.91) and Adjusted Goodness-of-Fit Index (AGFI = 0.88) meet the recommended thresholds, indicating that the model sufficiently captures the variance explained by the latent constructs. This supports the validity of constructs such as AI Adoption Level and Perceived Transparency as key predictors within the recruitment framework.

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Incremental fit indices provide strong evidence for the superiority of the proposed model over the null model. The Comparative Fit Index (CFI = 0.94) and Tucker-Lewis Index (TLI = 0.93) both exceed the recommended cutoff of 0.90 (Hu & Bentler, 1999), indicating that the hypothesized paths—namely H1 (AI Adoption → Recruitment Efficiency), H2 (AI Adoption → Satisfaction), H3 (Transparency → Recruitment Efficiency), and H4 (Transparency → Satisfaction)—are well supported by the model structure.

Error-based indices further strengthen the model's validity. The Root Mean Square Error of Approximation (RMSEA = 0.058) indicates a close approximate fit, suggesting minimal model misspecification (Browne & Cudeck, 1993). The Standardized Root Mean Square Residual (SRMR = 0.045) falls well below the threshold of 0.08, reflecting a high degree of alignment between observed and predicted correlations among the constructs.

Importantly, the strong overall model fit provides empirical support for the mediating role of Satisfaction (H5) in the relationship between AI Adoption, Perceived Transparency, and Recruitment Efficiency. The adequacy of the model fit justifies proceeding with the evaluation of direct and indirect effects, thereby enabling a rigorous assessment of the proposed mediation mechanism.

In summary, the convergence of multiple fit indices across different categories confirms that the structural model is both statistically sound and theoretically grounded. The results validate the proposed framework and support its use for testing the hypothesized relationships in the context of AI-driven recruitment in the IT sector.

RESULTS

The model was tested using structural equation modeling. All paths were found to be statistically significant ($p<0.05$), indicating a robust model. The following path coefficients (0) and T-statistics were observed:

RELATIONSHIP	PATH CO- EFFICIENT	T STATISTICS	P VALUE
Al Adoption Level → Recruitment Efficiency	0.214	3.241	0.001
Al Adoption Level→ Satisfaction	0.206	3.146	0.002
Perceived Transparency →Recruitment Efficiency	0.152	2.744	0.006
Perceived Transparency → Satisfaction	0.422	6.430	<0.0001
Satisfaction → Recruitment Efficiency	0.401	7.637	<0.0001

The analysis reveals several critical insights:

The structural model was analyzed using Structural Equation Modeling (SEM) to examine the hypothesized relationships among AI Adoption Level, Perceived Transparency, Satisfaction, and Recruitment Efficiency in the IT sector. The results indicate that all proposed paths are statistically significant ($p < 0.05$), thereby providing strong empirical support for the hypothesized model.

Specifically, H1, which posits that AI Adoption Level positively influences Recruitment Efficiency, is supported ($\beta = 0.214$, $t = 3.241$, $p = 0.001$). This suggests that increased adoption of AI technologies significantly enhances recruitment efficiency in IT organizations.

Similarly, H2, which examines the effect of AI Adoption Level on Satisfaction, is also supported ($\beta = 0.206$, $t = 3.146$, $p = 0.002$). This indicates that AI-driven recruitment processes contribute positively to the satisfaction levels of users (recruiters or candidates).

The results further confirm H3, where Perceived Transparency positively influences Recruitment Efficiency ($\beta = 0.152$, $t = 2.744$, $p = 0.006$). Although the effect size is relatively moderate, it remains statistically significant, highlighting the importance of transparent AI systems in improving recruitment outcomes.

In line with expectations, H4 is strongly supported, as Perceived Transparency has a substantial positive effect on Satisfaction ($\beta = 0.422$, $t = 6.430$, $p < 0.0001$). This represents one of the strongest relationships in the model, emphasizing that transparency in AI-driven decision-making significantly enhances user satisfaction.

Finally, H5, which proposes that Satisfaction positively influences Recruitment Efficiency, is also supported ($\beta = 0.401$, $t = 7.637$, $p < 0.0001$). The relatively high path coefficient indicates that satisfaction plays a critical role in driving recruitment efficiency outcomes.

Importantly, the results provide strong evidence for the mediating role of Satisfaction. Both AI Adoption Level and Perceived Transparency significantly influence Satisfaction, which in turn significantly affects Recruitment Efficiency. This suggests that the impact of AI and transparency on recruitment outcomes is not only direct but also indirectly transmitted through satisfaction, reinforcing the theoretical proposition that user perception and experience are crucial in AI-enabled recruitment systems.

Overall, the findings validate the proposed structural model and confirm that AI adoption and perceived transparency are key drivers of recruitment efficiency, both directly and indirectly through satisfaction, within the IT sector context.

Research Gap

- Limited empirical studies in the Indian IT context: Most existing literature is focused on Western economies (Upadhyay & Khandelwal, 2018; Tambe et al., 2019). The Indian IT sector, with its large-scale hiring and tech-savvy environment, offers a unique context that remains underexplored.
- Lack of stakeholder-centric analysis: Few studies provide a multi-stakeholder view incorporating HR professionals, recruiters, and job applicants (Wirtky et al., 2022). Most focus solely on technological capabilities rather than perceptions and human implications.

Findings:

- The Power of Transparency: Perceived transparency is a stronger driver of satisfaction {00.422) than Al adoption itself (00.206). This suggests that while technological advancement is important, the "explainability" and open communication regarding how these Al tools function are more central to user satisfaction.
- Satisfaction as a Catalyst: Satisfaction serves as a potent predictor of recruitment efficiency (00.401). This confirms that when users (recruiters and candidates) are satisfied with the Al-driven system, efficiency in recruitment outcomes increases significantly.
- Direct Efficiency Gains: Al adoption directly improves recruitment efficiency, though this effect is mediated by the satisfaction generated through the tool.

CONCLUSION AND MANAGERIAL IMPLICATIONS

For IT firms looking to optimize their recruitment pipelines, this study underscores two critical imperatives:

1. Prioritize Explainable Al (XAI): Organizations should not only focus on the deployment of Al but also on the transparency of the tools used. Ensuring that stakeholders understand how Al decisions are made is crucial for building the satisfaction necessary. for efficiency.
2. Focus on User-Centric Design: Recruitment efficiency is inherently linked to the satisfaction of the users interacting with Al systems. Investments should be directed toward user experience (LDO) to ensure that the adoption of Al is not met with resistance

REFERENCES

1. Madanchian, M., & Taherdoost, H. (2025). Barriers and enablers of Al adoption in human resource management: A critical analysis of organizational and technological factors. Information, 16(1), 51. https://doi.org/10.3390/nfo16010051
2. Ncube, F. (2025). The impact of artificial intelligence on human resource management practices: An investigation. SA Journal of Human Resource Management, 23(1). https://se/brm.co.za/index.php/sajbrm/article/view/2960/4807

3. Zhang, X., Antwi-Afari, M., Zhang, Y., & Xing, X. (2024). The impact of artificial intelligence on organizational justice and project performance: A systematic literature and science mapping review. Buildings, 14(1), 259. https://doi.org/10.3390/buildings14010259
4. Alam, M., & Verma, S. (2023). Impact of AI-based HR systems on employee outcomes. International Journal of Human Resource Management.
5. Binns, R., Veale, M., Van Kleek, M., & Shadbolt, N. (2018). Like trainer, like bot? Fairness and accountability in algorithmic decision-making.
6. Black, J. S., & van Esch, P. (2021). AI-enabled recruiting: What is it and how should HR adapt? Business Horizons.
7. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success. Journal of Management Information Systems.
8. Kaur, D., Uslu, S., Rittichier, K. J., & Durresi, A. (2023). Trustworthy AI: Explainability and transparency. ACM Computing Surveys.
9. Köchling, A., & Wehner, M. C. (2023). Discriminated by an algorithm: A systematic review of discrimination in AI recruitment. Business Research.
10. Nawaz, N., et al. (2023). AI-driven recruitment and organizational performance. Journal of Organizational Computing.
11. Rai, A. (2020). Explainable AI: From black box to glass box. Journal of the Academy of Marketing Science.
12. Raisch, S., & Krakowski, S. (2023). Artificial intelligence and management: The automation–augmentation paradox. Academy of Management Review.
13. Rudin, C. (2023). Interpretable machine learning: Fundamental principles. Nature Machine Intelligence.
14. Shin, D. (2021). The effects of explainability and causability on trust in AI. Computers in Human Behavior.
15. Shin, D. (2023). User perceptions of algorithmic decisions: Fairness, transparency, and trust. Information Systems Frontiers.
16. Shin, D., & Park, Y. (2023). Role of explainability in AI-based decision-making. Telematics and Informatics.
17. Tambe, P., Cappelli, P., & Yakubovich, V. (2019). AI in HRM: A review. Journal of Management.
18. Upadhyay, A. K., & Khandelwal, K. (2018). Applying AI in recruitment. Strategic HR Review.
19. Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance of IT. MIS Quarterly.