



IMPACT OF HRM PRACTICES AND ARTIFICIAL INTELLIGENCE ON EMPLOYEE ATTRITION IN IT INDUSTRY

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Abstract. The study reveals a positive relationship between strategic HRM practices and Artificial Intelligence integration, with organizations successfully aligning these elements facing a more resilient and engaged personnel. The human resources management strategies that prioritize talent acquisition, continuous learning, and employee well-being, when accompanied by AI-driven tools, contribute to reduced attrition and higher job satisfaction. The Information Technology (IT) industry is witnessing profound transformations driven by the integration of AI and innovative HRM practices. The first surface of the study delves into HRM practices, emphasizing their role in talent acquisition, employee's development and fostering a conducive work environment. Effective HRM practices, encompassing recruitment strategies, training programs and employee engagement initiatives, are examined as critical components for mitigating attrition challenges. The second dimension explores the infusion of AI in HRM processes and its repercussions on employee retention.

Keywords: HRM processes, talent acquisition, IT industry and attrition

1 Introduction

Information Technology (IT) industry stands at the forefront of technological innovation, with continual advancements shaping its operational landscape. The confluence of HRM practices and AI is redefining how organizations manage their workforce, particularly in the context of employee attrition. As the demand for skilled IT professionals intensifies, understanding the intricate relationship between HRM practices, AI integration and employee attrition becomes paramount for sustaining a competitive edge in the industry. AI applications such as predictive analytics, talent management systems and personalized learning platforms are scrutinized for their potential to enhance deci-

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sion-making and employee satisfaction. Conversely, concerns regarding job displacement, ethical considerations and the need for reskilling are addressed to comprehend the nuanced impact of AI on attrition. As the IT industry navigates the synergy between HRM practices and AI, a holistic understanding emerges, facilitating proactive measures to address attrition challenges and cultivate a sustainable and thriving workforce. Retaining top talent is a persistent challenge in an environment where employees are sought after for their expertise in emerging technologies.

The effective HRM practices are integral to talent acquisition, development and retention. Recruitment strategies, training programs and initiatives to enhance the work environment play a pivotal role in shaping the organizational culture and influencing employee commitment. As organizations vie for the best talent, the implementation of strategic HRM practices becomes a critical differentiator in minimizing attrition rates.

The advent of AI in HRM introduces a paradigm shift in how organizations approach in employee management. AI applications such as predictive analytics, machine learning algorithms and automation tools offer data-driven insights and decision-making capabilities. However, this technological integration raises questions about its impact on employee roles, job satisfaction and the employee experience.

- To analyze the intersection of HRM practices and AI and its influence on employee attrition within the IT industry.
- Assessing the role of artificial intelligence in shaping human resource management strategies and their effect on talent retention.
- Understanding the factors contributing to employee attrition in the context of technological advancements.

2 Review of Literature

Aldulaimi and Abdeldayem M M (2020)^[1], AI is shaping the landscape of Human Resource Management (HRM), offering innovative solutions to enrich decision-making, streamline processes, and optimize workforce management. This transformative technology brings forth a trends and opportunities in the territory of HRM. AI applications will empower efficient resource management, decision-making, and waste reduction.

Rawash N and Aloqaily A (2022)^[18], AI is revolutionizing the landscape of administrative human resources (HR) processes, bringing about transformative changes in how organizations manage their workforce. The integration of AI technologies into HR administrative tasks is streamlining operations, enhancing efficiency and unlocking new possibilities for strategic decision-making. In the realm of administrative HR processes, where routine tasks and procedural workflows are abundant, AI is proving to be a game-changer.

Ali, Arslan, Cooper, Golgeci and Khan, (2022)^[4], AI-driven systems contribute to a smoother on the process, automating paperwork and providing new hires with personalized training modules. This ensures a positive and efficient onboarding experience, setting the tone for a productive employee journey. AI-powered chatbots and self-service portals offer employees instant access to information related to HR policies, benefits, and frequently asked questions.

Bilan S., P. Suler, E. Krajnakova, Vasilyeva and Skrynnyk, (2022)^[5], AI applications contribute to a more personalized and responsive employee experience. AI assists in forecasting workforce trends, identifying skill gaps and planning for future talent needs. This strategic approach allows organizations to stay ahead in a rapidly evolving business environment. The combination of artificial intelligence in HRM presents numerous trends and opportunities that can significantly influence the productivity and effectiveness of HR professionals.

P. van Esch, and Black J. S., (2021)^[18], AI helps ensure HR processes comply with ever-evolving regulations by automating compliance tracking and reporting. This reduces the risk of errors and ensures that organizations stay in line with legal requirements. The impact of AI on administrative HR processes is profound, offering unprecedented efficiency, accuracy and strategic insights. The integration of AI in administrative HR processes marks a paradigm shift towards a more agile, data-driven and responsive approach to workforce management.

3 Methodology

The researcher conducted the study by 125 questionnaire were used to collect data, usable questionnaire is 118. Therefore, the sample size is 118. Cronbach's Alpha Value is 0.844 which is more than 0.7. The KMO value stands at 0.788, which surpasses the 0.5 threshold. Consequently, it is categorized as an excellent level of adequacy.

- Continuous learning opportunities through AI can boost job satisfaction and retention.
- AI in recruitment processes help to reduce the risk of attrition.

3.1 Communalities

Table 1: Communalities

| | Communalities | |
|---|---------------|------------|
| | Initial | Extraction |
| Robust training and development programs contribute to employee skill enhancement and career growth | 1.000 | .702 |
| These HR practices enhance employee satisfaction and reduce the likelihood of attrition | 1.000 | .728 |
| Continuous learning opportunities through AI can boost job satisfaction and retention | 1.000 | .567 |
| AI in recruitment processes help to reduce the risk of attrition | 1.000 | .704 |
| AI tools can analyze employee performance data to identify high performers | 1.000 | .655 |
| AI-driven surveys helping organizations address concerns before they lead to attrition. | 1.000 | .516 |
| Performance evaluations contribute to employees' perception of growth opportunities within the organization | 1.000 | .766 |
| HRM practices with AI implementations reducing attrition rates | 1.000 | .736 |

Extraction Method: PCA.

The extraction value is ranging from 0.516 to 0.766, which indicates minimum variance is 51.6% and maximum is 76.6%.

3.2 Total Variance Explained

Table 2. Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.858 | 48.230 | 48.230 | 3.858 | 48.230 | 48.230 | 2.799 | 34.993 | 34.993 |
| 2 | 1.515 | 18.934 | 67.163 | 1.515 | 18.934 | 67.163 | 2.574 | 32.171 | 67.163 |
| 3 | .843 | 10.542 | 77.705 | | | | | | |

| | | | |
|---|-----|------|-------|
| 4 | .47 | 5.99 | 83.69 |
| | 9 | 1 | 6 |
| 5 | .45 | 5.64 | 89.33 |
| | 1 | 0 | 6 |
| 6 | .32 | 4.04 | 93.38 |
| | 4 | 7 | 3 |
| 7 | .29 | 3.69 | 97.07 |
| | 6 | 5 | 8 |
| 8 | .23 | 2.92 | 100.0 |
| | 4 | 2 | 00 |

Extraction Method: Principal Component Analysis.

The above table indicated that, 2 constructs comprising of 8 items that are extracted cumulatively explains 67.163 percent of the total variance.

3.3 Rotated Component Matrix

Table 3. Rotated Component Matrix

| | Component | |
|---|-----------|------|
| | 1 | 2 |
| HRM practices with AI implementations reducing attrition rates | .839 | |
| These HR practices enhance employee satisfaction and reduce the likelihood of attrition | .839 | |
| AI in recruitment processes help to reduce the risk of attrition | .821 | |
| AI-driven surveys helping organizations address concerns before they lead to attrition. | .695 | |
| Robust training and development programs contribute to employee skill enhancement and career growth | | .822 |
| Performance evaluations contribute to employees' perception of growth opportunities within the organization | | .815 |
| AI tools can analyze employee performance data to identify high performers | | .809 |
| Continuous learning opportunities through AI can boost job satisfaction and retention | | .678 |
| Extraction Method: PCA | | |
| Rotation Method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations. | | |

Factor 1:

HRM practices with AI implementations reducing attrition rates. These HR practices enhance employee satisfaction and reduce the likelihood of attrition. AI in recruitment processes help to reduce the risk of attrition. AI-driven surveys helping organizations address concerns before they lead to attrition.

Factor 2: Robust training and development programs contribute to employee skill enhancement and career growth. Performance evaluations contribute to employees' perception of growth opportunities within the organization. AI tools can analyse employee performance data to identify high performers. Continuous learning opportunities through AI can boost job satisfaction and retention.

3.4 SEM

Table 4. Fit Indices for the Model

| S.NO | Measure | Recommended value | Observed Values | Interpretation |
|------|---------|-------------------|-----------------|----------------|
| 1 | CFI | >0.90 | 0.942 | Excellent |
| 2 | GFI | >0.90 | 0.953 | Excellent |
| 3 | NFI | >0.90 | 0.941 | Excellent |
| 4 | IFI | >0.90 | 0.946 | Excellent |

Table 5. Testing Significance of the Dimensions of HR Practices and AI

| | | | Estimate | S.E. | C.R. | P |
|--------------------------|------|------|----------|------|--------|------|
| Reducing attrition rates | <--- | RTDP | -.117 | .102 | -1.149 | .251 |
| Reducing attrition rates | <--- | ESRA | .154 | .092 | 1.676 | .094 |
| Reducing attrition rates | <--- | COJS | .305 | .071 | 4.276 | *** |
| Reducing attrition rates | <--- | RRA | .243 | .076 | 3.214 | .001 |
| Reducing attrition rates | <--- | AEP | -.242 | .084 | -2.891 | .004 |
| Reducing attrition rates | <--- | EPG | .163 | .100 | 1.621 | .105 |

| | | | Esti- mate | S.E. | C.R. | P |
|----------------------------------|------|------|---------------|------|-------|-----|
| Reduc- ing attrition rates | <--- | AILA | .386 | .087 | 4.431 | *** |

The above table indicated that continuous learning opportunities through AI can boost job satisfaction and retention having a significant effect over reducing attrition rates, AI in recruitment processes help to reduce the risk of attrition is having a significant effect over reducing attrition rates, AI tools can analyse employee performance data to identify high performers is having a significant effect over reducing attrition rates and AI-driven surveys helping organizations address concerns before they lead to attrition having a significant effect over reducing attrition rates.

4 Interpretation

Ensure that HRM practices are agile and responsive to technological advancements. Regularly assess the skills needed in the IT industry and plan training and development programs that align with emerging technologies.

Promote a culture of continuous learning and reskilling. Utilize AI-driven personalized learning platforms to identify individual learning needs and provide targeted training programs.

Leverage AI in recruitment processes to streamline candidate selection, ensuring a cultural fit and alignment with organizational goals. Implement AI-powered tools for predictive analytics in talent acquisition strategies. Implement HRM practices that prioritize work-life balance and employee well-being. Utilize AI to optimize workloads and automate routine tasks while carefully monitoring and managing employee work hours. Implement AI-driven tools for employee engagement surveys and sentiment analysis. Leverage AI to identify high performers and personalize recognition programs. Ensure regular feedback mechanisms to address concerns promptly.

Develop transparent career advancement paths for employees. Develop AI for talent management, identifying high-potential employees and recommending personalized career development opportunities.

5 Conclusion

The dynamic landscape of the Information Technology (IT) industry, characterized by rapid technological advancements, places a premium on effective HRM practices and

integration of AI. The impact of HRM practices and AI on employee attrition in the IT industry is multifaceted, requiring organizations to navigate this landscape strategically. By fostering a symbiotic relationship between HRM practices and AI attracts the top talent and retain them also it develops the face of technological advancements. This approach positions organizations to thrive in an era where the synergy between human expertise and artificial intelligence is key to sustained success in the IT industry.

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