

Original Research Article

Evaluating the Impact of AI-Enabled Appraisal Practices on Millennial Career Advancement: A Gender Equality Perspective in Mumbai Workplaces

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Abstract

The increasing integration of Artificial Intelligence (AI) into human resource management has transformed traditional performance appraisal through data-driven evaluation, continuous feedback, predictive analytics, and automated decision-making. This study evaluates the impact of AI-enabled appraisal practices on millennial career advancement, with particular emphasis on gender equality in Mumbai workplaces. It examines AI-supported performance evaluation, feedback, competency assessment, and data-driven appraisal decisions in relation to career growth, promotion opportunities, professional development, and advancement. It also considers whether perceived gender equality and fairness are associated with career advancement and mediate the relationship between AI-enabled appraisal practices and career advancement. The study adopts a quantitative approach using a structured questionnaire among millennial employees in selected Mumbai workplaces. The findings indicate positive relationships among AI-enabled appraisal practices, perceived gender equality/fairness, and career advancement. The study contributes to the emerging literature on AI in HRM by connecting technology-enabled appraisal, career

development, and gender equality. It also highlights the importance of transparency, consistency, human oversight, and ethical governance when implementing AI-supported appraisal systems.

Keywords: Artificial Intelligence, Performance Appraisal, Millennial Employees, Career Advancement, Gender Equality, Human Resource Management, Mumbai Workplaces.

1. Introduction

Artificial Intelligence (AI) is increasingly transforming Human Resource Management (HRM) by introducing data-driven approaches to employee management, performance evaluation, talent development, and decision-making. Its growing integration into HR practices can improve efficiency, consistency, and access to information for managerial decisions. Budhwar et al. (2023) note that AI is reshaping traditional HR functions while raising important concerns related to employee relations, ethics, inclusion, and the future of work. Therefore, AI should be viewed not only as a technological tool but also as a development that can influence employee experiences and organizational outcomes.

Performance appraisal is one HR function significantly influenced by AI. Traditional appraisal systems often rely on periodic evaluations, managerial observations. In contrast, AI-enabled appraisal practices can use employee-performance data, automated feedback, analytical tools, and algorithm-supported evaluations to provide more continuous and data-driven assessments. Riaz and Ghanghas (2024) suggest that AI and machine-learning technologies can support real-time performance measurement and potentially improve the accuracy, consistency, and fairness of evaluations. Similarly, Yun et al. (2024) demonstrate that machine-learning approaches can support employee performance evaluation and provide information relevant to promotion and career development decisions. Ansari and Vora (2024) further highlight the growing application of machine learning in employee promotion evaluation.

The relationship between performance appraisal and career advancement makes AI-enabled appraisal particularly important. Performance evaluations can influence promotions, recognition, training, professional development, and increased responsibilities. AI-driven appraisal may therefore shape employees' perceptions of their future career opportunities. Furthermore, AI can transform employee feedback by enabling automated and continuous performance-related feedback. Pei et al. (2024) found that AI-enabled feedback can influence employees' learning responses and job performance, suggesting that AI can contribute to continuous employee development.

However, AI does not automatically guarantee objective or unbiased decisions. Algorithms depend on datasets, variables, design processes, and organizational criteria that may contain existing inequalities. Kelan (2024) argues that AI can reproduce or amplify human bias, with algorithmic inclusion influenced by data, design, and decisions.

The issue is especially relevant for millennials, who form a significant segment of today's workforce and have experienced increasing digitalization in workplace practices. Mumbai, as a major corporate and commercial centre with diverse industries, provides an appropriate context for examining employees' perceptions of AI-enabled HR practices and their implications for career advancement and gender equality.

Literature Review

The study Bajaja & Shah (2025) highlights how AI-enabled HR strategies can support gender equality by identifying workplace barriers and creating better opportunities for women's career growth. It suggests that technology can make HR decisions more inclusive when implemented fairly and responsibly.

The authors show that gender discrimination at work can negatively affect women's professional development and career progression. Fitong Ketchiwou & Dzansi (2023) Their findings highlight the need for fair workplace practices that provide equal opportunities for women.

The study found that employees' satisfaction with performance appraisal is linked to career development and creative behaviour. Ismail & Rishani (2017) A fair and meaningful appraisal process can therefore contribute to employees' professional growth.

Kaur (2025) The study discusses the continuing gender pay gap and inequalities in workplaces despite growing awareness of gender equality. It emphasises the importance of stronger organisational policies to ensure equal treatment and opportunities.

The authors explain that achieving women's career equality requires organisational changes in leadership, policies, and workplace practices. Kossek & Buzzanell (2018) They emphasise evidence-based approaches to create more supportive career environments for women.

Mutaqin & Chaerudin (2020) The study indicates that competency, organisational career management, and performance appraisal can influence career path advancement among millennials. It also highlights the importance of organisational commitment in supporting employees' career progression.

Oktaviani & Handayani (2025) The study suggests that performance appraisal and organisational culture can influence employees' promotion opportunities. A supportive organisational culture combined with fair appraisal practices can improve career advancement prospects.

Pant (2025) The study identifies a positive connection between performance appraisal practices and employees' career development in Nepalese commercial banks. It indicates that effective appraisal systems can help employees understand their strengths and plan their future careers.

Rodrigues & Dias (2024) The study highlights the role of soft skills in career development and shows that performance appraisal can strengthen this relationship. Constructive appraisal feedback can therefore help employees identify areas for improvement and career growth.

Stewart et al. (2016) The authors discuss the distinctive workplace expectations and characteristics of millennials. Their study suggests that organisations need appropriate management and development practices to support this generation's engagement and career growth.

Du (2024) The study examines the continuing challenges to gender equality in workplaces and discusses strategies for addressing them. It stresses that organisational policies and practices need to actively promote equal opportunities.

The study examines HR practices associated with women's career progression in India and highlights the continuing presence of barriers such as the glass ceiling. Kumari & Kaur (2025) It suggests that inclusive HR policies are important for improving women's opportunities for advancement.

Mittal (2025): The study focuses on workforce participation among educated women in urban India and highlights factors that influence women's participation in employment. The findings underline the importance of creating workplace conditions that encourage women to remain and progress in their careers.

The study explores why women experience unequal pathways to leadership in the health sectors of India and Kenya. Saville et al. (2024) It shows that organisational structures and gender-related barriers can influence women's progression into leadership positions.

The study suggests that emotional intelligence may help women manage gender-related workplace bias and navigate barriers to career advancement. Askew-Breier & Blau (2025)

Table 1. Review of Literature Related to the Study Variables (Key Findings)

Author(s) & Year	Focus of Study	Variable/Dimension Relevant to Present Study	Key Findings	Relevance to Present Study
Budhwar et al. (2023)	AI and generative AI in HRM	AI in HRM, performance management, employee outcomes	AI is transforming HR functions and creating opportunities as well as challenges related to employee management, ethics and inclusion.	Establishes the broader theoretical context for examining AI-enabled appraisal practices.
Bujold et al. (2024)	Responsible AI in HRM	Responsible AI, fairness, transparency, HR decision-making	The review highlights the importance of responsible AI practices and the risks associated with AI-based HR decisions.	Supports the fairness and gender-equality dimension of your study.
Pei et al. (2024)	AI-based negative performance feedback	AI-enabled feedback, employee performance	AI-based feedback can influence employees' motivation to learn and can contribute to improved job performance.	Directly supports AI-enabled appraisal/feedback as an important component of your independent variable.
Riaz & Ghanghas (2024)	AI in employee performance evaluation	AI, performance appraisal, employee performance	AI/ML can support employee performance evaluation and provide opportunities for more data-driven appraisal.	Directly supports the AI-enabled appraisal practices construct.
Yun et al. (2024)	Machine-learning-based employee performance evaluation	AI-based performance evaluation, promotion, career advancement	Machine-learning approaches can be applied to employee performance evaluation and may support decisions related to promotion and career development.	Strongly supports the relationship between AI-enabled appraisal and career advancement.
Kelan (2024)	Algorithmic inclusion in AI-supported HR decisions	Algorithmic bias, inclusion, fairness	AI does not automatically remove bias; data, design and decision-making processes can reproduce or amplify existing inequalities.	Provides a strong theoretical basis for the gender equality/fairness dimension.

Gupta & Tembhumekar (2024)	AI-driven performance appraisal systems	AI appraisal, algorithmic bias, ethics	AI-based appraisal can improve efficiency and objectivity but also raises concerns regarding algorithmic bias, ethics and data privacy.	Supports both the benefits and risks of AI-enabled appraisal.
Bankins et al. (2024)	AI in organizations	AI, organizational behaviour, employee outcomes	AI adoption has implications for employee behaviour and organizational practices and requires attention to human and organizational factors.	Supports the broader relationship between AI adoption and employee outcomes.

2.5 Research Gap

The literature indicates that AI has considerable potential to transform performance appraisal through data-driven evaluation and automated analysis. Existing studies have examined AI-enabled employee performance evaluation and its potential contribution to promotion, career advancement, and organizational decision-making. However, there remains a need to examine these issues from an employee career-advancement and gender-equality perspective.

In particular, limited attention has been given to how millennial employees perceive AI-enabled appraisal practices and whether such practices are associated with their perceived career advancement. Further, the intersection of AI-enabled appraisal and gender equality remains an important area for investigation, especially in the context of Indian workplaces.

4. Objectives of the Study

1. To examine the impact of AI-enabled appraisal practices on the career advancement of millennial employees in Mumbai workplaces.
2. To examine the relationship between AI-enabled appraisal practices and perceived gender equality/fairness.
3. To examine the relationship between perceived gender equality/fairness and millennial career advancement.

5. Hypotheses of the Study

H1: AI-enabled appraisal practices have a significant positive effect on millennial career advancement.

H2: AI-enabled appraisal practices have a significant positive effect on perceived gender equality/fairness.

H3: Perceived gender equality/fairness has a significant positive effect on millennial career advancement.

H4: Perceived gender equality/fairness mediates the relationship between AI-enabled appraisal practices and millennial career advancement.

6. Conceptual Model



Theoretical Implication

Organizational Justice Theory is relevant because the study is concerned with employees' perceptions of fairness, equality and transparency in performance appraisal. Employees evaluate organizational processes not only according to their outcomes but also according to whether the procedures used to reach those outcomes are fair. In the context of AI-enabled appraisal, procedural fairness becomes particularly important. Employees may perceive AI-based evaluation as fair when performance criteria are consistently applied, relevant information is considered, and appraisal decisions are transparent. Conversely, concerns about algorithmic bias or lack of explanation may negatively affect perceptions of fairness.

7. Data Analysis and Interpretation

7.1 Measurement Model Assessment

Table 2. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
AI-Enabled Appraisal Practices	0.924	0.938	0.654
Perceived Gender Equality/Fairness	0.884	0.915	0.684
Career Advancement	0.912	0.931	0.697

Interpretation:

The results indicate satisfactory internal consistency for all three constructs. Cronbach's Alpha values range from **0.884 to 0.924**, exceeding the commonly accepted threshold of 0.70.

The Composite Reliability values range from **0.915 to 0.938**, further confirming the reliability of the constructs. The AVE values range from **0.654 to 0.697**, which are above the recommended threshold of 0.50.

Table 3. Structural Model Results

Hypothesized Relationship	Path Coefficient (β)	Interpretation
AEP $\rightarrow$ GE	0.483	Positive relationship
AEP $\rightarrow$ CA	0.411	Positive relationship
GE $\rightarrow$ CA	0.347	Positive relationship

Interpretation

The path coefficient from **AI-Enabled Appraisal Practices to Perceived Gender Equality/Fairness** is $\beta = 0.483$. This indicates a positive relationship.

The relationship between **AI-Enabled Appraisal Practices and Career Advancement** is $\beta = 0.411$, indicating a positive association.

The path from **Perceived Gender Equality/Fairness to Career Advancement** is $\beta = 0.347$, indicating that perceptions of fairness and equality are positively associated with career advancement.

7.5 Coefficient of Determination (R^2)

The explanatory power of the structural model was examined using R^2 .

Table 4. R^2 Values

Endogenous Construct	R^2
Perceived Gender Equality/Fairness	0.234
Career Advancement	0.427

Interpretation

The R^2 value for **Perceived Gender Equality/Fairness** is **0.234**, indicating that approximately **23.4% of its variance is explained by AI-Enabled Appraisal Practices**.

The R^2 value for **Career Advancement** is **0.427**. This indicates that approximately **42.7% of the variance in Career Advancement is explained by AI-Enabled Appraisal Practices and Perceived Gender Equality/Fairness together**.

7.6 Mediation Analysis

The study proposes that **Perceived Gender Equality/Fairness mediates the relationship between AI-Enabled Appraisal Practices and Career Advancement**.

$$AEP \rightarrow GE \rightarrow CA = 0.168$$

Interpretation

The positive indirect effect suggests that AI-enabled appraisal practices may influence career advancement partly through employees' perceptions of gender equality and fairness.

7.7 Hypothesis Testing

Table 5. Hypothesis Testing

Hypothesis	Relationship	Result	Decision*
H	AEP $\rightarrow$ Career Advancement	$\beta = 0.411$	Positive
H2	AEP $\rightarrow$ Gender Equality/Fairness	$\beta = 0.483$	Positive
H3	Gender Equality/Fairness $\rightarrow$ Career Advancement	$\beta = 0.347$	Positive
H4	AEP $\rightarrow$ GE $\rightarrow$ Career Advancement	$\beta = 0.168$	Positive indirect effect

8. Findings

The findings show that the measurement model had good reliability and validity, with Cronbach's Alpha values ranging from 0.884 to 0.924. AI-enabled appraisal practices had a positive relationship with perceived gender equality/fairness ($\beta = 0.483$) and career advancement ($\beta = 0.411$). Perceived gender equality/fairness also positively influenced career advancement ($\beta = 0.347$). The model explained 42.7% of the variance in career advancement ($R^2 = 0.427$). The indirect effect of 0.168 suggests that perceived gender equality/fairness may play a mediating role between AI-enabled appraisal practices and career advancement. Overall, the findings indicate that fair and AI-supported appraisal practices can contribute positively to employees' career advancement.

9. Discussion

The findings suggest that AI-enabled appraisal practices can support performance management and employee career development. The positive relationship between AI-enabled appraisal and career advancement aligns with Yun et al. (2024), who highlight the role of AI in performance evaluation and promotion-related decisions. The relationship between perceived gender equality and career advancement emphasizes the importance of fairness in appraisal processes. Employees are more likely to view career progression positively when evaluations are equitable. The potential indirect relationship further suggests that AI-enabled appraisal may influence career advancement through perceptions of fairness and equality.

10. Conclusion

The analysis indicates positive relationships among all three constructs. AI-enabled appraisal practices are positively associated with perceived gender equality and fairness, as well as career advancement. Similarly, perceived fairness is positively related to career advancement. These findings suggest that the effectiveness of AI in performance appraisal should not be evaluated only in terms of automation and efficiency. Its contribution to employees' career advancement also depends on whether appraisal processes are perceived as fair, transparent, consistent, and inclusive. From a gender-equality perspective, organizations should regularly review AI-supported appraisal systems to identify and minimize potential biases. Employees should also be provided with greater clarity regarding how AI contributes to performance evaluation and career-related decisions. The study contributes to the emerging literature on responsible and inclusive AI in HRM by integrating AI-enabled appraisal, gender equality, and career advancement. In Mumbai workplaces, AI can support evidence-based career decisions when combined with human oversight and ethical governance.

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