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Balancing Accuracy and Ethics In AI-Driven Performance Appraisals: Employee Evidence Supporting Hybrid Human Oversight.

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Abstract-

Background: **The fast development of the Artificial Intelligence (AI) into Strategic Human Resource Management (SHRM) is changing the performance appraisal system of the past where annual evaluations were conducted to ongoing data-driven performance appraisals. These technologies have brought about a serious ethical issue of fairness, transparency, and the welfare of the employees with their introduction and adoption.**

Purpose: **The study is intended to determine how AI-based performance appraisal systems can influence how employees perceive them to be fair, trusting, and accurate. Particularly, it discusses the ethical issues of automation and the viability of the hybrid (human-in-the-loop) appraisal models.**

Methods: **The design of the research was a quantitative explanatory research approach and the data were gathered with the help of a structured questionnaire that was sent to 224 HR professionals and employees in the IT industry in Bangalore. Pearson correlation and multiple regression were used to analyse the data in SPSS.**

Findings: **It indicates that the strongest predictor of job satisfaction (= 0.856, $p < 0.001$), accuracy trust (= 0.993, $p < 0.001$) is the strongest predictor of productivity. Alternatively, absence of human judgments is a strong predictor that results in stress among employees (= 0.995, $p = 0.001$).**

Conclusion: **AI increases efficiency and productivity, but it causes psychological anxiety because of the lack of a human touch. The results are highly in favor of adopting hybrid appraisal systems which integrate both algorithmic effectiveness and which take advantage of the effectiveness by human contextual judgement to alleviate some ethical dangers.**

Keywords: **Artificial Intelligence (AI), Business Ethics, Employee Stress, Hybrid Governance, Performance Appraisal, Strategic Human Resource Management (SHRM).**

I. INTRODUCTION

Introduction of artificial intelligence in human resource management is a significant shift in the context of Strategic Human Resource Management (SHRM) bearing in mind that firms are turning towards technological innovations in an attempt to concentrate on harmonizing human resource procedures with strategic objectives.

Application of artificial intelligence in human resources has already started to include all processes with the greatest demand, starting with talent acquisition, onboarding, employee engagement, training and development to talent retention and performance, thereby facilitating the shift of the conventional method of appraisals to the new method of the continuous appraisals [1] (Mariani et al., 2023) Within the context of SHRM, this will turn out to be a significant change in human resource management of improving strategic significance of human resources.

There are longstanding criticisms of the traditional performance appraisal practices as being rooted in the intermittent, manager-led appraisals structured around standardized performance criteria and subject to all manner of bias, such as nepotism and the halo effect, to procedural justice, worker trust, and organizational effectiveness [2] (Hajam et al., 2023). AI-driven performance management systems, in their turn, utilize state-of-the-art analytics, as well as real-time data, to provide a more objective evaluation of worker performance, addressing the long-recognized flaws of the classical performance appraisal practice.

It can also be seen that the implementation of AI-based performance management can be analysed according to the Ability Motivation Opportunity (AMO) model. One the one hand, AI-driven platforms enhance employee capacity with training and development of personal suggestions. Meanwhile, employees are motivated by performance management processes, which are more genuine and just because of the analysis provided by AI. Also, the use of AI-based performance management systems offers an employee a chance to contribute based on skills analysis, internal talent mobility, and predictive workforce analysis that enable companies to remain proactive in their workforce plan [3] (Nikita Saklani & Ashli Khurana, 2023). Also, automation of administrative functions in the human resources sector through AI streamlines business processes and allows human resource leaders to focus their time on the worthwhile and resourceful matters such as talent development and competency-based pay packages [4] (Mughal et al., 2025).

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With the implementation of AI in the performance management process, businesses can improve the manner in which HR practices can influence employee performance, which, in its turn, can enhance the relationship between human resource and performance central to both strategic and administrative models of HRM (SHRM and AMO models, respectively). Overall, AI is proving not only to be an addition to technology, but also a source of optimization performance in business.

It has its own challenges, even though it has benefits in terms of the application of AI in HRM. An increase in ethical issues among employees that involves consistency in the evaluation of the employees with respect to different job titles, ethical issues like fairness and impartiality, employee resistance, fear of job loss, and aversion to automations, which are the key raised issues. The artificial intelligence can be used to surpass the human accuracy of decisions because of its ability to analyse behavioural patterns and vast quantities of data, but excessive reliance on technology may harm human intuition and trust in employees [5] (Artha et al., 2024). In order to overcome the mistrust and anxieties of the employees on appraisals, this strategy highlights the elements of humanised judgement and AI-powered HRM systems and creates the clear picture of the decisions taken and creates transparency and openness to the appraisal process.

II. Statement Of The Problem.

The subjective biases such as nepotism and halo effect and procedural injustice toward the appraisal process have been criticized in the traditional approach [2] (Hajam et al., 2023). AI addresses the weakness by providing real time analytics and impartiality. Nonetheless, such a technological change presents new challenges. Irrespective of its benefits, AI in HRM has become an issue of ethics due to its uniformity, trust, accuracy, fairness, and the character of the algorithmic decision-making. Excessive resort to AI platforms to bias the confidence and perceptions of employees [5] (Artha et al., 2024).

Despite the growing adoption of artificial intelligence into performance appraisal systems, the current literature is centering on technology by emphasizing on the efficiency, accuracy, and the lack of empirical research emphasis on the contributions in the ethical and human side of the AI-based appraisal. The current literature has extensively talked of ethical AI concepts, including fairness, transparency, accountability, and privacy of data in an abstract manner but without empirical research on the effects of the aforementioned elements on employees. Moreover, although there is an increasing demand of hybrid performance ratings, there are still minimal empirical evidences that it is effective in comparison to AI system, especially in the IT field. To fill these lapses, the current study examines the effects of job satisfaction, productivity, and stress.

The findings indicate that the strong predictors of job satisfaction are data privacy and fairness, productivity is driven by accuracy trust, and stress in employees is caused by the lack of human judgment. This paper offers strong arguments in favor of the adoption of hybrid AI-human performance appraisal systems, which develops a balanced and sustainable strategy, which plays a role in ethical AI governance and strategic human resource management.

Objectives of the Study

- To evaluate the impact of AI systems on fairness, transparency, trust, accuracy, and accountability in AI-driven appraisal methods amongst employees.
- To examine the ethical concerns and challenges of the AI-enabled performance appraisal process.
- To analyse the use of governance structures and design aspects of appraisals (hybrid) for managing risks and long-term career impact on employees.

III. Literature Review

AI Technologies in Human Resource Management

The past performance ratings were based on managerial judgments that took so long to be approved, lacked objectivity, had inaccurate data and did not provide sufficient performance monitoring of an individual which hampered the adaptation of the latest technologies and constrained the employees training and development programs. The adoption of Artificial Intelligence (AI) has changed the evaluation standards that correspond to the strategic growth of employees that align with the organizational objectives [6] (Stone, 2015). With time, more advanced applications were made possible through machine learning (ML), natural programming languages (NLP) and data analytics. Such intelligence systems used predictive analytics to decide on the screening of the job applicants, automated on-boarding, and tailored learning tools to upskill the employee development of an organization [7] (Ashwani Kumar Upadhyay & Komal Khandelwal, 2018).

The technological change led to the formation of data-driven algorithms to find some trends in employee performances, retention, and engagement [8] (Davenport et al., 2020). These smart talent systems currently allow human resource experts to predict skills shortages and implement specific interventions that are aligned with strategic workforce planning [9] (Ming-Hui Huang, 2022).

Current trends in AI-driven performance appraisal systems

Performance appraisal systems represent a key and rapidly evolving area in the adoption of AI in human resource management.

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AI-driven systems collect large sets of data from diverse sources such as supervisors' feedback, peer feedback, feedback from clients, productivity metrics, and digital activity logs to generate real-time insights [10] (Levenson, 2017).

Current trends include –

Continuous performance feedback: AI tools analyses work patterns and provide performance insights, replacing annual reviews [11] (Cappelli et al., 2018)

Smart goal setting & personalized development: AI systems generate dynamic and personalized KPIs based on organisational priorities and past performance patterns, integrating with learning platforms that allow AI to recommend custom skill development paths based on performance outcomes of employees [12] (Angrave et al., 2016).

Sentiment analysis: NLP techniques assess employee communications to understand their engagement in work, morale, and quality of collaboration [13] (Strohmeier, 2015).

Ethical considerations in AI.

Ethical AI signifies systems designed and implemented in a way that reflects core values – such as fairness, accountability, transparency, and respect for human decision-making [14] (Floridi et al., 2018). AI usage in the workplace raises a unique ethical concern as it mediates employment decisions and interacts with employees directly or indirectly. Key issues include–

Bias in hiring and appraisals –Algorithms trained on biased datasets can reinforce existing inequalities, leading to unfair outcomes in recruitment and performance evaluations [15] (Raghavan et al., 2019)

Opaque Decision-Making –A black box model might rate an employee as high or low performing, limiting employees' understanding of which factors are weighted most or why the final score was produced [16] (Burrell, 2016).

Surveillance and Privacy Invasion –AI tools continuously monitor employee activities where questions are raised on consent and breach [17] (Ajunwa, 2020).

Performance appraisal systems

Traditional approaches to performance appraisal

Traditional performance appraisals rely on historic or periodic evaluations by managers through assessments. Organisations use 720-degree feedback systems, Management by Objectives (MBO) and competency-based appraisals.

These approaches have several limitations:

Subjectivity and bias: A manager's judgements are based on personal preferences rather than objective performances.

Recency effect: Performance evaluations are subjected to recent events rather than consistent performances.

Feedback timelines –Traditional feedback usually occurs annually or biannually, which delays the implementation of corrective actions [18] (DeNisi, 2017).

Consequently, organisations implemented continuous performance management techniques intended to facilitate real-time feedback and development.

Transaction to AI-driven performance appraisal systems

AI-driven performance appraisals surpass traditional limitations by misusing continuous data streams and advanced analytics. These systems are integrated by machine learning programs to deliver continuous evaluations and recommendations [11] (Cappelli et al., 2018).

The transformations include –

Automated data collections –AI systems gather performance metrics from various sources like project management tools without manual inputs.

Real-time feedback –AI continuously analyses the work data, provides instant feedback, identifies gaps, and provides data-driven improvements.

Bias mitigation tools –Algorithms are designed in a way that would detect and provide corrective patterns of unfairness.

Empirical studies suggest that AI-augmented appraisals improve objectivity and fairness in employees' perceptions [19] (Basalamah & P, 2025). However, these tools rely on algorithm designs, organisational transparency, and data quality.

Potential ethical implications of this transition

AI offers more insights and efficiency in performance evaluations, while also giving rise to ethical implications:

- *Privacy concerns* –Continuous monitoring may hinder employee privacy, especially when personal devices are tracked and off –hour behaviours are analysed.
- *Algorithmic Bias* –Organisations have to input the data into the AI models to get meaningful insights; when the data is historic in nature, it may replicate and arise inequities.
- *Employee Autonomy* –AI performance appraisals empower individuals to understand feedback, make informed decisions, and actively manage their performances.

The transitions to AI-driven appraisals have to balance technological capabilities with ethical safeguards [20] (Lepri, 2017).

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Governance and regulations of AI in HR

Current regulatory Landscape for AI in workplace settings

Implementation of AI in the workplace is emergent across the jurisdictions. While some regions have adopted AI legislation like the European Union's AI Act, which puts a risk-based requirement on high-impact systems, including those in HR (European Commission Act, 2021). Other countries address AI through indirect data protection laws, such as GDPR, which governs collection processing, protection of personal data, ensuring data privacy, transparency, and individual rights.

The existing laws have considered complex algorithmic decision-making, which is where the gaps in enforcement and accountability arise [21] (Binns, 2020).

Industry standards and best practices for ethical AI in HR

Beyond regulation, industry bodies and consultancies endorse the following best practices for ethical AI in HR:

- *Algorithmic Audits* -These are regular internal and external audits of AI systems for bias and fairness.
- *Explainability Requirements* –The user must be aware of the algorithms used and what is the basis for drawing the conclusions on those particular decisions.
- *Human-in-the-Loop (HITL)* –A human oversight is necessary so that no critical decisions are made with automated systems.
- *Data Governance Frameworks* -Clearly defined policies on data collection, storage, access, and retention.

These best practices encourage proactive governance rather than reactive compliance [22] (Gasser, 2017).

Gaps in Governance Structures for AI-Driven Performance Appraisals

Although progress has been made, serious gaps in governance persist:

- *Lack of AI Workplace Standards*- Most regulatory frameworks do not explicitly cover AI performance appraisal systems, leaving organizations to self-regulate.
- *Uneven International Policy*- Global organizations must navigate conflicting requirements across borders that can complicate the ethical deployment of AI.
- *Limited Enforcement Mechanisms* – Most of the regulatory bodies lack technical expertise to audit the complex data used in AI systems.
- *Deficits in Transparency* – AI models resist disclosing the algorithms used and the decisions given; thus, accountability cannot be demanded.
- There is a need for multi-stakeholder governance approaches that give adequate roles to regulators, employers, employees, and technical experts, ensuring ethical and equitable AI at workplaces [23] (Cath, 2018).

IV. Research Methodology

Research design

The research in this study will take a quantitative explanatory research design to examine ethical principles that can regulate AI-based performance appraisal systems. This approach is appropriate in this research because ethical concerns, governance systems, and multifaceted organisational performances. According to previous sources, ethical AI implementation in HR cannot be solely explained using numerical variables as it implies fairness, perceptions, transparency, trust, and accountability [24] (Jobin et al., 2019) A qualitative approach makes it possible to take an in-depth analysis of the ways organisations develop ethical risks, mitigation strategies, and vulnerability to uncertainty of regulations in AI appraisals. The relationships between variables are tested with the help of the SPSS analysis, and the preferences concerning the AI-only and the hybrid (human + AI) appraisal systems are compared to obtain the information based on the data that could help to understand the use of AI in HRM.

Considerations in research ethics. The whole study was done in a manner that adhered to ethics. The informed consent of all the participants was obtained, and this guarantees voluntary attendance and the freedom to withdraw at any point during the process of filling in the questionnaire, and this study does not ask the respondents to provide sensitive information of any personal kind or the organisation in any form other than what is necessary in carrying out academic research.

The sampling and data collection were conducted with the help of interview and survey methods. The research is based on the primary qualitative data presented by the researcher in the form of an open-ended structured questionnaire with 224 participants who participate in the survey as HR professionals, AI practitioners and organisational decision-makers working in the field of AI-enabled performance management. The sample size was sufficient to determine the perceptions of fairness, transparency, trust, motivation, ethical issues, and the comparison of the preferences on whether AI or hybrid appraisal systems should be implemented in an organisation.

Data collection method

The study was implemented through the structured open-ended questionnaire designed to measure employee perceptions of AI-driven performance appraisals.

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The questionnaire covered the following sections covering the key aspects –

1. Perceptions of Fairness, Transparency & Accountability.
2. Trust in AI-Driven Appraisal Systems.
3. Impact on Motivation, Job Satisfaction, Stress & Productivity.
4. Challenges Associated With AI-Based Evaluation.
5. Comparison Between AI-Driven and Hybrid Systems.
6. Long-Term Career Impact & Performance Trends.

All the items are measured on a five-point Likert scale, ranging from 1 – strongly disagree to 5 – strongly agree, that allows respondents to express their perceptions in a standardised manner. This questionnaire was administered electronically to ensure ease in the collection of information from the respondents.

Data analysis

Data analysis is conducted using SPSS to identify the reliability using Cronbach's Alpha. The relationship between variables was tested using Pearson's correlation, and Regression was used to test and validate hypotheses. By supporting theoretical interpretation, this approach makes it possible to map against ethical AI principles such as fairness, transparency, accountability, and human oversight.

Need And Scope Of Study

The increased use of AI-based performance appraisal systems has enhanced efficiency and data-driven HRM decision-making. How ever it has raised a number of ethical concerns to do with fairness, trust, transparency and accountability of HR decision making processes. An interest emerges to examine how such AI-based appraisals can affect the views of the employees and how these views can be effective in promoting ethical and human-centred decision making. It will be included in the research to evaluate the nature of ethical problems, their governance framework, and the performance of AI-only systems and hybrid appraisal systems. It also explores long term impacts on motivation of employees, trust and career growth in the organisation.

V. Results

Reliability Statistics of Data

In order to determine the validity of the questionnaire applied in this research, the Cronbach's alpha test is applied as a generally acceptable test to verify the internal consistency of survey tools. The alpha of Cronbach may take the value of 0 to 1.00. 1.00 is a high level of consistency of items in the questionnaire. The alpha of Cronbach was determined to be 0.881 in the course of this study analysis.

High reliability coefficient indicates that the questionnaire items are very consistent with the reliability coming out at 88.1%. Consequently, the conclusions made in this study can be deemed as solid, which enables additional data interpretation and analysis of information obtained about AI-based performance appraisals in the IT industry.

Table 1:
Statistic of reliability.

Reliability Statistics	
Cronbach's Alpha	N of Items
.881	16

Hypotheses

H0 – Ethical AI-driven performance appraisal practices have no significant effect on employee outcomes.

H1 - Ethical AI-driven performance appraisal practices have a significant effect on employee outcomes.

Descriptive Statistics

Table 2:
Descriptive Statistics

	N	Mean	Std. Deviation
Uniformity	224	4.09	0.943
Fairness	224	3.75	1.08
Transparency	224	4.1	0.852
Accuracy Trust	224	4.14	0.854
Data Privacy	224	3.79	1.021
Motivation	224	4.14	0.87
Job Satisfaction	224	3.79	1.017
Stress	224	4.13	0.88
Productivity	224	4.14	0.849
Technical Issues	224	3.78	1.026
Lack Human Judgment	224	4.13	0.858
Preference for AI Appraisal	224	4.13	0.866
Hybrid Effectiveness	224	3.79	1.026
Preference for Hybrid Appraisal	224	3.96	0.939
Career Development	224	3.78	1.069
Performance Tracking	224	3.88	1.013
Valid N (listwise)	224		

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Based on a table 2 depicts the descriptive statistics of the research undertaken on the work of different AI-based performance appraisal systems, using 224 respondents. The responses were all measured on a Likert scale ranging between 1 and 5 meaning that the responses were varied and the data is suitable in further inferential analysis.

AI-based performance appraisal perceptions. The mean scores were very high in accuracy trust (M = 4.14, SD = 0.854), motivation (M = 4.14, SD = 0.870) and productivity (M = 4.14, SD = 0.849), which reflects the level of confidence employees had in the accuracy of the AI-generated evaluation along with motivation and contribution to the performance improvement of the employees. The average score received on Transparency (M = 4.10, SD = 0.852) and Uniformity (M = 4.09, SD = 0.943) depict the perceptions of the employees regarding uniformity and the criteria used in evaluating the outcomes produced by AI.

The results confirm the proposal that AI-based systems can contribute to the clarity, performance motivation and productivity, align through the implementation of AI-based technologies in appraisal systems, and add to the theoretical body related to AI-supported decisions in HRM.

Concerns of Trust, Fairness and Privacy.

The fairness variable (M = 3.75, SD = 1.080) and the data privacy variable (M = 3.79, SD = 1.021) had high mean scores, and the higher standard deviation indicates that the perceptions are not homogenous and this may be caused by transparency within an organisation and previous experience with AI systems or data governance practices in the sector

Stress and Human Judgment Limitations

The items that received high scores were the stress (M = 4.13, SD = 0.880) and the lack of human judgment (M = 4.13, SD = 0.858), which indicate a critical paradox. The employees are also stressed due to the constant observation and absence of context and human judgment but AI systems are viewed as precise and increasing productivity. This accentuates the socio-psychological expenses that are associated with the algorithmic management practices.

Preference for Appraisal Systems

The AI appraisals had a high preference among the employees (M = 4.13, SD = 0.866); the Hybrid Effectiveness (M = 3.79, SD = 1.026) and Preference of Hybrid Appraisal (M = 3.96, SD = 0.939) also indicated high means. This implied that AI appraisals are acceptable, and employees are content with the hybrid model of appraisal and AI under human control is perceived to be more effective and balanced.

Career and Long-Term Performance Growth

The Career Development (M = 3.78, SD = 1.069) and Performance Tracking (M = 3.88, SD = 1.013) demonstrate that AI-based appraisals are deemed moderately helpful in the case of career planning in the long run and the performance trend analysis. The broader spread is an indicator of the variation in the maturity of AI implementation among organisations.

Overall, the descriptive findings indicate that AI-based appraisal systems are considered to be accurate, motivational, and increasing productivity, whereas on the contrary, they cause additional stress and fears about human judgement and ethical justice. Therefore, the empirical findings support the practical justification of a hybrid appraisal model, which would balance its cost-efficiency and human control.

CORRELATION ANALYSIS

Pearson's correlation analysis was conducted to study the relationships among ethical dimensions of AI-driven performance appraisal systems and employee-related outcomes. Table 3 presents the correlation matrix for the study of variables. Correlation coefficients significant at the 0.01 level (two-tailed) indicate strong statistical relationships.

Table 03:
Correlation

Correlations						
Variables	**1**	**2**	**3**	**4**	**5**	**6**
Uniformity	1					
Accuracy trust	.56**	1				
Motivation	.55**	.95**	1			
Stress	.56**	.98**	.96**	1		
Productivity	.56**	.99**	.95**	.99**	1	
Performance tracking	.74**	.66**	.65**	.65**	.66**	1

Ethical AI Dimensions and Positive Employee Outcomes

Strong statistically significant, positive correlations were found between core ethical dimensions of AI systems and favorable outcomes:

Fairness was strongly positively related to:

Job Satisfaction ($r = .966$, $p < .01$)

Career Development ($r = .911$, $p < .01$)

Hybrid Effectiveness ($r = .929$; $p < .01$)

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There was a strong correlation between transparency and:

Hybrid Appraisal (preferential, r =.728, p <.01).

Accuracy trust demonstrated high correlations with:

Productivity (r = .994, p < .01)

Preference AI Appraisal (r =.994, p < .01)

Stress (r = .986, p < .01)

These results suggest that the belief in the quality of AI and clear decision logic and its creation is the primary aspect that contributes to its adoption along with performance and satisfaction, which supports ethical AI ideals emphasized in the earlier researches about the regulation of artificial intelligence.

Data Privacy as a Foundational Ethical Construct

Strong positive relationship exists between data privacy and:

Job Satisfaction (r = .996, p < .01)

Technical Issues (r = .987, p < .01)

Career Development (r = .968, p < .01)

This implies that how much employees' regard data protection and its management as critical, as well as significant to the outcome of AI-mediated appraisal and career outcome in AI-mediated appraisals.

Ethical Risk Factors and Psychological Consequences

The variables of ethical risks were found to have high correlations with stress-related outcomes: Absence of Human Judgment was also associated with:

Stress (r = .994, p < .01)

Productivity (r = .997, p < .01)

Ratings towards AI Appraisal (r =.997, p <.01)

There were serious technical Problems linked with:

Hybrid Effectiveness (r = .983, p < .01) ⎤

Career Development (.964, p < .01)

The findings point to the fact that AI automation without human intervention causes the stress of the employees to increase, which explains the need to adopt human-in-the-loop models of governance.

Support for Hybrid Appraisal Models

Hybrid appraisal effectiveness showed a positive relationship with:

Job Satisfaction (r = .983, p < .01)

Career Development (r = .985, p < .01)

This gives sound empirical evidence to hybrid AI-human appraisal models, which are both efficient and contextualized and equitable.

Performance and Long-term Outcomes Follow-up. Significant correlation was found between performance tracking and:

Uniformity (r = .743, p < .01)

Accuracy Trust (r = .661, p < .01)

Productivity (r = .660, p < .01)

This shows the positive attitude towards AI-driven continuous monitoring in case the systems are correct, stable, and ethically controlled.

Test Of Hypotheses

The proposed hypothesis was monitored by means of regression analysis to examine the effect of the ethical AI-based performance appraisal dimensions on employee outcomes. The ANOVA F-test was used in determining the overall significance of each regression model.

Hypotheses One

H0 – Ethical AI-driven performance appraisal practices have no significant effect on job satisfaction.

H1 - Ethical AI-driven performance appraisal practices have a significant effect on job satisfaction.

Table 4:
Results of Multiple Regression Analysis Predicting Job Satisfaction

Predictor	β	t	p
Uniformity	−0.004	−0.627	0.531
Fairness	0.146	7.591	<.001
Transparency	0.003	0.481	0.631
Accuracy Trust	−0.010	−1.572	0.117
Data Privacy	0.856	44.555	<.001

Dependent Variable: Job Satisfaction
Predictors: (Constant), Data Privacy, Accuracy Trust, Transparency, Uniformity, Fairness

The study examines how the attributes of ethical AI-appraisal, including fairness, uniformity, transparency, accuracy trust, and data privacy, relate to job satisfaction in a multiple regression analysis. The regression model as a whole was significant (F = 6584.861, p = 0.001), which suggests the predictors chosen were significant in explaining a large percentage of variance in job satisfaction. Data privacy was found to be the most significant and strongest predictor of job satisfaction (=0.856, t = 44.555, p < 0.001). This suggests that data privacy perceptions by employees are crucial towards increased job satisfaction in AI based employees appraisal systems. Job satisfaction is greatly and positively influenced by fairness. Its t= 7.591, beta= 0.146, and its p is smaller than 0.001. Conversely, uniformity (-0.004, p =.531) and transparency (-0.003, p =.631) had a neutral impact on job satisfaction which means that they did not have any statistical significance, and accuracy trust had a marginal impact (-0.010, p =.117).

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This implies that these constructs have no independent relationship with job satisfaction when one gets other attributes of AI.

Hypotheses Two

$H0_2$: Ethical AI-driven performance appraisal practices have no significant effect on employee productivity.

$H1_2$: Ethical AI-driven performance appraisal practices have a significant effect on employee productivity.

Table 5:
Results of Multiple Regression Analysis showing Employee Productivity

Predictor	β	t	p
Fairness	-0.006	-0.769	0.443
Transparency	0.001	0.181	0.857
Accuracy Trust	0.993	132.492	<.001

Dependent Variable: Productivity

Predictors: (Constant) Accuracy Trust, Transparency, Fairness.

Multiple regression analysis was used to assess the effect of fairness, transparency and accuracy trust on workforce productivity in AI-based performance assessment instruments. According to the results, accuracy trust is a strong and statistically significant predictor of productivity ($r= 0.993$, $t = 132.492$, $p < 0.001$). This observation indicates that the belief of an employee in the precision of AI-generated performance ratings has a significant positive impact on the productivity levels of the latter. Nonetheless, fairness (0.006, $t = -0.769$, $p = 0.443$) and transparency (0.001, $t = 0.181$, $p = 0.857$) did not have statistically significant effects on productivity. This implies that the subjective notion of fairness, and transparency has no influence on productivity.

Hypotheses Three

H03: Ethical AI-driven performance appraisal practices have no significant effect on stress.

H13: Ethical AI-driven performance appraisal practices have a significant effect on stress.

Table 6:
Results of Multiple Regression Analysis showing effect of stress.

Predictor	β	t	p
Technical Issues	0.014	1.967	0.050
Lack Human Judgment	0.995	141.334	<.001

Dependent Variable: Stress

Predictors: (Constant) Technical issues and lack of human judgement.

Using a multiple regression model, the findings on how technical issues and lack of human involvement in AI-based performance appraisal systems affect the stress of the employees was studied. The results show that there is an extremely important and significant predictor of stress (0.995, $t = 141.334$, $p < 0.001$). It means that once performance is based on automated mechanisms, which lack proper human monitoring, employees experience greater stress. This had a positive impact on stress as per the technical issues (0.014, $t = 1.967$, $p < 0.050$) which implies that technical glitches, system errors and site traffic produces greater stress than having no human judgment. Comprehensively, the findings indicate that the perceived absence of human judgement is the source of psychological stress associated with AI-powered performance appraisal with technical difficulties being the second cause of anxiety.

VI. Discussion

FINDINGS

The paper identifies the dual nature of AI in human resource management, which makes AI-based performance appraisal a dual factor of optimization and an element of psychological pressures. Even though AI enhances efficiency and objectivity in performance evaluation, the outcomes demonstrate how ethical management and human interventions play a significant role in handling employee experience and performance.

Regression analysis reveals that the most important predictor of job satisfaction (= 0.856) is data privacy, which means that under the conditions of continuous monitoring, employees are concerned with the confidentiality and correct utilisation of their personal and professional data. The given finding makes the data privacy not only a highly regulatory matter but one of the significant determinants of trust and well-being of employees in AI-based performance evaluation systems. Also, in AI decision-making, fairness is a contributor to job satisfaction, which supports the contribution of procedural justice.

Conversely, productivity also relies on the confidence in the accuracy of AI-based performance appraisal, which confirms the idea that employees adopt an outcome-based perspective on AI systems in case of performance rewards. This is in line with the ability aspect of the AMO model indicating that the accurate data-based feedback enhances employee capacity to make the ability consistent with the performance expectations, which leads to a high productivity level.

The biggest discovery concerning the stress is the lack of human judgment that influences the levels of stress in employees. Data as processed by AI does not take into account context, judgement, and empathy to cause psychological distress. Evaluation algorithmic is uninterrupted but not humanized to compromise psychological safety that comes with surveillance. The results are good evidence of the introduction of hybrid AI-human appraisal systems. The correlation between the hybrid effectiveness and job satisfaction (r=.983) is positive, which means that the human appraisal would reduce the AI threat to performance without reinstating its benefits.

Managerial Implications

Based on the empirical findings, this research offers critical insights on HR professionals and organisational leaders transitioning to AI-driven performance systems.

Adoption of Hybrid Governance Models: The analysis results have revealed that lack of human judgment is the powerful predictor of stress (=0.995). The organisations cannot use the fully automated black box appraisals. Rather, organisations ought to implement human-in-the-loop approach so that AI is employed in the data integration and pattern recognition costs only, and the final assessment and feedback is left to the manager. This minimizes tension and anxiety.

Prioritizing Data Privacy to Boost Satisfaction: The most predictive job satisfaction is data privacy (0.856), Organisations should establish an effective data governance dashboard to enable employees see data collection, usage, and access by whom. Ensuring that employees are comfortable with their information to maintain a high level of workforce morale.

Upskilling Managers for Empathetic AI Interpretation: As it has been proven that stress among employees can arise due to various technical complications and poor judgement, managers should receive specially designed training on the application of AI tools and interpretation of insights with empathy. The contextualisation of AI data should be the subject of managerial programs. Leaders should be taught by managers when an algorithm fails to recognize personal sufferings and intangible efforts that cannot be measured in quantitative terms.

Leveraging Accuracy to Drive Productivity: Findings in the study revealed that the primary aspect that determines productivity is accuracy trust (0.993). In order to do this to the maximum, organisations ought to conduct periodic audits of the algorithms and publish such findings to the workforce to show that the system is not biased and error-free. The more the employees have confidence in the accuracy of the system, the more they will be willing to contribute to the objectives of the organisation.

Future Scope Of Study

While this research offers strong evidence regarding ethical frameworks in the IT sector, there are several areas still open for future exploration:

Longitudinal Studies: This research design is cross-sectional, which will involve taking employee perceptions at one time. Longitudinal studies ought to be conducted by future researchers to determine how trust and stress levels will vary as employees continue to use the AI tools during the appraisal cycles. This would assist in establishing whether the novelty effect goes away or accumulation of stress with time.

Comparative industry analysis: The current study that has been conducted does not cover the IT sector in any other town other than Bangalore. Further research must be done to other non-technical sectors such as manufacturing, healthcare or education industry. The attitude of employees in the following spheres might vary regarding automation. The comparison of these sectors might assist in identifying the preference of the hybrid in all the industries or sector specific.

Objective vs. Perpetual performance metrics: The data of the study are self-reported in terms of productivity and stress. Future studies can be enhanced with addition of survey results with objective performance results of the organisation like actual appraisal results, retention rates or revenue per employee. This may aid in proving the reality of business outcomes caused by perceived accuracy.

Qualitative exploration of human judgement: The fact that the absence of human judgement was reported to be a critical stressor, therefore, the qualitative data, such as interviews and focus groups, might be utilized to determine what human factors employees believe are lacking. Knowledge of whether negotiability of ratings, the emotional support or contextual understanding is missed by the employees would enable developers to build a superior AI-human interface.

Limitations Of The Study

- The data is collected using self-administered questionnaires that are subjected to social desirability bias and differences in individual perceptions.
- Cross-sectional design does not capture changes in perception over time.
- The study relies on perceptual measures rather than objective performance measures.
- The study uses convenience sampling within the IT sector, limiting it to other sectors.
- Due to the rapid evolution of AI regulations, long-term applicability may be affected.

VII. Conclusion

The move toward the application of AI-based appraisal has its benefits in the Strategic Human Resource Management (SHRM) as both a performance optimization catalyst and a potential cause of severe psychological pressure. According to the study, the ethical governance of AI is the key to the success of the organisation. According to the findings, the factor of accuracy trust is a primary contributor to productivity (= 0.993), which implies that the employees are receptive to precision. Nonetheless, the accuracy is weak unless there are ethical protection. Importantly, data privacy cannot be merely that something that is to be complied with. It ranks as the clearest predictor of job satisfaction (=0.856), which presents transparency in positioning as a fundamental need in the contemporary digital environment. A critical threat in ethical judgment is identified in the study. The most significant predictor of employee stress (=0.995) is the absence of human judgment, which is significantly greater than failure in the technical respects. That means black box automation, which lacks context and empathy that is detrimental to psychological safety.

In theory, this study is an extension of the Ability-Motivation-Opportunity (AMO) model with an emphasis on the fact that algorithmic management boost's ability but lowers motivation in the absence of a human being. In practice, there is evidence of the concept of hybrid appraisal (human-in-the-loop) governance. To overcome the automation paradox whereby increased efficiency brings increased anxiety, organisations have to embrace the hybrid approaches whereby AI assists, but does not eliminate managerial decision-making. Finally, the nature of sustainable AI in HRM is based on the ability to balance between the data-driven insights and human judgments.

Conflict Of Interest Statement:

The authors declare that they have no conflict of interest.

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