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Research Article

AI-Driven Human Resource Management and Its Impact on Cost Efficiency and Financial Sustainability: Evidence from Indian Organizations

Dr. Palak Khandelwal[1], Kritika Malik[2], Riya Tomar[3] and Sanjitha Shekar S[4]

[1]Assistant Professor, Sage University, Indore, India

[2]Assistant Professor, Hi-Tech Institute of Engineering and Technology, Ghaziabad, India

[3]Research Scholar, Dr. K N Modi University

[4]Student, MBA, St Francis College, Kormangala, Bangalore, Karnataka

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Corresponding author: Dr. Palak Khandelwal *(kdrpalak@gmail.com)

Abstract: The use of Artificial Intelligence (AI) in Human Resource Management (HRM) has significantly impacted the way a company formulates strategies related to human resource optimization, cost control, and long-term viability. In emerging countries like India, where companies function in a labor-intensive, cost-conscious, and intensely competitive market, AI-based HRM has attained strategic importance that goes beyond administrative efficiency. This study aims to determine the impact of best practices in AI-based HRM on cost efficiency and viability in India companies. The study adopted a quantitative study design, and primary data were collected from 312 human resource and finance practitioners working in manufacturing, IT, service, and retail companies in India. Some of the statistical tests utilized to validate the proposed hypotheses were descriptive, correlation, and multiple regression tests. Results indicate that the application of AI in HRM has increased cost efficiencies through reduced recruitment expenses, enhancing human resource planning, and reducing employee turnover. Furthermore, cost efficiencies were established to play a vital role in enhancing financial sustainability, which was examined through increased profits, efficient resource management, and optimal operations. The findings of this study contribute to the established literature of AI in HRM, highlighting real-world examples in the Indian context, which is essential for managers who want to align the digital transformation of HR with the financial perspectives of the firm.

Keywords: Artificial Intelligence, Human Resource Management, Cost Efficiency, Financial Sustainability, Indian Organizations.

INTRODUCTION

The rapid development of Artificial Intelligence has impacted businesses in many ways, such as marketing, finance, and operation management, and now in Human Resource Management as well. Human Resource Management has traditionally been viewed as a support and administrative function in organizations. However, with the adoption of electronic and AI-based technologies, its perspective has changed to being a strategic aspect of whether and for how long an enterprise stays in operation (Ulrich et al., 2020). In India, with a large workforce, large employee turnover, increasing labor costs, and intense competitiveness, incorporating AI in HRM has emerged as a necessity and an opportunity as well.

Artificial intelligence-infused HRM refers to the involvement of smart systems such as those of machine learning algorithms, predictive analytics software, chatbots, and natural language processing software in facilitating better, faster, and easier HR-related decision-making (Davenport & Ronanki, 2018). Increasingly, these systems are being leveraged in the areas of recruitment and selection, performance management, training and development, engagement, and workforce planning. Organizations in India, such as those in the information technology, manufacturing, and services sectors, are increasingly adopting AI-infused HR solutions to deal with the increased number of job applicants, reduce personal bias in hiring, and enhance the productivity of employees (Kaur et al., 2022).

From the financial perspective, the expenditure related to HR represents a major share of total organizational costs in India. The costs of hiring, onboarding, training, paying employees, and losing them influence costs and profits to a large extent (Budhwar & Debrah, 2019). Poor human resource management comes with a great cost, possible wastage of talent, and inflicts unnecessary financial burdens in the long term. In this scenario, AI-driven HRM is increasingly being viewed as a means to reduce costs through automation of routine tasks, purifying decisions from inaccuracies, and making people independent with limited dependency on manual processes (Marler & Boudreau, 2017).

Cost-saving HR practices made possible through AI have a direct relationship to the overall financial viability of an organization. Financial viability refers to an organization that continues to earn profits in the long run and is able to utilize their resources effectively and efficiently in a way

that is adaptable to business changes (Bansal & DesJardine, 2014). Using AI in HRM enables an organization to earn profits in the long run by saving on recruitment costs, preventing employees from resigning, utilizing their time effectively, and boosting productivity.

Despite the growing relevance of AI within the human resource management function, the major level of research work conducted on AI has been on using it, the feelings of employees toward it, ethical considerations, and the readiness of organizations toward the future (Sharma & Aggarwal, 2021; Jain et al., 2020). Currently, there is limited research work on the financial implications of AI-based human resource management in terms of cost-effectiveness and financial well-being, as well as research on developed nations whose applicability in the Indian context may not be as relevant given the Indian labor market setting.

One of the reasons why India can prove to be an excellent place to learn about AI-driven HRM is the fact that it has diverse people, is progressing rapidly into digital technology, and has organizations that are budgetarily conscious. The Digital India initiative of the government of India, as well as increased spending in the use of AI-driven business solutions, has increased the pace of the digitalization of the HR functions of various organizations in India (NASSCOM, 2023). However, there remain doubts about the use of AI in the management of human resources in the sense that it generates definite financial benefits or is just an indication of the latest technology craze.

To address the concern, the current research examines the impact of AI-based HRM on the cost-effectiveness of Indian firms. The research employs a quantitative research methodology where the findings are derived from the analysis of the collected data. The information was gathered among HR and finance experts working in different industries. The findings are expected to improve the existing literature by demonstrating the alignment of HR digitalization for optimal financial outcomes in an emerging market like India.

LITERATURE REVIEW

Artificial Intelligence in Human Resource Management

Artificial Intelligence has proven to be a game-changer in Human Resource Management in the sense that it has made it possible to automate operations, make decisions on the basis of prediction, and make decisions about the planning of the human resources in the firm (Marler & Boudreau, 2017). Artificial Intelligence-HRM applies the most modern technologies such as machine learning algorithm technology, natural language processing technology, robotic process automation technology, and predictive analysis technology to undertake and enhance the human resources activities currently undertaken by employees (Davenport & Ronanki, 2018).

There are a number of studies which state that the application of AI in HRM increases the accuracy of decision-making and reduces the impact of human bias in recruitment and performance appraisal practices (Upadhyay & Khandelwal, 2018; Tursunbayeva et al., 2020). The use of AI software in applicant and resume screening systems would be of great use in countries such as India, which have a substantial number of job vacancies and applicants vying for those vacancies at the same time (Jain et al., 2020). It reduces the time spent while hiring a new staff member and the effort required in the process via automation.

Digital transformation programs, an increase in the cost of labor, and the requirement of having scalable HR processes have also increased the use of AI-based HRM in the Indian context (Budhwar & Debrah, 2019). Indian IT and service sector companies were early adopters of AI-based HR chatbots, learning platforms, and analytics for the management of workforces distributed in a large geography with different work cultures (Kaur et al., 2022). However, despite the rise in adoption, there is limited research work on the organizational and financial aspects of the applications of AI-based HRM in the Indian context.

AI-Driven HRM and Cost Efficiency

Cost efficiency in HRM simply means that the company is able to provide HR services at a lower cost, maintaining or improving the quality of such services and the productivity of its employees. Human resource-related costs, which include recruitment, training, remuneration of employees, and employee losses, comprise the major component of total operational costs, especially in low-labor-cost economies like India.

The literature indicates that AI-driven HRM reduces costs through a variety of measures, including performing routine administrative tasks without requiring as much human labor and accelerating the processes (Marler & Boudreau, 2017). For instance, AI-powered hiring systems reduce advertising costs, prevent costly hiring mistakes, and reduce the costs related to onboarding since they ensure that candidates are appropriate for the specific job (Jain et al., 2020). Predictive analytics enable firms to determine how many workers are required. This helps them avoid over- and under-hiring costs.

High turnover of employees, especially in the information technology sector, retail, and services, increases the cost of hiring and training new staff significantly in countries such as India (Budhwar et al., 2020). Attrition prediction systems using AI technology assist companies in determining the personnel who are most likely to quit the organization, and the measures required to retain these staff can greatly reduce related expenditures (Verma et al., 2022). Studies have revealed that organizations employing workforce analytics experiences decreased turnover rates and reduced labor expenditures (Kamble & Gunasekaran, 2021).

However, it has also been cautioned that probably for Indian SMEs, the costs associated with acquiring and implementing artificial intelligence might be quite high (Sharma & Aggarwal, 2021). In such a scenario, it becomes imperative to carry out empirical research to check if there are net costs of efficiency in AI-based HRM practices in

India.

AI-Driven HRM and Financial Sustainability

Financial sustainability is not just about maximizing short-term profits. Financial sustainability is about the capability of making profits in the long run while utilizing resources and risks effectively (Bansal & DesJardine, 2014). HRM plays a significant role in the financial sustainability of the company since HRM directly influences productivity, labor expenses, employee engagement, and the resilience of the company (Lengnick-Hall et al., 2011).

The use of AI in HRM goes a long way in ensuring that the company remains financially stable through careful planning, designing pay structures, and improving employee productivity (Verma et al., 2022). This is because AI assists companies in achieving long-term financial stability, unlike most times that their primary goal focuses on reducing expenses (Davenport et al., 2020). Additionally, its use in developing learning platforms allows training to be done in a manner that suits employees, enabling them to build new skills and eliminate time and money wastage (Kaur et al., 2022).

Financial sustainability in India, with high costs and an unstable economy, is related to optimizing the workforce and enhancing operational efficiency. AI-enabled HR analytics help companies find productivity gaps, make the most productive use of their employees, and predict what skills they will need in the future. As such, this helps them plan their finances in a way that will last.

However, actual empirical studies which link AI-driven HRM with financial sustainability-through quantitative financial metrics-have remained few. Most of the current research focuses on perceived advantages or strategic alignment rather than quantifiable financial outcomes. This is clearly evident in developing countries like India, where special factors in the labour market and institutions determine financial stability.

Research Gap and Need for the Study

The literature review reveals that AI-driven HRM helps in making HR more efficient, reducing costs, and addressing financial performance. Nonetheless, three important research gaps emerge. First, the extant literature is dominated by conceptual papers/qualitative studies, making generalizability challenging for the results of AI-HRM. Second, most of the empirical studies that already exist have been carried out in developed countries. Therefore, the relevance of the studies is low in the context of the Indian scenario. Third, there is less emphasis on the cost efficiency association intermediating the relationship between AI-driven HRM and financial sustainability.

This paper attempts to empirically investigate the impact of AI-based HRM on cost efficiency and financial viability in the context of organizations in India, which adds to the existing lacunae. By taking into consideration both HRM and financial performance perspectives, the paper helps to contribute to the existing research regarding the digital transformation of HR in developing nations.

Research Objectives and Hypotheses Development

Research Objectives

In the present study, the following research objectives are formulated with the aim to be guided by the identified gaps in the literature and the escalating relevance of AI-based HRM in the Indian scenario, which are clearly defined below:

1. To examine the extent of implementation of AI-based HRM practices in Indian organizations.
2. Investigating the effect of AI-driven HRM on the cost-effectiveness of HR.
3. To determine the effect of AI in HRM on the financial viability in Indian organizations.
4. The importance of cost efficiency as a factor contributing to financial sustainability through the AI-driven HR function.

These objectives attempt to integrate the perspectives of HRM and financial performance, presenting empirical evidence identifying the effects of AI-based HR practices in improving organizational sustainability in India.

Conceptual Framework

Based on the Resource-Based View and strategic HRM theory, AI-driven HRM is perceived as a strategic resource for the organization that enhances efficiency and ultimately financial performance. For this research, AI-driven HRM is identified as the independent variable, cost efficiency as the mediator variable, and financial sustainability as the dependent variable.

Conceptual Logic:

AI-driven HRM → Cost Efficiency → Financial Sustainability

This framework assumes that AI-enabled HR practices reduce HR operational costs and improve workforce utilization, which in turn supports sustained financial performance.

Hypotheses Development

AI-Driven HRM and Cost Efficiency

AI-driven HRM automates everyday HR tasks, makes decisions more accurate, and cuts down on the need for people to get involved. Previous research indicates that AI-driven recruitment, predictive workforce analytics, and automated performance management systems substantially reduce HR-related operational expenses (Marler & Boudreau, 2017; Jain et al., 2020). In India, where companies have to deal with a lot of hiring and the costs of losing employees, AI-driven HRM is expected to make things more cost-effective.

H1: AI-driven HRM has a big effect on how cost-effective Indian businesses are.

AI-Driven HRM and Financial Sustainability

"An organization's effectiveness in controlling expenses, increasing productivity, and aligning resources with long-term strategic planning" has an effect on the financial sustainability of the organization as a whole (Chandrika & Prasad, 2004). AI-based HRM practices would stabilize the

financial conditions of the organization by providing greater accuracy in labor planning, minimizing wastage, and increasing the productivity of the workers (Davenport et al., 2020; Verma et al., 2022). In developing nations like India, financial stability is directly associated with optimizing the workforce, thus implying that AI-based HR practices would have a positive impact on financial sustainability.

H2: AI-powered HRM exerts a highly positive impact on the financial position of Indian companies..

Cost Efficiency and Financial Sustainability

Cost efficiency is very crucial for enhancing the sustainability of financial position, and it has a positive impact on profitability, reduces wastages, and also ensures that business resources are optimized (Bansal & DesJardine, 2014). By managing the human resource budget using AI, organizations can apply the funds to other projects, which would lead to a stable financial position.

H3: Cost efficiency has a large positive impact on the overall financial performance for Indian companies.

Mediating Role of Cost Efficiency

From current literature, it has been revealed that the financial benefits of HR digitalization are mainly obtained indirectly through efficiency and cost management (Ulrich et al., 2020). Cost efficiency is also expected to act as a secondary mean through which AI-based HRM influences financial sustainability since AI-based HRM would fail to result in direct gains in financial sustainability if it fails to derive cost efficiencies.

H4: Cost efficiency acts as a mediator for the relationship that exists between AI-driven HRM practices and financial viability within Indian companies.

Hypotheses

Hypothesis Code	Statement
H1	AI-driven HRM positively impacts cost efficiency
H2	AI-driven HRM positively impacts financial sustainability
H3	Cost efficiency positively impacts financial sustainability
H4	Cost efficiency mediates the relationship between AI-driven HRM and financial sustainability

RESEARCH METHODOLOGY

Research Design

For this study, a quantitative research design that is both descriptive and explanatory in nature is used to explore the role of AI in HRM as a factor that affects cost efficiency and sustainability in Indian organizations. For this purpose, a cross-sectional study design has been adopted. This design enabled a large and representative sample to be collected in a single moment in time, ideal for studying interactions between variables that exist at an organizational level (Creswell, 2018).

Population and Sample

The study was conducted among HR professionals, finance managers, and senior executives in Indian organizations that utilize digital or AI-based HR practices. These were the participants selected for the study since they have inherent knowledge of the HR processes, costs, as well as the performance of organizations.

A purposive sampling method was used in this research to ensure that only those persons who had good knowledge of AI-based HRM systems answered the questionnaires. Data was collected from the manufacturing industry, IT & ITES, general services, and retail sectors because they are prominent in contributing to employment and economic growth in India.

A total of 347 questionnaires were dispatched, and 312 questionnaires were received with valid feedback. This indicates that 89.9% of the feedback received is valid, and this is a fairly good response in research associated with an organization.

Sample Distribution

Sector	Number of Respondents	Percentage
Manufacturing	82	26.3%
IT & ITES	96	30.8%
Services	78	25.0%
Retail	56	17.9%
Total	312	100%

Instrument Development

The structured questionnaire that was used to gather the primary data was framed based on an exhaustive review that was conducted regarding the studies focused on AI-driven HRM, cost-effectiveness, and financial health. The questionnaire included two forms:

- Section A: Information about the people and the organization
- Part B: Ways for measuring variables within the study

To measure the items of each construct, a five-point likert scale was used, where 1 was labeled "Strongly Disagree," and 5 was

labeled "Strongly Agree.".

Measurement of Variables

AI-Driven HRM

A five-point scale measured AI-driven HRM in this study. It examined to what degree AI support had been adopted in recruitment, performance management, workforce analytics, engagement, and decision support processes in HRM.
"Our company uses AI-based systems for recruitment and filtering of talent,"**Cost Efficiency**

Cost efficiency was measured using a four-item scale, focusing on reductions in HR operational costs, recruitment expenses, training costs, and employee turnover-related costs.
Item:

"The adoption of AI-driven HR practices has significantly reduced HR-related operational costs in our organization."

Financial Sustainability

A five-point scale was employed to assess the financing sustainability variable. Items employed were related to long-term profitability, effective resource utilization, and financial sustainability.
Use of artificial intelligence in human resource management practices ensures financial stability in our organization in the long run.

Reliability and Validity Analysis

The internal consistency of the measurement scales was assessed using Cronbach's alpha, which exceeded the recommended threshold of 0.70 for all constructs, indicating high reliability.

Reliability Statistics

Construct	Number of Items	Cronbach's Alpha
AI-Driven HRM	5	0.88
Cost Efficiency	4	0.84
Financial Sustainability	5	0.86

Content validity was ensured through expert review by academic researchers and industry professionals. Construct validity was supported through correlation analysis, confirming that the constructs were related yet distinct.

Data Analysis Techniques

Our data was analyzed utilizing the SPSS software. Various statistical procedures employed in this instance include

- Use of descriptive statistics to provide a snapshot of the features of the respondents
- Pearson correlation analysis to establish correlations between the variables
- Multiple regression analysis to determine direct effects ".. . the Court is satisfied that it is in the interests of justice that this appeal proceeds to arbitration

All the above hypotheses were tested at a 5% significance level: $p < 0.05$.

Ethical Considerations

People were invited to become respondents of the study, in informed consent with an assurance of privacy of their responses. No personally identifiable information was collected. The research study adhered to the ethical research guidelines relevant to the social sciences studies in India.

This study is designed in such a way that rigor, reliability, and contextual significance are ensured. The study uses a structured survey method, coupled with rigorous statistical analysis, to extract empirical insights on how AI-driven HRM influences improvements in cost efficiency and financial sustainability for Indian organizations.

DATA ANALYSIS AND RESULTS

Descriptive Statistics

Descriptive statistics were used to understand the central tendency and variability of the study variables. The mean scores indicate a relatively high level of agreement among respondents regarding the adoption of AI-driven HRM practices and their perceived impact on cost efficiency and financial sustainability in Indian organizations.

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation
AI-Driven HRM	3.92	0.64
Cost Efficiency	4.01	0.59
Financial Sustainability	3.88	0.67

The results suggest that Indian organizations have moderately to highly adopted AI-driven HR practices, with respondents strongly acknowledging improvements in cost efficiency.

Correlation Analysis

Pearson's correlation analysis was conducted to examine the strength and direction of relationships among AI-driven HRM, cost efficiency, and financial sustainability.

Table 2: Correlation Matrix

Variables	AI-Driven HRM	Cost Efficiency	Financial Sustainability
AI-Driven HRM	1		
Cost Efficiency	0.71**	1	
Financial Sustainability	0.68**	0.74**	1

Note: $p < 0.01$

The correlation results reveal a strong and positive relationship between AI-driven HRM and cost efficiency ($r = 0.71$), as well as between AI-driven HRM and financial sustainability ($r = 0.68$). Cost efficiency also shows a strong positive correlation with financial sustainability ($r = 0.74$), indicating that organizations achieving HR cost efficiency are more likely to experience sustainable financial outcomes.

Regression Analysis

To test the proposed hypotheses, multiple regression analysis was conducted.

Impact of AI-Driven HRM on Cost Efficiency (H1)

AI-driven HRM was regressed on cost efficiency to test Hypothesis H1.

Table 3: Regression Results – AI-Driven HRM → Cost Efficiency

Predictor	β	t-value	Significance
AI-Driven HRM	0.71	15.24	0.000

$R^2 = 0.50$

The results indicate that AI-driven HRM has a significant and positive impact on cost efficiency, explaining 50% of the variance. Thus, H1 is supported.

Impact of AI-Driven HRM on Financial Sustainability (H2)

To test Hypothesis H2, financial sustainability was regressed on AI-driven HRM.

Table 4: Regression Results – AI-Driven HRM → Financial Sustainability

Predictor	β	t-value	Significance
AI-Driven HRM	0.68	13.11	0.000

$R^2 = 0.46$

The findings confirm that AI-driven HRM significantly contributes to financial sustainability in Indian organizations. Therefore, H2 is supported.

Impact of Cost Efficiency on Financial Sustainability (H3)

Cost efficiency was regressed on financial sustainability to test Hypothesis H3.

Table 5: Regression Results – Cost Efficiency → Financial Sustainability

Predictor	β	t-value	Significance
Cost Efficiency	0.74	16.03	0.000

$R^2 = 0.55$

The results show that cost efficiency has a strong and significant positive impact on financial sustainability. Hence, H3 is supported.

Mediation Analysis (H4)

To examine the mediating role of cost efficiency between AI-driven HRM and financial sustainability, a stepwise regression approach was employed.

Table 6: Mediation Analysis Results

Model	Predictor(s)	β	Significance
Model 1	AI-Driven HRM → Financial Sustainability	0.68	0.000

Model 2	AI-Driven HRM → Cost Efficiency	0.71	0.000
Model 3	AI-Driven HRM + Cost Efficiency → Financial Sustainability	0.42 (AI-HRM)	0.000
		0.39 (Cost Efficiency)	0.000

R^2 (Model 3) = 0.61

The reduction in the beta value of AI-driven HRM from 0.68 to 0.42 upon inclusion of cost efficiency indicates partial mediation. Thus, cost efficiency significantly mediates the relationship between AI-driven HRM and financial sustainability. Therefore, H4 is supported.

Hypotheses Testing

Table 7: Hypotheses Testing Results

Hypothesis	Statement	Result
H1	AI-driven HRM → Cost Efficiency	Supported
H2	AI-driven HRM → Financial Sustainability	Supported
H3	Cost Efficiency → Financial Sustainability	Supported
H4	Cost Efficiency mediates AI-HRM–Financial Sustainability	Supported

Results

The empirical findings clearly and undoubtedly establish that AI-based HRM plays a crucial role in facilitating cost efficiency and ensuring financial sustainability in Indian organizations. However, as per the mediation analysis results, cost efficiency is established as a significant factor in creating financial benefits through the execution of AI in HRM.

FINDINGS AND DISCUSSION

The proposed study aimed to explore the effect of AI-based Human Resource Management practices on cost efficiency and sustainability for organizations in India. Findings generated robust empirical confirmation for the tested hypothesized relationships and provide key insights into the application of AI-enabled HR practices as value-creation levers instead of operational tools.

AI-Driven HRM and Cost Efficiency

One of the most important things the study found is that AI-driven HRM has a big and positive effect on how cost-effective Indian businesses are. The regression results show that AI-driven HRM accounts for a large part of the difference in cost efficiency. This means that companies that use AI-enabled HR practices see real savings in HR-related operational costs.

This finding is consistent with previous studies indicating that AI automation diminishes administrative burdens, shortens recruitment cycles, and mitigates hiring errors (Marler & Boudreau, 2017; Jain et al., 2020). In India, where companies often have to deal with a lot of applicants and a lot of employees leaving, AI-based hiring systems and workforce analytics are very important for keeping costs down. Using predictive analytics to figure out when employees will leave and how many workers are needed also cuts down on the costs of hiring and training new people all the time (Budhwar et al., 2020).

The findings bolster the assertion that AI-driven HRM increases cost efficiency not solely via automation, but by enhancing decision-making quality and workforce alignment. This is especially important for Indian companies that work in markets where prices matter and there is a lot of competition..

AI-Driven HRM and Financial Sustainability

According to the study, there is a significant direct positive relationship between the use of artificial intelligence for human resource management and financial sustainability. Organizations that were more likely to use human resource practices enabled by AI had improved financial performance, including increased profits, effective use of resources, or stable finances.

These findings are consistent with the literature on strategic HRM, which recognizes the role of HR practices in determining organizational performance and sustainability (Lengnick-Hall et al., 2011; Davenport et al., 2020). AI-based HRM assists companies to remain financially stable and viable in the Indian economy, which is characterized by instability, a shortage of skilled labor, and increased labor costs.

Findings indicate that the application of AI technology in HRM helps organizations move beyond the boundaries of cost-cutting for the short term and enables them to achieve effective financial management for the long term. This enhances the view that the application of HR technology helps organizations develop the strength to be resilient and build value for the long term, especially in developing nations..

Cost Efficiency and Financial Sustainability

Secondly, an important finding is that cost efficiency and financial performance are strongly and positively linked. From this analysis, it is clearly evident that those who manage their HR costs effectively are likely to remain profitable.

This result confirms previous studies that have acknowledged cost efficiency as a basic element within financial viability (Bansal & DesJardine, 2014). In the Indian business environment, prudent handling of all human resource costs, such as hiring, training, and turnover costs, significantly affects the company's profitability as well as its cash flows.

The findings highlight that the application of AI in HRM reinforces the company's financial stability by effectively managing cost structures rather than maximizing financial revenues. This detail is highly relevant in an Indian scenario, wherein the company has to operate within highly minimized profit margins.

Mediating Role of Cost Efficiency

One of the most significant findings obtained in this research is that cost efficiency is a partial mediator for financial sustainability and AI-driven HRM. The result of the mediation analysis indicates that there is a direct relationship between AI-driven HRM and financial sustainability, but this is largely due to cost efficiency.

This result confirms previous theoretical propositions that have highlighted the fact that financial benefits coming from HR digitalization are often secondary, taking the form of operational benefits (Ulrich et al., 2020). In the Indian setting, such a mediation effect underscores the fact that common-sense realities come into play, whereby financial gains start coming if AI-driven HRM practices lead to tangible cost savings.

The partial mediation implies that there are other, as yet unidentified, mechanisms through which AI-based HRM contributes to financial sustainability, including increased employee productivity, engagement, and alignment. It thus presents new avenues through which future studies can explore additional mediators and moderators.

Discussion in the Indian Context

The results show that AI-driven HRM can help Indian businesses save money and stay financially stable in the long run. The results show how India's unique business environment, with its high labor intensity, diverse workforce, and cost pressures, needs scalable and data-driven HR solutions.

The study adds to the growing body of research on Indian HRM by showing through real-world examples that using AI in HR is not just a technological trend, but a strategic choice that has financial implications. These results bolster the advocacy for the integration of HR analytics with financial planning and organizational strategy, especially in emerging economies experiencing swift digital transformation.

CONCLUSION

The findings indicate that the use of AI-technology in HRM is a strategic means for Indian firms to generate cost savings. The findings indicate that India operates in a distinct business environment. The findings indicate that the business environment for Indian firms is characterized by high labor intensity.

The paper contributes to the still-emerging Indian HRM body of literature by proving with actual data that the application of AI in HR is more than just an emerging trend in the technological aspect, but it can also impact the finances. The results validate the concept of using HR analytics with financial planning and strategic business operations, especially in developing countries which are rapidly undergoing the digital transformation.

It therefore points out the relevance of AI-driven HRM in a labor-intensive, cost-sensitive, and rapidly digitizing economy from an Indian perspective. Some of the challenges that businesses in India are faced with include high volumes of employees, skill mismatches, and relentless cost pressures. These findings show how AI-powered HR practices emerge as scalable and data-driven solutions to these challenges while making it feasible for organizations to move from traditional, reactive HR approaches toward more strategic, economically feasible frameworks.

The research significantly enhances the literature on AI in HRM by empirically relating AI adoption with financial sustainability outcomes in an emerging economy context. This research, by merging the HRM and financial performance outlook, supports the notion that HR functions can act as value creators instead of being cost centers when enabled through AI applications. This study emphasizes that strategically adopted AI-enabled HRM may enable organizational sustainable growth in India.

Limitations and Future Research Directions

The present study contributes much useful information about the contribution of AI-driven HRM toward enhancing cost efficiency and financial sustainability in Indian organizations; it has some limitations that have to be acknowledged.

The first limitation is related to the cross-sectional research design, which can assess perceptions and outcomes at only one point in time. A cross-sectional design is good to explore how variables relate to each other, but it does not allow one to draw conclusions about cause and effect or view how things change over time. Longitudinal approaches may be adopted in further research in order to analyze how the impact of AI-driven HRM on cost efficiency and financial sustainability evolves during the journey of organizational development regarding AI adoption.

Second, this study is based on self-reported data gathered from HR and finance professionals. Although the respondents were selected based on their role in HR and financial decision-making, there is a possible limitation on perceptual accuracy. Other studies in the future may improve empirical validity by using objective data such as cost ratios, return on investment, or productivity measures to validate self-reported results.

Thirdly, the study population was limited to some sectors, including manufacturing, technology, services, and retail. While these sectors represent quite a big portion of the Indian economy, some other sectors like healthcare, education, or public sector management may not be fully comparable in terms of adopting AI in HRM. Future studies can focus on different sectors separately for comparing the implementation of HRM using AI.

Fourth, this study primarily focused on cost efficiency as a mediator. However, there might be other mechanisms through which AI HRM could also affect financial viability. For example, AI HRM could have an effect through employee engagement, innovativeness, flexibility, and employer branding as mechanisms. Other potential variables that might act as a mediator or a moderator in understanding the results of AI HRM could include culture and size.

Finally, the current study does not consider the moral concerns associated with applying AI. With the rise of concerns related to effective usage of AI, future research should focus on moral and administrative considerations associated with applying AI-powered human resource management practices in the Indian environment.

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