

Integration of Artificial Intelligence in Strategic Human Resource Practices for Developing Organizational Performance

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Abstract: *Strategic human resource management practices focus on coordinating different activities in the organization. The digital revolution has transformed nearly every sector globally, and strategic human resource management (SHRM) is no exception. This led to the integration of human resource practices and their implications with Artificial intelligence. This study examines the integration of strategic human resource management practices and how it contributes to the organization's development as a whole. The research mainly focuses on how the integration of artificial intelligence and its implications can contribute to the organization. A quantitative research approach is adopted, utilizing a structured questionnaire administered to professionals across various sectors. Data will be analyzed using Structural Equation Modeling (SEM) to test the proposed mediation model. The findings are expected to contribute valuable insights into the transformative role of artificial intelligence. This study offers strategies for Human resource professionals aiming for better implications in the Human resource department.*

Keywords: Strategic Human Resource Management (SHRM), Artificial Intelligence (AI), Organizational Development, Human Resource Practices and Digital Revolution

I. INTRODUCTION

Many organizations lack in creating a strategic framework to implement artificial integration in the HR practices in the organization due to financial constraint and adoption challenges. Due to this drawback there is a serious need to study on this aspect. That will result in adoption of artificial integration and its capabilities that will contribute to the organization performance. Advancing this understanding will enable more effective integration of AI, unlocking its potential to drive strategic value and enhance organizational outcomes.

II. LITERATURE REVIEW

Cemal Zehir, Tugba Karaboga and Dogan Basar (2019) Digitization has reshaped HRM practices, with Big Data and AI playing a key role in transforming strategic HRM (SHRM). These technologies enhance decision-making, efficiency, and alignment with business goals. The evolution of HR from 1945 to the present shows how technological advances influence HR functions. As a result, digital SHRM contributes to improved business performance. The study also highlights future directions for researchers and HR professionals in adopting digital tools for strategic HR development (Cemal Zehir, 2019).

Ebtesam Abdullah Alzeiby, Nazrul Islam, Aqueeb Sohail Shaik and Muhammad Zafar Yaqub (2025) A recent study involving 208 HR professionals highlights the sequential mediating roles of strategic intent (SI) and strategic human resource management practices (SHRMP) in linking AI adoption in HR (AIAHR) to improved employee engagement (EENG) and experience (EEXP). The findings suggest that clear strategic direction and aligned HR practices are essential for effective AI integration, offering practical insights and contributing to the growing literature on AI in HRM (Ebtesam Abdullah Alzeiby, 2025).



Sanjit K. Roy, Bidit L. Dey, David M. Brown, Aman Abid, Chrysostomos Apostolidis, Michael Christofi, Shlomo Tarba (2025) Artificial Intelligence (AI) drives business model innovation but also presents operational, regulatory, and strategic challenges. AI adaptation varies across organizations due to external influences and internal strategies related to innovation and resource management. Understanding these variations is essential for linking AI use to value creation. Using adaptive structuration theory, a study based on interviews with top management from 51 Indian companies developed taxonomy of AI adaptation—exploitive, exploratory, emancipatory, and expedient—organized in a 2×2 matrix. The study also proposes a value appropriation model that highlights the strategic role of human resource management in AI-led innovation(Sanjit K. Roy, 2025).

III. MATERIALS AND METHODS

Research Gap: A significant gap exists in the empirical validation of Artificial Intelligence's mediating role between Strategic human resource management practices and organizational performance. All the other studies focus on the direct effect of Artificial Intelligence on organizational performance. Only a few studies have been conducted to determine the mediating effect of Artificial Intelligence on organizational performance.

Objectives of the Study

- To examine the impact of strategic HR practices on organizational performance.
- To assess the level of AI integration in human resource practices.
- To explore the effect of AI integration on organizational performance.
- To investigate the mediating role of AI integration in the relationship between strategic HR practices and organizational performance.

Research Questions

1. How do strategic human resource (HR) practices influence organizational performance?
2. To what extent do strategic HR practices influence the integration of artificial intelligence (AI) in HR functions?
3. How does the integration of AI in HR functions impact organizational performance?
4. Does AI integration mediate the relationship between strategic HR practices and organizational performance?

Research Hypotheses

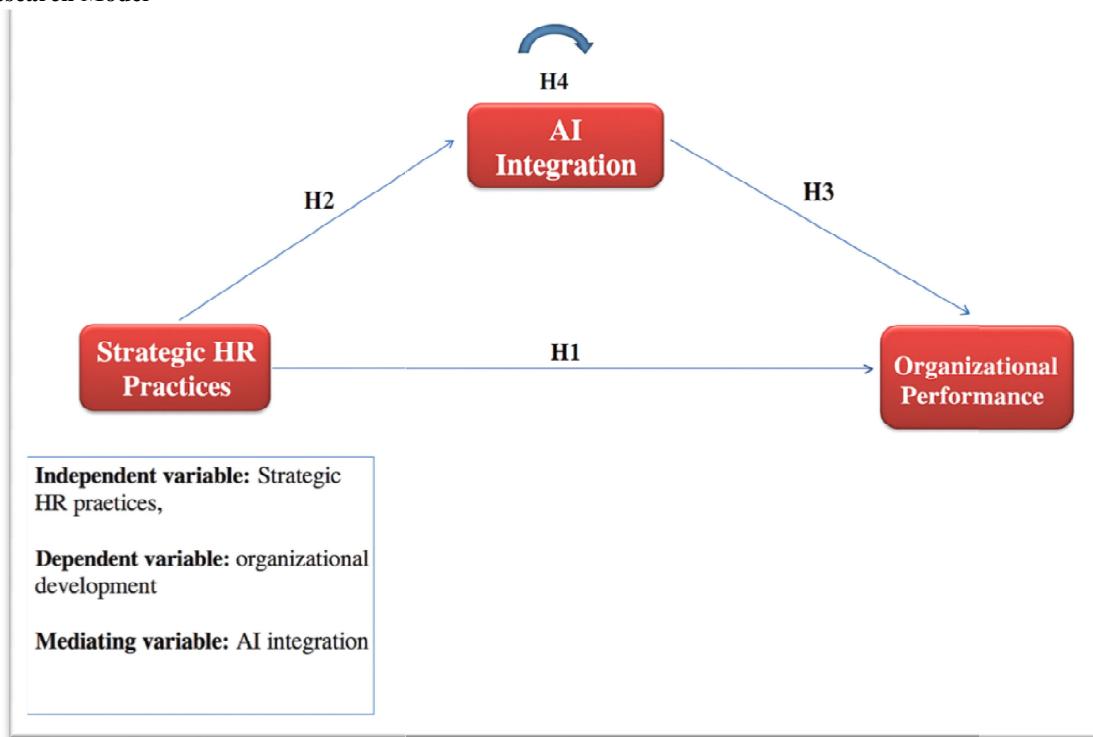
H1: Strategic HR practices significantly influence organizational performance.

H2: Strategic HR practices significantly influence the integration of Artificial Intelligence in HR functions.

H3: AI integration significantly influences organizational performance.

H4: AI integration mediates the relationship between strategic HR practices and organizational performance.



Research Model


Source: Self-Complaint Image

IV. RESEARCH METHODOLOGY

Research Design: The research design for this study follows by incorporating quantitative methods. Research design is framed to explore two types of effect first type of effect is to find direct effect between the variables and the second type of effect is to find indirect effect (Mediating effect) between the variables.

Data Collection Method: Survey method is used to collect the data. Structured questions with predefined answers (multiple-choice, Likert scale).

Sampling Techniques: Judgment sampling or purposive sampling technique is used for this study.

Sample Size: 34

Data Analysis Methods: Simple linear regression, SEM is used to analyze Mediating effect.

V. DATA ANALYSIS AND INTERPRETATION

Reliability test: This test is used to measure the consistency and dependability of a test. Cronbach's Alpha test is used to test the internal consistency of the data in this study (J, 1951).

Cronbach's Alpha test

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Strategic HR practices	6.2941	5.024	0.861	0.763	0.937



Artificial intelligence integration	6.3529	5.513	0.866	0.780	0.929
Organizational performance	6.2353	5.301	0.924	0.854	0.885

The above table represents the Cronbach's Alpha test's Item-total statistics of the variables. The cronbach's Alpha value of the entire variable is above 0.8. It indicates the internal consistency of all the variables is strong.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.943	0.944	3

INTERPRETATION: The overall Cronbach's Alpha estimation is **0.943**, which is above 0.8, which is considered as very strong internal consistency. This ensures excellent internal consistency among the data and establishes a conventional standard for scale reliability.

HYPOTHESIS TESTING

HYPOTHESIS 1

HO: Strategic HR practices do not significantly influence organizational performance.

H1: Strategic HR practices significantly influence organizational performance.

Regression Analysis (Coefficients ^a)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.715	0.267		2.680	0.012
	SHRM practices	0.791	0.079	0.871	10.047	0.000

a. Dependent Variable: Organizational Performance

Interpretation: P value is **0.00** which is less than **0.05** hence we reject null hypothesis. This ensures SHRM practices influences Organizational Performance.

HYPOTHESIS 2

HO: Strategic HR practices do not significantly influence the integration of Artificial Intelligence in HR functions.

H2: Strategic HR practices significantly influence the integration of Artificial Intelligence in HR functions.

Regression Analysis (Coefficients ^a)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.806	0.328		2.457	0.020
	SHRM practices	0.725	0.097	0.798	7.491	0.000

a. Dependent Variable: Artificial intelligence Integration



Interpretation: P value is **0.00** which is less than **0.05** hence we reject null hypothesis. This ensures SHRM practices influences integration of Artificial Intelligence.

HYPOTHESIS 3

HO: AI integration does not significantly influence organizational performance.

H3: AI integration significantly influences organizational performance.

Regression Analysis (Coefficients ^a)					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	0.487	0.275	1.770	0.086
	AI integration	0.880	0.084		

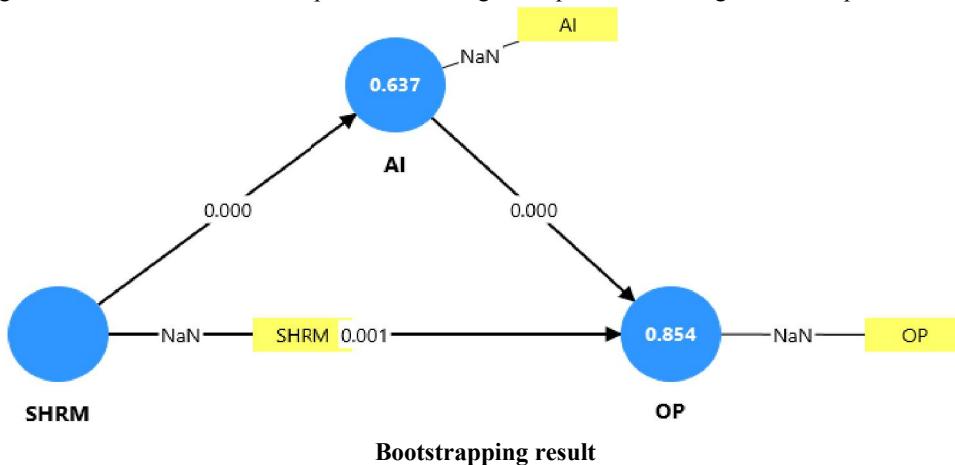
a. Dependent Variable: Organizational Performance

Interpretation: P value is **0.00** which is less than **0.05** hence we reject null hypothesis. This ensures AI integration influences Organizational Performance.

HYPOTHESIS 4(Mediating Effect)

HO: AI integration does not mediate the relationship between strategic HR practices and organizational performance.

H4: AI integration mediates the relationship between strategic HR practices and organizational performance.



Bootstrapping

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
SHRM -> AI -> OP	0.408	0.409	0.114	3.587	0.000

Interpretation: The above table shows the results of bootstrapping. The mediating effect of Artificial intelligence integration between SHRM practices and organizational performance. The P value is **0.000**, which is less than 0.05. Hence, we reject the null hypothesis.



Results

Reliability Test: Cronbach's Alpha test is used to test the reliability of the data. All the Cronbach's Alpha individual items for SHRM, AI integration, and organizational performance resulted in **0.937**, **0.929**, and **0.885**. Since all the values are above 8, this ensures that there is excellent internal consistency. And overall, Cronbach's Alpha value resulted in **0.943**. This ensures that overall internal consistency is very strong.

Hypothesis Testing

H₁: Strategic HR practices significantly influence organizational performance ($p < 0.05$).

H₂: Strategic HR practices significantly influence the integration of Artificial Intelligence in HR functions ($p < 0.05$).

H₃: AI integration significantly influences organizational performance ($p < 0.05$).

H₄: AI integration mediates the relationship between strategic HR practices and organizational performance ($p < 0.05$).

Discussion

The result confirms that Strategic human resource management practices play a crucial role in enhancing organizational performance. It not only impacts organizational performance, but also has a severe impact on artificial intelligence in the selected organization. Hence, this ensures the independent variable effect of Strategic human resource management practices on other variables is very strong.

Mediating effect: Artificial intelligence integration has a strong mediating effect between Strategic human resource management practices and organizational performance. This indicates that the combined effect of Strategic human resource management practices along with Artificial intelligence integration will contribute towards organizational performance. This suggests that the organization that uses Artificial intelligence can improve its performance.

VI. CONCLUSION

The study highlights the important role of Strategic HR practices on other factors. From the results, it is evident that strategic HR practices play a crucial role in developing organizational performance. On the other hand, Artificial intelligence has a significant role in building a bridge between Strategic HR practices and organizational performance. And the mediating effect between them ensures a strong connection. Hence, the organization should start implementing Artificial Intelligence-based training programs to develop the employees in the organization, this contribute in improving organization performance.

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