

## The impact of artificial intelligence on organizational behaviour: An empirical survey-based study

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**Received:** 23-Jan-2026, Manuscript No. JPAI-2026-0003; **Editor assigned:** 25-Jan-2026, PreQC No. JPAI-2026-0003 (PQ); **Reviewed:** 05-Feb-2026, QC No. JPAI-2026-0003; **Revised:** 08-Feb-2026, Manuscript No. JPAI-2026-0003 (R); **Published:** 11-Feb-2026

Citation: Kiranmayi, Y. S. (2026). The impact of artificial intelligence on organizational behaviour: An empirical survey-based study. *J Prog Artif Intell*.

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### ABSTRACT

Artificial Intelligence (AI) is increasingly embedded in organizational processes, reshaping how employees perform tasks, make decisions, and relate to their organizations. Despite growing interest in AI-driven transformation, empirical evidence explaining its behavioural implications remains limited, particularly from an organizational behavior perspective. This study examines the impact of AI adoption on key organizational behavior outcomes employee performance, job satisfaction, decision-making effectiveness, and organizational commitment while investigating the mediating role of trust in AI as a psychological mechanism. Using a quantitative, cross-sectional survey design, data were collected from 250 employees and managers across IT, manufacturing, healthcare, and service sectors (banking, education, and hospitality). Descriptive statistics, reliability analysis, correlation analysis, and multiple regression analysis were conducted using SPSS. The findings indicate that AI adoption significantly enhances employee performance, decision-making effectiveness, and organizational commitment, while job satisfaction shows a moderate but significant relationship. Trust in AI partially mediates the relationship between AI adoption and organizational behavior outcomes. The study contributes to organizational behavior and information systems literature by empirically

positioning AI as a socio-technical resource and highlighting trust as a critical psychological mechanism for effective AI integration.

**Keywords:** Artificial intelligence adoption, Organizational behavior, Trust in AI, Employee performance, Decision-making effectiveness

### INTRODUCTION

Artificial Intelligence (AI) is increasingly transforming organizational processes and the nature of work across industries. Organizations across industries are adopting AI-enabled systems to enhance productivity, automate routine processes, and support data-driven decision-making. Applications of AI now extend to recruitment, performance appraisal, customer relationship management, and strategic planning, thereby influencing both managerial practices and employee experiences<sup>[1]</sup>. Organizational Behavior (OB) research emphasizes understanding how individuals and groups behave within organizations and how organizational systems influence employee attitudes and performance. The integration of AI into organizational processes introduces significant behavioral implications, as employees must interact with intelligent systems that influence job design, autonomy, and decision

authority. While AI has the potential to augment human capabilities, it may also generate employee

concerns related to job security, skill obsolescence, surveillance, and ethical decision-making [2]. Despite growing interest in AI-driven organizational transformation, empirical research examining its behavioral consequences remains limited and fragmented. In particular, limited attention has been paid to the role of trust in AI as a psychological mechanism that shapes employee acceptance and effective use of AI systems [3]. Trust determines whether employees perceive AI as a supportive partner or a threatening control mechanism [4,5]. Addressing these gaps, the present study investigates the impact of AI adoption on employee performance, job satisfaction, decision-making effectiveness, and organizational commitment, while examining the mediating role of trust in AI. By integrating AI adoption into an organizational behavior framework, this study contributes to a deeper understanding of how AI reshapes employee behavior and organizational outcomes, particularly in emerging organizational contexts. From an advanced organizational behavior perspective, Artificial Intelligence (AI) adoption represents a complex socio-technical intervention rather than a purely technological change. Drawing on socio-technical systems theory, social exchange theory, and emerging technology trust literature, this study conceptualizes AI as an embedded organizational actor that reshapes employee role expectations, psychological contracts, and decision authority. Unlike prior studies that primarily emphasize the economic or technical benefits of AI, the present research adopts a behavioral lens, emphasizing employee perceptions, trust formation, and attitudinal responses as critical explanatory mechanisms. By integrating AI adoption within an organizational behavior framework, this study advances theory by recognizing intelligent systems as active participants in organizational life rather than neutral tools. Accordingly, this study responds to recent scholarly calls for theory-driven, behaviourally grounded empirical research examining how AI adoption shapes employee attitudes and organizational outcomes.

## LITERATURE REVIEW

### *Intelligence and organizational behavior*

Artificial Intelligence (AI) refers to systems capable of learning, reasoning, and problem-solving tasks traditionally associated with human intelligence [6]. In organizational settings, AI functions as decision-support, automation, and predictive tools. From an Organizational Behavior (OB) perspective, AI adoption constitutes a socio-technical transformation

that reshapes job roles, task structures, and workplace interactions [3]. Organizational behavior research emphasizes that technological systems interact dynamically with human cognition, motivation, and social relationships. Consequently, AI adoption reshapes job roles, redistributes decision authority, and influences employee perceptions of autonomy and control, thereby affecting attitudes and behavioural outcomes.

### *AI adoption and employee performance*

Empirical evidence indicates that AI adoption enhances employee performance by reducing cognitive load, improving focus, and enabling engagement in higher-order tasks [7-8]. OB research further suggests that performance gains depend on employees' perceptions of control and organizational support. When AI is viewed as an investment in employee effectiveness, performance improvements are strengthened through reciprocal commitment and discretionary effort [9].

### *AI adoption and job satisfaction*

AI adoption influences job satisfaction through both positive and negative pathways. While AI can enhance satisfaction by reducing workload and improving task clarity, it may also increase anxiety related to job insecurity and skill obsolescence [2,10]. Studies show that satisfaction is higher when organizations provide training, transparency, and participative implementation, framing AI as an assistive rather than controlling technology [4].

### *AI adoption and decision-making effectiveness*

AI significantly improves decision-making effectiveness by integrating large datasets, reducing bias, and accelerating responses in complex environments [8]. OB research indicates that employees demonstrate greater acceptance and confidence in AI-supported decisions when they are perceived as objective and data-driven, thereby strengthening trust in leadership and organizational systems [11].

### *AI adoption and organizational commitment*

AI adoption can enhance organizational commitment by improving perceptions of fairness, decision quality, and organizational competence. When employees perceive AI-enabled practices as supportive and aligned with organizational values, they are more likely to develop stronger affective commitment and long-term attachment to the organization [11].

*Trust in AI as a central behavioral mechanism*

Trust in AI is a key psychological mechanism shaping employee responses to AI-enabled systems [4,5]. Trust is multidimensional, encompassing perceptions of competence, integrity, and benevolence. Transparent, explainable, and value-aligned AI systems foster higher trust, which in turn mediates the relationship between AI adoption and positive organizational behaviour outcomes [11].

*Research gap*

Although prior research has examined the adoption of Artificial Intelligence in organizations, existing empirical studies remain fragmented and limited in scope. Much of the literature focuses on isolated outcomes such as productivity or decision quality, often adopting a technical or economic perspective. There is limited empirical research that simultaneously examines multiple core organizational behavior outcomes within a single integrative framework. Moreover, while trust has been acknowledged as an important factor in human technology interaction, the mediating role of trust in AI as a psychological mechanism linking AI adoption to employee attitudes and behaviors remains underexplored, particularly across diverse industry contexts. Existing studies rarely position trust in AI as an intervening construct that explains how and why AI adoption influences employee performance, job satisfaction, decision-making effectiveness, and organizational commitment. To address these gaps, the present study empirically investigates AI adoption as a socio-technical intervention influencing multiple organizational behavior outcomes, while explicitly modelling trust in AI as a mediating mechanism. By adopting a multi-sector empirical design, the study responds to recent calls for theory-driven and behaviourally grounded research on AI in organizational contexts.

*Objectives of the study*

The present study aims to empirically examine the behavioral implications of Artificial Intelligence (AI) adoption within organizational contexts. Specifically, the objectives of the study are to:

To examine the impact of AI adoption on key organizational behavior outcomes, including employee performance, job satisfaction, decision-making effectiveness, and organizational commitment.

To analyse the individual effects of AI adoption on employee performance, job satisfaction, decision-making effectiveness, and organizational commitment.

To investigate the role of trust in AI as a psychological mechanism influencing employees'

responses to AI-enabled systems and to assess its mediating effect on the relationship between AI adoption and organizational behavior outcomes. To contribute to organizational behavior theory and managerial practice by positioning AI adoption as a socio-technical intervention and providing empirical evidence on the behavioral conditions under which AI adoption leads to positive employee and organizational outcomes.

*Hypothesis:*

Hypothesis 1 (H1): AI adoption positively influences employee performance.

Hypothesis 2 (H2): AI adoption has a significant relationship with job satisfaction.

Hypothesis 3 (H3): AI adoption positively influences decision-making effectiveness.

Hypothesis 4 (H4): AI adoption positively influences organizational commitment.

Hypothesis 5 (H5): Trust in AI mediates the relationship between AI adoption and organizational behavior outcomes.

Each hypothesis is directly derived from the stated objectives and examined through the corresponding empirical analysis.

**METHODOLOGY**

*Research design*

A quantitative, cross-sectional survey design was adopted to test the proposed hypotheses examining the impact of Artificial Intelligence (AI) adoption on organizational behavior outcomes and the mediating role of trust in AI.

*Sample and data collection*

Data were collected from 250 employees and managers working in IT, manufacturing, healthcare, and service sectors. A convenience sampling technique was employed. Participation was voluntary, and informed consent was obtained from all respondents. Anonymity and confidentiality were assured. The "services" category specifically represents non-IT and non-healthcare service sub-sectors such as banking, financial services, education, retail services, and hospitality, where AI is primarily used for customer analytics, service automation, and decision support. This classification enabled a more nuanced examination of AI adoption across heterogeneous organizational contexts.

Table 1 presents the demographic profile of the respondents, including gender, age, and industry distribution.

Table 1. Demographic Profile of Respondents (N = 250)

Variable	Category	Frequency	Percentage (%)
Gender	Male	145	58.0
	Female	105	42.0
Age	Below 30	72	28.8
	31–40	118	47.2
	Above 40	60	24.0
Industry	IT	82	32.8
	Manufacturing	64	25.6
	Healthcare	54	21.6
	Services	50	20.0

Note. Percentages may not total 100 due to rounding.

#### *Measurement instruments*

All constructs were measured using five-point Likert scales (1 = strongly disagree, 5 = strongly agree). Measurement items were adapted from validated prior studies on AI adoption, employee performance, job satisfaction, decision-making effectiveness, organizational commitment, and trust in AI.

#### *Data analysis techniques*

Data were analysed using SPSS. Descriptive statistics and correlation analysis were conducted to examine variable distributions and relationships. Internal consistency reliability was assessed using Cronbach's alpha.

#### *Methodological rigor and validity considerations*

To ensure methodological rigor consistent with doctoral-level empirical research, several validity and reliability checks were performed. Internal consistency reliability was confirmed through Cronbach's alpha, with all constructs exceeding recommended thresholds. Construct validity was supported by theoretically consistent correlations

among variables. Common method variance was assessed using Harman's single-factor test, and results indicated that no single factor accounted for the majority of variance, reducing concerns of common method bias. Although the cross-sectional design limits causal inference, the methodological approach aligns with established best practices in organizational behavior and information systems research. The use of a cross-sectional survey design and convenience sampling is consistent with prior organizational behavior and information systems research, particularly in exploratory studies examining emerging technologies. Given access constraints across multiple sectors, this approach was considered appropriate for capturing employee perceptions of AI adoption. Regression-based mediation analysis was employed as it remains a widely accepted technique for testing indirect effects in behavioural research.

## **RESULTS**

Table 2 summarizes the descriptive statistics, including means and standard deviations, for all study variables.

Table 2. Descriptive statistics of study variables

Variable	Mean	Standard Deviation
AI Adoption	3.89	0.71
Employee Performance	4.02	0.68
Job Satisfaction	3.76	0.74
Decision-Making Effectiveness	4.08	0.65
Organizational Commitment	3.85	0.7
Trust in AI	3.92	0.69

*Reliability analysis*

As shown in Table 3, Cronbach's alpha values for all constructs exceed the recommended threshold of 0.70, indicating satisfactory internal consistency reliability.

Table 3. Reliability analysis

Construct	Cronbach's $\alpha$
AI Adoption	0.88
Employee Performance	0.91
Job Satisfaction	0.83
Decision-Making Effectiveness	0.89
Organizational Commitment	0.86
Trust in AI	0.90

Note. All values exceed the recommended threshold of 0.70 (Hair et al., 2020).

Table 4 presents the Pearson correlation matrix for the study variables. All correlations are in the expected directions and statistically significant at  $p < .01$ .

Table 4. Correlation matrix

Variable	1	2	3	4	5	6
AI Adoption	1					
Employee Performance	.54**	1				
Job Satisfaction	.41**	.48**	1			
Decision-Making Effectiveness	.59**	.56**	.44**	1		
Organizational Commitment	.46**	.51**	.49**	.53**	1	
Trust in AI	.62**	.58**	.45**	.60**	.52**	1

Note.  $p < .01$ .

*Regression and mediation analysis*

As indicated in Table 5, AI adoption has a significant positive effect on all organizational behavior outcomes, thereby supporting Hypotheses H1 through H4.

Table 5. Regression results

Dependent Variable	$\beta$	t-value	p-value
Employee Performance	.45	8.21	< .001
Job Satisfaction	.29	5.14	< .001
Decision-Making Effectiveness	.52	9.34	< .001
Organizational Commitment	.38	6.87	< .001

These findings support Hypotheses H1, H2, H3, and H4. Among the examined outcomes, AI adoption exhibited the strongest effect on decision-making effectiveness, followed by employee performance and organizational commitment.

Hypotheses H1 to H4 were tested using multiple regression analysis, with AI adoption as the independent variable and each organizational behavior outcome as the dependent variable.

Hypothesis H5, which proposed the mediating role of trust in AI, was tested using regression-based mediation analysis following established procedures.

Harman's single-factor test indicated no significant common method bias, as no single factor accounted for the majority of variance.

*Mediation analysis*

The mediation analysis demonstrates that trust in AI partially mediates the relationship between AI adoption and key organizational behavior outcomes, including employee performance, job satisfaction, decision-making effectiveness, and organizational commitment, thereby providing empirical support for Hypothesis 5. This result indicates that AI adoption influences organizational behavior outcomes through both direct pathways and indirect pathways operating via trust in AI. Specifically, while AI adoption independently contributes to improvements in employee attitudes and behaviors, these effects are amplified when employees develop trust in AI systems, reflecting perceptions of reliability, transparency, and alignment with organizational objectives. The presence of partial mediation further suggests that trust in AI functions as a complementary psychological mechanism, rather than a substitute, in translating AI adoption into favourable organizational behavior outcomes.

**DISCUSSION**

The purpose of this study was to empirically examine the impact of Artificial Intelligence (AI) adoption on key Organizational Behavior (OB) outcomes, namely employee performance, job satisfaction, decision-making effectiveness, and organizational commitment, while also assessing the mediating role of trust in AI. The findings provide robust empirical evidence that AI adoption significantly influences employee behavior and attitudes within organizational settings, thereby reinforcing the growing view of AI as a socio-technical resource rather than a purely technological tool. First, the results demonstrate a strong positive relationship between AI adoption and employee performance. This finding is consistent with prior research suggesting that AI enhances employee productivity by automating routine tasks, reducing cognitive load, and enabling employees to focus on higher-order problem-solving activities [3,7]. From an organizational behavior perspective, AI appears to function as a performance enabler by augmenting human capabilities rather than replacing them. This supports socio-technical systems theory, which posits that optimal organizational outcomes are achieved when technological systems are effectively aligned with human and social elements. Second, the relationship between AI adoption and job satisfaction was found to be significant, although comparatively weaker than its relationship with performance and decision-making effectiveness [12]. This nuanced finding suggests that while AI improves efficiency and work quality, employees may simultaneously experience concerns related to job security, monitoring, and skill redundancy. These mixed perceptions align with the arguments of Vrontis et al., who emphasize that digital transformation can generate both positive and negative emotional responses among employees [10]. Thus, AI adoption

alone may not guarantee higher job satisfaction unless accompanied by supportive human resource practices, reskilling opportunities, and transparent communication. Third, AI adoption exhibited the strongest effect on decision-making effectiveness. This finding corroborates earlier studies highlighting AI's capacity to enhance decision quality through advanced analytics, pattern recognition, and real-time data processing [8]. Improved decision-making effectiveness not only benefits organizational outcomes but also positively influences employee confidence in managerial processes. When employees perceive decisions as data-driven and unbiased, trust in organizational systems tends to increase, fostering a more positive work environment. Fourth, the positive relationship between AI adoption and organizational commitment indicates that employees are more likely to develop emotional attachment and loyalty when AI systems improve work conditions and organizational efficiency. This finding supports prior research suggesting that technology-enabled environments can enhance employee commitment by signalling organizational support and innovation orientation [9]. Employees may interpret AI adoption as an investment in long-term organizational sustainability, thereby strengthening their commitment.

### *Implications*

#### *Theoretical implications*

This study extends organizational behavior literature by empirically positioning AI as a determinant of employee attitudes and behaviors and validating trust in AI as a mediating mechanism.

#### *Managerial implications*

Managers should prioritize AI transparency, ethical governance, and employee training to foster trust and maximize AI benefits.

#### *Limitations and future research*

The cross-sectional design limits causal inference. Future research may adopt longitudinal approaches and examine additional mediators such as perceived job insecurity and resistance to change.

### **CONCLUSION**

This study extends organizational behavior literature by empirically examining AI adoption as a socio-technical intervention and by validating trust in AI as a critical psychological mechanism influencing employee outcomes. By examining employee performance, job satisfaction, decision-making effectiveness, and organizational commitment within a unified framework, the study offers a

Most importantly, the mediation analysis reveals that trust in AI plays a critical intervening role in translating AI adoption into positive organizational behavior outcomes. Trust in AI partially mediated the relationships between AI adoption and employee performance, decision-making effectiveness, and organizational commitment. This finding underscores the psychological dimension of AI adoption, highlighting that technological effectiveness alone is insufficient without employee trust. Consistent with Glikson and Woolley, the results suggest that when employees perceive AI systems as reliable, fair, and transparent, they are more likely to rely on AI outputs and integrate them into their work practices [4]. Consequently, trust emerges as a central mechanism through which AI influences employee behavior. Overall, the discussion highlights that AI adoption is not a purely technical intervention but a behavioral and managerial challenge. Organizations that neglect employee perceptions, trust, and ethical considerations may fail to realize the full potential of AI systems. Thus, the successful integration of AI requires a holistic approach that combines technological capability with organizational culture, leadership, and trust-building initiatives [13,14].

comprehensive understanding of how AI reshapes employee attitudes and behaviors in organizational settings. The findings demonstrate that AI adoption significantly enhances employee performance and decision-making effectiveness, confirming AI's role as a powerful enabler of human productivity and organizational efficiency. While job satisfaction is positively associated with AI adoption, the comparatively weaker effect highlights the need for managerial interventions to address employee concerns related to job security and technological anxiety. Furthermore, the positive relationship between AI adoption and organizational commitment suggests that employees are more likely to remain loyal to organizations that leverage AI to improve work processes and strategic outcomes. A key contribution of this study lies in establishing trust in AI as a critical mediating mechanism. The results clearly indicate that trust determines whether AI adoption leads to favorable behavioral outcomes. Employees who trust AI systems are more willing to engage with them, rely on their outputs, and integrate them into daily work practices. Consequently, trust acts as a bridge between technological adoption and behavioral effectiveness. In conclusion, AI adoption can significantly improve organizational behavior outcomes when implemented within a supportive and trust-oriented organizational environment. Organizations that prioritize transparency, ethical AI practices,

employee training, and continuous communication are more likely to harness the full potential of AI. As AI continues to evolve and penetrate organizational life, understanding its behavioral implications will remain essential for achieving sustainable organizational performance and employee well-being.

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