



The Application of AI-Based Technology and Psychological Contract in Improving Employee Performance in the Hotel Industry

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Abstract

Background: Digital transformation has accelerated the adoption of Artificial Intelligence (AI) in the hospitality industry; however, research integrating AI with Psychological Contract (PC) and Innovative Work Behavior (IWB) to explain Employee Performance (EP) remains limited, particularly in Indonesia.

Objective: This study examines the relationships among AI, PC, IWB, and EP and assesses the mediating role of IWB among employees of four-star hotels in Yogyakarta.

Methods: A quantitative cross-sectional survey was conducted involving 90 respondents selected through purposive sampling. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS).

Results: All seven hypotheses were supported. AI was positively associated with EP ($\beta = 0.345$; $p < 0.001$) and IWB ($\beta = 0.397$; $p < 0.001$), while PC was positively associated with EP ($\beta = 0.416$; $p < 0.001$) and exhibited the strongest association with IWB ($\beta = 0.526$; $p < 0.001$). IWB was positively associated with EP ($\beta = 0.352$; $p < 0.001$) and partially mediated both the AI–EP ($\beta = 0.140$; $p < 0.001$) and PC–EP ($\beta = 0.185$; $p < 0.001$) relationships. The model explained 68.2% of the variance in EP and 44.7% of the variance in IWB.

Conclusion: The findings extend hospitality research by integrating technological and psychological perspectives within a single model and indicate that AI utilization and PC fulfillment are associated with employee performance both directly and through innovative work behavior.

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INTRODUCTION

The global hospitality industry has undergone significant transformation driven by advances in digital technology. Employee performance constitutes a pivotal factor in determining organizational achievement, especially within service-driven sectors where client satisfaction is intrinsically connected to workforce competencies (Hasibuan et al., 2026; Plaskoff, 2017). In recent years, Artificial Intelligence (AI) has emerged as a groundbreaking technology that empowers organizations to enhance operational productivity, streamline repetitive processes, and improve service delivery (Anantrasirichai & Bull, 2022). Concurrently, the psychological relationship between employees and organizations, conceptualized as the Psychological Contract (PC), has been recognized as an essential factor shaping employee attitudes and work performance (Levinson et al., 1962; Li & Dai, 2015; Manchia et al., 2026).

The hospitality sector, particularly the hotel industry, operates in a highly competitive

environment where service excellence is paramount. According to the Ministry of Tourism and Creative Economy ([Indonesia, 2023](#)) hotels represent one of the key accommodation businesses that contribute significantly to the national economy. In Indonesia, the hotel industry has experienced rapid growth, with four-star and five-star hotels increasingly adopting digital technologies such as online booking systems, virtual assistants, and AI-driven customer analytics to maintain a competitive advantage. The trend toward experiential services in the creative economy, which emphasizes unique and personalized customer encounters, has further accelerated the need for technologically competent and psychologically engaged employees ([Indonesia, 2023](#)).

Research on the role of AI in organizational performance has attracted substantial scholarly interest. Tong et al. ([2021](#)) and Pei et al. ([2024](#)) showed that AI functionalities can effectively monitor workforce behavior, evaluate performance levels, and provide work-related recommendations that enhance job effectiveness. Wijayati et al. ([2022](#)) found that AI implementation positively influenced employee performance through increased work engagement, while Wamba-Taguimdje et al. ([2020](#)) and Domini et al. ([2023](#)) demonstrated that AI-driven digital transformation generates organizational value by enhancing operational productivity. Similarly, Mikalef and Gupta ([2021](#)) and Almheiri et al. ([2025](#)) argued that AI capability constitutes a strategic organizational resource that improves performance through data-driven analytical capabilities.

Parallel to the technological dimension, the psychological dynamics between employees and organizations play a vital role in determining work outcomes. Psychological Contract theory, originally proposed by Argyris ([1960](#)) and subsequently elaborated by Levinson et al. ([1962](#)) and Dascombe et al. ([2026](#)), posits that employees hold implicit expectations regarding mutual obligations with their organizations. When these expectations are fulfilled, employees demonstrate higher levels of commitment, motivation, and performance ([Maula et al., 2026](#); [Sheikh Elsouk et al., 2021](#)). In the hospitality context, where diverse generational cohorts (including Generation X, Millennials, and Generation Z) coexist in the workforce, understanding and fulfilling psychological contracts becomes particularly challenging yet essential for maintaining organizational performance ([Lyons et al., 2015](#); [Zhao & Ji, 2024](#)).

Innovative Work Behavior (IWB) has been recognized as a significant intermediary process that connects organizational inputs to performance outcomes. Thurlings et al. ([2015](#)) and Aryani et al. ([2024](#)) contended that innovation differs according to workforce behavior and represents a crucial element for organizational continuity. Sulistiawan and Andyani ([2020](#)) and Wang ([2025](#)) demonstrated that employees' psychological perceptions enhance work engagement, which subsequently fosters innovative behavior and, in the long run, improves organizational outcomes. Furthermore, Afsar and Badir ([2017](#)) and Ekmekcioglu and Öner ([2024](#)) observed that when employees perceive organizational support and the fulfillment of psychological obligations, they exhibit a greater propensity to engage in creative problem-solving and service innovation. This is particularly significant in the hospitality sector, where service differentiation constitutes a primary competitive advantage.

Notwithstanding the expanding body of scholarship on AI and employee performance, most previous investigations have concentrated on the direct association between technology implementation and work outcomes without considering the psychological mechanisms that underlie technology acceptance and performance improvement ([Wijayati et al., 2022](#)). Moreover, research integrating both technological and psychological factors, specifically AI and PC, within a single framework remains limited, especially within the hospitality sector of emerging economies such as Indonesia ([Hidayat et al., 2023](#)). The function of IWB as a mediating construct connecting technological inputs and psychological contracts to employee performance has not been sufficiently investigated in the hotel industry context. This represents a notable gap in the current body of knowledge, given that the hospitality industry relies heavily on both technological innovation and human relationship management to achieve service excellence.

The novelty of this study lies in the development of an empirical model that concurrently incorporates technological dimensions (AI) and psychological dimensions (PC) through the mediating function of IWB within the Indonesian hospitality sector. In contrast to earlier investigations that analyzed these constructs separately, this research provides a more holistic

understanding of how digital transformation and employee relationship management interact to influence employee performance in four-star hotels. Specifically, this investigation advances the scholarly discourse by: (1) analyzing the concurrent influence of AI and PC on employee performance; (2) investigating IWB as a mediating mechanism; and (3) providing empirical evidence from the Indonesian hospitality context, which has been underrepresented in existing research ([Hidayat et al., 2023](#); [Wijayati et al., 2022](#)).

The aims of this investigation are: (1) to analyze the association between Artificial Intelligence and Employee Performance; (2) to assess the relationship between Psychological Contract and Employee Performance; (3) to evaluate the relationship between Innovative Work Behavior and Employee Performance; (4) to investigate the association between Artificial Intelligence and Innovative Work Behavior; (5) to explore the relationship between Psychological Contract and Innovative Work Behavior; (6) to determine the mediating function of Innovative Work Behavior in the association between Artificial Intelligence and Employee Performance; and (7) to ascertain the mediating function of Innovative Work Behavior in the relationship between Psychological Contract and Employee Performance.

This study was limited to employees of four-star hotels in the Yogyakarta area, Indonesia. The sample was drawn exclusively from managerial-level employees who had at least one year of work experience and were within the productive age bracket of 25 to 55 years. Consequently, the results may lack generalizability across different hotel classifications, geographic areas, or nonmanagerial hospitality staff. Additionally, the cross-sectional approach adopted in this investigation collects data at a single point in time, thereby constraining the ability to determine causal relationships among the constructs.

METHOD

This investigation utilized a quantitative methodology employing a cross-sectional survey design. This research design was selected to analyze the associative relationships among constructs at a specific point in time, making it suitable for evaluating the proposed conceptual framework using SEM-PLS ([Hair Jr. et al., 2021](#); [J. Hair & Sabol, 2025](#)). Data were collected from late 2024 to early 2025 from managerial-level employees of four-star hotels in the Yogyakarta area, Indonesia. The population consisted of all managerial employees working in four-star hotels in Yogyakarta. Primary data were collected using a structured survey instrument administered directly to the participants. The survey instrument employed a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The Artificial Intelligence variable was measured using seven indicators adapted from ([Wijayati et al., 2022](#)), the Psychological Contract construct was assessed using 16 items derived from Li and Dai ([2015](#)), Sheikh Elsouk et al. ([2021](#)) and Maula et al. ([2026](#)), the Innovative Work Behavior variable was measured using eight indicators adapted from Thurlings et al. ([2015](#)) and Aryani et al. ([2024](#)), and the Employee Performance variable was measured using seven indicators adapted from Guan and Frenkel ([2017](#)) and Bagis and Yulianeu ([2024](#)).

The participant selection approach employed non-probability sampling through a purposive sampling strategy, in which respondents were selected based on predetermined eligibility criteria ([Oranga et al., 2025](#); [Sekaran & Bougie, 2009](#)). The inclusion criteria were: (1) managerial-level employees working in four-star hotels in the Yogyakarta area; (2) employees with a service duration of no less than one year and no more than 15 years; and (3) employees between 25 and 55 years of age. The sample size was determined using power analysis, taking into consideration the highest number of predictor variables directed toward an endogenous construct within the structural model ([Memon et al., 2020](#); [Mismetti et al., 2026](#)). Based on this calculation, the minimum required sample size was 88 respondents, while 90 valid responses were obtained and subsequently included in the SEM-PLS analysis. Participation was voluntary, and respondents were informed of the purpose of the study, the confidentiality and anonymity of their responses, and their right to withdraw from participation.

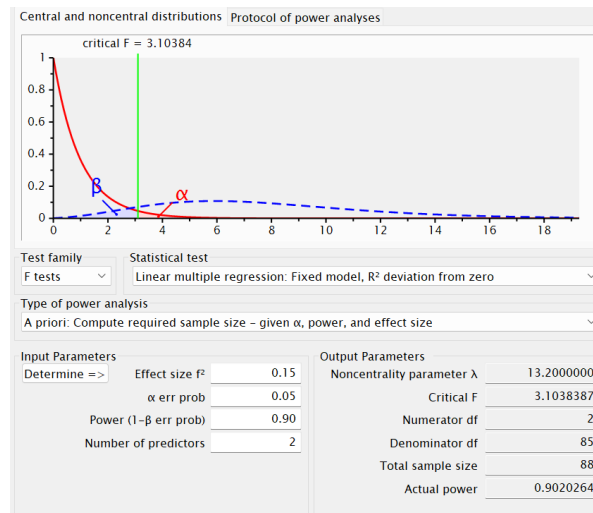


Figure 1. Sample calculation

The analytical procedure comprised two phases: descriptive statistical analysis and inferential analysis. Descriptive statistics, including the mean, standard deviation, minimum, and maximum values, as well as respondents' demographic characteristics, were analyzed using SPSS version 29. Hypothesis testing and the analysis of direct and indirect relationships among the constructs were performed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software. SEM-PLS was adopted because of its suitability for exploratory research involving relatively small sample sizes and complex models comprising multiple latent constructs and measurement items (Hair Jr. et al., 2014; J. Hair & Sabol, 2025). The SEM-PLS evaluation followed a two-stage procedure: (1) assessment of the measurement model (outer model), which included convergent validity (outer loadings ≥ 0.70 ; AVE ≥ 0.50), discriminant validity (HTMT < 0.90), and reliability testing (Cronbach's alpha and composite reliability ≥ 0.70); and (2) assessment of the structural model (inner model), which encompassed R^2 , path coefficients, t-statistics, p-values, effect size (f^2), predictive relevance (Q^2), and the Variance Inflation Factor (VIF) for assessing multicollinearity (Changalima & Chuwa, 2026; Hair Jr. et al., 2021).

RESULTS AND DISCUSSION

Results

Data Description

Table 1

Respondent Characteristics

Gender	Quantity	%
Male	73	81%
Women	17	19%
Age		
25 – 29 Years	23	26%
30 – 39 Years	54	60%
40 – 55 Years Old	13	14%
Long working time		
1 – 5 Years	36	40%
5 – 10 Years	35	39%
11 – 15 Years	19	21%
Quantity	90	100%

Source: Results of Primary Data Processing with SPSS (2026)

Table 1 shows that 73 respondents (81%) were male and 17 respondents (19%) were female. This distribution indicates that male respondents constituted the majority of the research sample; nonetheless, this proportion should not be construed as reflecting the broader gender

distribution of managerial personnel in the hospitality sector, as the data were confined to those respondents who participated in this investigation.

With respect to age distribution, the majority of participants fell within the 30 to 39 age bracket (60%), succeeded by those aged 25–29 years (26%) and 40–55 years (14%). In terms of tenure, 40% of respondents had worked for 1–5 years, 39% for 5–10 years, and 21% for 11–15 years. These findings indicate that the sample comprised employees with varied levels of work experience, with relatively similar proportions in the 1–5-year and 5–10-year tenure groups.

Measurement Model Analysis (Outer Model)

Convergent Validity Test

The convergent validity assessment is intended to ascertain the degree to which each measurement item can accurately capture its underlying construct. An indicator is declared valid if it has an outer loading value of ≥ 0.70 ([Changalima & Chuwa, 2026](#); [J. F. Hair et al., 2021](#); [Ketchen, 2013](#)). The assessment outcomes are displayed in the table 2.

Table 2

Convergent Validity Test

	Artificial Intelligence	Employee Performance	Innovative Work Behaviour	Psychological Contract
AI1	0.860			
AI2	0.844			
AI3	0.882			
AI4	0.821			
AI5	0.825			
AI6	0.860			
AI7	0.891			
EP1		0.901		
EP2		0.842		
EP3		0.839		
EP4		0.882		
EP5		0.796		
EP6		0.873		
EP7		0.905		
IWB 1			0.852	
IWB 2			0.874	
IWB3			0.847	
IWB4			0.851	
IWB5			0.835	
IWB6			0.864	
IWB7			0.874	
IWB8			0.815	
PC1				0.853
PC10				0.807
PC11				0.822
PC12				0.860
PC13				0.820
PC14				0.787
PC15				0.852
PC16				0.795
PC2				0.863
PC3				0.787
PC4				0.864
PC5				0.799
PC6				0.835
PC7				0.822

	Artificial Intelligence	Employee Performance	Innovative Work Behaviour	Psychological Contract
PC8				0.779
PC9				0.823

Based on the table 2, all indicators on the four variables, namely, Artificial Intelligence (AI1–AI7), Employee Performance (EP1–EP7), Innovative Work Behaviour (IWB1–IWB8), and Psychological Contracts (PC1–PC16) possess outer loading values exceeding 0.70, with the minimum value recorded at 0.779 (PC8) and the peak value at 0.905 (EP7). This demonstrates that every indicator is deemed valid and suitable for measuring its corresponding construct, indicating that no measurement items require removal from the model (Sarstedt et al., 2022).

Discriminating Validity Test

The discriminant validity assessment serves to verify that each construct is entirely distinct from the others on an empirical basis. The test was carried out by looking at the Heterotrait-Monotrait Ratio (HTMT) value, where a construct is considered to possess adequate discriminant validity when the HTMT value falls below 0.90 (Changalima & Chuwa, 2026; Henseler et al., 2015).

Table 3

Discriminating Validity Test

	Artificial Intelligence	Employee Performance	Innovative Behaviour	Work
Employee Performance	0.519			
Innovative Work Behaviour	0.418	0.755		
Psychological Contract	0.118	0.640	0.553	

The test results showed that all HTMT values between constructs were below the threshold of 0.90, with the highest value of 0.755 (between Innovative Work Behaviour and Employee Performance) and the lowest value of 0.118 (between Psychological Contract and Artificial Intelligence). Thus, it can be concluded that the four constructs in this study, Artificial Intelligence, Employee Performance, Innovative Work Behavior, and Psychological Contract have good discriminant validity, meaning that each construct is wholly distinct and exhibits no conceptual or empirical overlap with the others.

Reliability Test

The reliability assessment is conducted to evaluate the internal coherence of the measurement items comprising a construct. The criteria used were Cronbach's Alpha and Composite Reliability (rho_a and rho_c) values ≥ 0.70 , and Average Variance Extracted (AVE) values ≥ 0.50 as indicators of convergent validity at the construct level (Kumar, 2014; Sarstedt et al., 2022; Sekaran & Bougie, 2017).

Table 4

Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Artificial Intelligence	0.939	0.953	0.950	0.731
Employee Performance	0.943	0.946	0.953	0.745
Innovative Work Behaviour	0.946	0.948	0.955	0.725
Psychological Contract	0.968	0.970	0.971	0.678

The test results showed that all four constructs had Cronbach's Alpha values ranging from 0.939–0.968 and Composite Reliability values (both rho_a and rho_c) ranging from 0.946–0.971. All of these values are well above the threshold of 0.70, even in the very high category (excellent),

which signifies that the measurement items within each construct demonstrate outstanding internal coherence and dependability (Frieman et al., 2022; Sekaran & Bougie, 2017).

In addition, the AVE coefficients across all four constructs spanned from 0.678 to 0.745, all of which were above the 0.50 threshold. This confirms that each construct is able to explain more than 50% of the variance of its indicators, so that convergent validity at the construct level has likewise been satisfied. Overall, the results in the outer part of this model show that the measurement model in this investigation has fulfilled the standards of convergent validity, discriminant validity, and reliability, thereby warranting progression to the structural model evaluation phase (inner model).

Structural Model Analysis (Inner Model)

R-Square Test (R²)

The R-Square statistic serves to quantify the extent to which exogenous constructs can account for variability in endogenous constructs. According to Chin (1998) and Yuan et al. (2023), the R² value of 0.67 is categorized as strong (substantial), 0.33 is categorized as moderate, and 0.19 is categorized as weak (J. F. Hair et al., 2021; Sarstedt et al., 2022).

Table 5

R-Square Test

	R-square	R-square adjusted
Employee Performance	0.682	0.671
Innovative Work Behaviour	0.447	0.435

The R-square coefficient for the Employee Performance construct was 0.682 (R² adjusted = 0.671), indicating that Artificial Intelligence, Psychological Contract, and Innovative Work Behavior collectively explained 68.2% of the variance in Employee Performance. This value falls into the strong (substantial) category (J. F. Hair et al., 2021; Sarstedt et al., 2022). The R-square value for Innovative Work Behavior was 0.447 (R² adjusted = 0.435), indicating that Artificial Intelligence and Psychological Contract explained 44.7% of the variance, which is categorized as moderate. Furthermore, the VIF scores for every predictor construct remained beneath the 5.0 cutoff, confirming that multicollinearity was not present in the structural framework. The effect size (f²) analysis revealed that the Psychological Contract had a medium effect on Innovative Work Behavior (f² = 0.362) and Employee Performance (f² = 0.274), while Artificial Intelligence had a modest-to-moderate influence on Innovative Work Behavior (f² = 0.206) and Employee Performance (f² = 0.189). The predictive relevance test using the blindfolding procedure yielded Q² values of 0.478 for Employee Performance and 0.305 for Innovative Work Behavior, both exceeding the threshold of zero, confirming that the model possesses adequate predictive relevance (J. F. Hair et al., 2021; Sarstedt et al., 2022).

Path Coefficient

The path coefficient denotes the directionality and strength of the effect among latent constructs within the structural framework. The original sample value (O) indicates the path coefficient derived from the original data estimation, whereas the sample mean (M) and standard deviation (STDEV) are derived from the bootstrapping process (Ketchen, 2013; Sarstedt et al., 2022).

Table 6

Path Coefficient

			Original sample	Sample mean (M)	Standard deviation (STDEV)
			(O)		
Artificial Intelligence	>	Employee Performance	0.345	0.346	0.071
Psychological Contract	>	Employee Performance	0.416	0.417	0.069

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)
Artificial Intelligence > Innovative Work Behaviour	0.397	0.398	0.070
Psychological Contract > Innovative Work Behaviour	0.526	0.529	0.072
Innovative Work Behaviour > Employee Performance	0.352	0.350	0.078

All path coefficients (original sample) show positive values, which means that all relationships between variables are positive/unidirectional. The largest pathway coefficient was found in the association between Psychological Contract and Innovative Work Behaviour (0.526), indicating that Psychological Contract served as the most powerful predictor of Innovative Work Behaviour compared to other pathways. In contrast, the smallest path coefficient was found in the relationship between Artificial Intelligence and Employee Performance (0.345), although this value still showed a significant positive influence. The sample mean value that is close to the original sample value for all paths, with a relatively small standard deviation (0.069–0.078), indicates that the estimated path coefficient is stable and consistent.

Hypothesis Test

Hypothesis evaluation was performed by examining T-statistics and P-values generated through the bootstrapping procedure. A hypothesis is deemed accepted (significantly corroborated) when T-values exceed 1.96 and P-values fall below 0.05 (significance level 5%).

Table 7
Hypothesis Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Verdict
Artificial Intelligence > Employee Performance	0.345	0.346	0.071	4.873	0.000	Accepted
Psychological Contract > Employee Performance	0.416	0.417	0.069	6.063	0.000	Accepted
Artificial Intelligence > Innovative Work Behaviour	0.397	0.398	0.070	5.671	0.000	Accepted
Psychological Contract > Innovative Work Behaviour	0.526	0.529	0.072	7.300	0.000	Accepted
Innovative Work Behaviour > Employee Performance	0.352	0.350	0.078	4.512	0.000	Accepted
Artificial Intelligence > Innovative Work Behaviour > Employee Performance	0.140	0.139	0.040	3.539	0.000	Accepted
Psychological Contract > Innovative Work Behaviour > Employee Performance	0.185	0.185	0.049	3.776	0.000	Accepted

Discussion

H1: Artificial Intelligence is significantly associated with Employee Performance

The results indicated a path coefficient of 0.345, accompanied by a T-statistic of 4.873 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H1. This finding suggests that Artificial

Intelligence (AI) is positively and statistically significantly associated with Employee Performance (EP). The positive association indicates that greater adoption and utilization of AI to support work processes are associated with higher employee performance. These findings are consistent with (Wijayati et al., 2022), who reported that AI deployment was positively associated with workforce performance through heightened work engagement. The results also align with Wamba-Taguimdje et al. (2020) and Domini et al. (2023), who demonstrated that AI-driven digital transformation creates organizational value by improving operational productivity. Mikalef & Gupta (2021) and Almheiri et al. (2025) further suggested that AI capability functions as a strategic organizational asset associated with enhanced performance through data-driven and analytical competencies. In the context of four-star hotels in Yogyakarta, AI adoption may support front-office operations, reservation systems, digital marketing, and customer relationship management, thereby contributing to improvements in individual performance.

H2: Psychological Contract is significantly associated with Employee Performance

The results showed a path coefficient of 0.416, accompanied by a T-statistic of 6.063 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H2. This finding indicates that the Psychological Contract (PC) is positively and significantly associated with Employee Performance. Greater fulfillment of implicit expectations and obligations between employees and the organization is associated with higher levels of employee performance. Among the five direct relationships tested, this pathway demonstrated the second-largest coefficient. These results are consistent with the Psychological Contract framework advanced by Levinson et al. (1962) and Dascombe et al. (2026), and elaborated by Li & Dai (2015) and Singh & Dhan (2023), which posits that the mutual relationship between organizations and their employees constitutes a basis for constructive work behavior. The findings align with Mahmoud Sheikh Elsouk et al. (2021) and Maula et al. (2026), who demonstrated that PC fulfillment is associated with improved employee performance through an enhanced sense of responsibility and organizational commitment. Aluko et al. (2022) similarly found a favorable association between psychological contracts and work performance within service-oriented institutions.

H3: Artificial Intelligence is significantly associated with Innovative Work Behavior

The results indicated a path coefficient of 0.397, accompanied by a T-statistic of 5.671 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H3. This finding suggests that Artificial Intelligence is positively and significantly associated with Innovative Work Behavior (IWB). More effective utilization of AI technology is associated with a greater tendency for employees to demonstrate innovative work behavior. This suggests that AI does not necessarily replace employee creativity but rather serves as a supporting tool for generating new ideas, facilitating faster access to information, enabling real-time customer data analysis, and automating routine tasks, thereby providing employees with greater capacity for innovation. These results align with Mikalef & Gupta (2021) and Almheiri et al. (2025), who established that AI capability promotes organizational creativity. Lichtenthaler (2019) and Chen et al. (2022) also demonstrated that AI expands organizational capacity for innovation through intelligent decision-making. In the hotel context, AI can facilitate service personalization, guest behavior analysis, and operational optimization, thereby fostering innovative employee behavior (Anantrasirichai & Bull, 2022).

H4: Psychological Contract is significantly associated with Innovative Work Behavior

The results showed a path coefficient of 0.526, accompanied by a T-statistic of 7.300 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H4. This finding indicates that the Psychological Contract is positively and significantly associated with Innovative Work Behavior. Among all direct relationships in the model, this pathway exhibited the largest path coefficient and the highest T-statistic, suggesting that PC is a particularly strong predictor of IWB. When employees perceive that the organization fulfills its psychological obligations, they may be motivated to extend their contributions beyond prescribed job duties through innovative behavior. These results are consistent with Sulistiawan and Andyani (2020) and Wang (2025), who demonstrated that psychological contracts foster innovative work behavior through work engagement and the intention to share knowledge. The study further suggested that innovation

requires a sense of psychological safety, enabling employees to propose new ideas without fear of negative consequences. In the hotel industry, service innovation is significantly influenced by the quality of working relationships between management and employees.

H5: Innovative Work Behavior is significantly associated with Employee Performance

The results indicated a path coefficient of 0.352, accompanied by a T-statistic of 4.512 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H5. This finding suggests that Innovative Work Behavior exhibits a positive and statistically significant relationship with Employee Performance. Employees who demonstrate higher levels of innovative behavior including generating new ideas, exploring opportunities, and implementing creative solutions tend to exhibit higher performance outcomes. These findings align with the innovation-performance link established by Thurlings et al. (2015) and Aryani et al. (2024), who argued that workforce innovation constitutes a decisive element in organizational sustainability and competitive positioning. Within the hospitality sector, employees who engage in innovative behavior contribute to enhanced service quality, operational productivity, and guest satisfaction, ultimately improving individual and organizational performance (Bagis & Yulianeu, 2024; Guan & Frenkel, 2017).

H6: Innovative Work Behavior mediates the relationship between Artificial Intelligence and Employee Performance

The indirect effect evaluation produced a coefficient of 0.140, with a T-statistic of 3.539 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H6. This finding indicates that IWB significantly mediates the relationship between AI and EP. Given that AI also demonstrated significant direct relationships with EP (H1) and IWB (H3), the mediation is classified as partial mediation, following the benchmarks outlined by Hair Jr. et al. (2021) and J. Hair & Sabol (2025). Specifically, the total effect of AI on EP comprises both a direct effect ($\beta = 0.345$) and an indirect effect through IWB ($\beta = 0.140$), resulting in a combined effect of 0.485. This suggests that AI is associated with workforce performance both directly and indirectly by strengthening innovative work behavior. These results correspond with Thurlings et al. (2015) and Aryani et al. (2024), who recognized IWB as a pivotal element in organizational achievement, and with Guan & Frenkel (2017) and Bagis & Yulianeu (2024), who argued that innovative behavior improves individual performance through enhanced work quality and adaptability.

H7: Innovative Work Behavior mediates the relationship between Psychological Contract and Employee Performance

The indirect effect evaluation produced a coefficient of 0.185, with a T-statistic of 3.776 (> 1.96) and a P-value of 0.000 (< 0.05), thereby supporting H7. This finding indicates that IWB significantly mediates the relationship between PC and EP. Since PC also demonstrated significant direct relationships with EP (H2) and IWB (H4), the mediation is classified as partial mediation. The total effect of PC on EP comprises both a direct effect ($\beta = 0.416$) and an indirect effect through IWB ($\beta = 0.185$), producing a cumulative effect of 0.601. Notably, this mediation pathway exhibited larger coefficients and T-statistics than the AI–IWB–EP pathway (H6), suggesting that the intermediary role of IWB is comparatively more pronounced in the PC–EP relationship. These results align with Sulistiawan & Andyani (2020) and Wang (2025), who demonstrated that psychological contracts enhance innovative work behavior through work engagement. Thus, organizations should not only fulfill formal contractual obligations but also meet employees' psychological expectations to foster innovation. A psychologically supportive work environment in the hotel industry encourages employees to develop new service ideas, improve service quality, and ultimately enhance performance.

CONCLUSION

This study examined the relationships among Artificial Intelligence (AI), Psychological Contract (PC), Innovative Work Behavior (IWB), and Employee Performance (EP), including the mediating role of IWB among employees of four-star hotels in Yogyakarta. The findings supported all seven hypotheses. AI and PC exhibited positive and statistically significant associations with

EP and IWB, whereas IWB demonstrated a positive and statistically significant association with EP. PC showed the strongest association with IWB ($\beta = 0.526$), and the model accounted for 68.2% of the variance in EP and 44.7% of the variance in IWB. Furthermore, IWB partially mediated both the AI-EP ($\beta = 0.140$) and PC-EP ($\beta = 0.185$) relationships, indicating that AI utilization and PC fulfillment are associated with EP both directly and indirectly through IWB.

These findings contribute to hospitality management research by integrating technological and psychological perspectives through IWB within a single empirical model. Practically, the results indicate the importance of aligning AI utilization with human resource practices that support employees' psychological expectations and innovative behavior. Given the study's cross-sectional design and its focus on employees of four-star hotels in Yogyakarta, the findings should be interpreted as associations rather than causal relationships. Future research should examine the model across different hotel categories and regions, employ longitudinal or mixed-methods designs, and investigate additional factors such as Digital Leadership, Organizational Learning, and Human-AI Collaboration to extend the explanatory scope of the model.

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AUTHOR CONTRIBUTION STATEMENT

Egabetha Amirah Yudhaputri contributed to the conceptual development, research design, methodological framework, data analysis, interpretation of results, and drafting of the initial manuscript. Sarfilianty Anggiani contributed to supervisory oversight, conceptual refinement, validation procedures, and interpretation of outcomes. Salsabila Irawan contributed to data collection, data processing, literature review, and manuscript composition. All authors endorsed the definitive version of the manuscript.

REFERENCES

- Afsar, B., & Badir, Y. (2017). Workplace spirituality, perceived organizational support and innovative work behavior: The mediating effects of person-organization fit. *Journal of Workplace Learning*, 29(2), 95–109. <https://doi.org/10.1108/JWL-11-2015-0086>
- Almheiri, H. M., Ahmad, S. Z., Khalid, K., & Ngah, A. H. (2025). Examining the impact of artificial intelligence capability on dynamic capabilities, organizational creativity and organization performance in public organizations. *Journal of Systems and Information Technology*, 27(1). <https://doi.org/10.1108/JSIT-10-2022-0239>
- Aluko, H. A., Aluko, A., & Ogunjimi, F. (2022). The implications of psychological contract on employee job performance in education service delivery: A study of Ebonyi State University. *Open Journal of Business and Management*, 10(2), 978–999. <https://doi.org/10.4236/ojbm.2022.102053>
- Anantrasirichai, N., & Bull, D. (2022). Artificial intelligence in the creative industries: A review. *Artificial Intelligence Review*, 55(1), 589–656. <https://doi.org/10.1007/s10462-021-10039-7>
- Argyris, C. (1960). *Understanding Organizational Behavior*. Dorsey Press. <https://books.google.com/books?id=uo9qAAAAMAAJ>
- Aryani, R., Widodo, W., & Susila, S. (2024). Model for social intelligence and teachers' innovative work behavior: serial mediation. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2312028>
- Bagis, F., & Yulianeu, A. (2024). Enhancing Employee Performance through AI-Enabled HR Analytics: Exploring the Roles of Job Crafting, Perceived Risk, and Employee Engagement. *Journal of Digitovation and Information System*, 4(1). <https://doi.org/10.54433/jdiis.2024100039>
- Changalima, I. A., & Chuwa, M. P. (2026). Partial Least Squares Structural Equation Modeling (PLS-

- SEM) in business research: A simple guide for novice researchers. *International Journal of Research in Business and Social Science* (2147- 4478), 14(9). <https://doi.org/10.20525/ijrbs.v14i9.4601>
- Chen, D., Esperança, J. P., & Wang, S. (2022). The Impact of Artificial Intelligence on Firm Performance: An Application of the Resource-Based View to e-Commerce Firms. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.884830>
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern Methods for Business Research* (pp. 295–336). Lawrence Erlbaum Associates.
- Dascombe, E. M., Morgan, P. J., Drew, R. J., & Young, M. D. (2026). Meeting Men Where They Listen: Preferences for Podcast-Delivered Mental Health Support. *Mental Illness*, 2026(1). <https://doi.org/10.1155/mij/5510212>
- Domini, B., Dewi, A. S., & Cesna, G. P. (2023). The Effects of Artificial Intelligence (AI) on Company Performance Including the Value of AI-based Business Transformation Initiatives. *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, 5(1). <https://doi.org/10.34306/itsdi.v5i1.606>
- Ekmekcioglu, E. B., & Öner, K. (2024). Servant leadership, innovative work behavior and innovative organizational culture: the mediating role of perceived organizational support. *European Journal of Management and Business Economics*, 33(3). <https://doi.org/10.1108/EJMBE-08-2022-0251>
- Frieman, J., Saucier, D. A., & Miller, S. S. (2022). Multiple Regression and Beyond. In *Principles & Methods of Statistical Analysis*. <https://doi.org/10.4135/9781071878903.n18>
- Guan, X., & Frenkel, S. J. (2017). How HR Practice, Work Engagement and Job Crafting Influence Employee Performance. *Academy of Management Proceedings*, 2017(1), 10547. <https://doi.org/10.5465/AMBPP.2017.10547abstract>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed). Sage Publications.
- Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (7th ed.). Pearson. <https://search.worldcat.org/>
- Hair Jr., J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). SAGE Publications, Inc. <https://www.sagepub.com/shop/buy-a-book/a-primer-on-partial-least-squares-structural-equation-modeling-pls-sem-3-270548>
- Hair, J., & Sabol, M. A. (2025). Overview of Multivariate Data Analysis, An. In *International Encyclopedia of Statistical Science*. https://doi.org/10.1007/978-3-662-69359-9_20
- Hasibuan, R., Arnesih, Anggraini, D., Yona, M., Hisyam, M., & Lubis, U. S. (2026). Human resource management and its impact on employee performance in MSMEs—SLR. In *Frontiers in Sustainability* (Vol. 7). <https://doi.org/10.3389/frsus.2026.1764507>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hidayat, F., Sumantri, S., Rumengan, A. E., Wibisono, C., & Khaddafi, M. (2023). The Effect of Digital Leadership, Information Technology and Digital Competency on Employee Performance in the Digital Era: Mediating Role of Job Satisfaction. *International Journal of Advances in Social Sciences and Humanities*, 2(2), 144–151. <https://doi.org/10.56225/ijassh.v2i2.204>
- Indonesia, K. P. dan E. K. P. dan E. K. R. (2023). *Outlook Pariwisata dan Ekonomi Kreatif Indonesia 2023/2024*. Deputy Bidang Kebijakan Strategis, Kementerian Pariwisata dan Ekonomi Kreatif/Badan Pariwisata dan Ekonomi Kreatif Republik Indonesia. <https://elibrary.kemenpar.go.id/daftar-buku/outlook-pariwsata-dan-ekonomi-kreatif-indonesia-2023-2024>
- Ketchen, D. J. (2013). A Primer on Partial Least Squares Structural Equation Modeling. In *Long Range Planning* (Vol. 46, Numbers 1–2). <https://doi.org/10.1016/j.lrp.2013.01.002>
- Kumar, R. (2014). *Research Methodology* (4th ed.). Sage Publishing.
- Levinson, H., Price, C. R., Munden, K. J., Mandl, H. J., & Solley, C. M. (1962). *Men, Management, and Mental Health*. Harvard University Press.

- <https://doi.org/10.4159/harvard.9780674424746>
- Lichtenthaler, U. (2019). An Intelligence-Based View of Firm Performance: Profiting from Artificial Intelligence. *Journal of Innovation Management*, 7(1), 7–20. https://doi.org/10.24840/2183-0606_007.001_0002
- Li, J., & Dai, L. (2015). A Review of Psychological Contract. *Psychology*, 06(12), 1539–1544. <https://doi.org/10.4236/psych.2015.612150>
- Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). Resilience in the modern career. *Career Development International*, 20(4), 363–383. <https://doi.org/10.1108/CDI-02-2015-0024>
- Manchia, G. C. A., Bal, P. M., & Khapova, S. N. (2026). Unveiling the origins of psychological contract perceptions: a systematic review of 30 years of psychological contract antecedents research. In *Journal of Managerial Psychology* (Vol. 41, Number 2). <https://doi.org/10.1108/JMP-10-2023-0608>
- Maula, M. F., Jarnawi, J., Majid, M. S. A., Ibrahim, M., & Miraza, C. N. (2026). Transformational leadership, organizational support, and employee performance: The mediating role of organizational citizenship behavior in the public sector. In *Social Sciences and Humanities Open* (Vol. 13). <https://doi.org/10.1016/j.ssaho.2026.102872>
- Memon, M. A., Ting, H., Cheah, J.-H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample Size for Survey Research: Review and Recommendations. *Journal of Applied Structural Equation Modeling*, 4(2), i–xx. [https://doi.org/10.47263/JASEM.4\(2\)01](https://doi.org/10.47263/JASEM.4(2)01)
- Mikalef, P., & Gupta, M. (2021). Artificial intelligence capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance. *Information & Management*, 58(3), 103434. <https://doi.org/10.1016/j.im.2021.103434>
- Mismetti, M., Bettinelli, C., & Rovelli, P. (2026). Survey-Based Research for Creativity and Innovation Management: Review and Recommendations. *Creativity and Innovation Management*, 35(2). <https://doi.org/10.1111/caim.70034>
- Oranga, J., Matere, A., & Njurai, E. (2025). The Mixed Methods Research Approach: An Overview. *Postmodernism Problems*, 15(1). <https://doi.org/10.46324/pmp2501084>
- Pei, J., Wang, H., Peng, Q., & Liu, S. (2024). Saving face: Leveraging artificial intelligence-based negative feedback to enhance employee job performance. *Human Resource Management*, 63(5). <https://doi.org/10.1002/hrm.22226>
- Plaskoff, J. (2017). Employee experience: The new human resource management approach. *Strategic HR Review*, 16(3), 136–141. <https://doi.org/10.1108/SHR-12-2016-0108>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). *Partial Least Squares Structural Equation Modeling*. In C. Homburg, M. Klarmann, & A. E. Vomberg (Eds.), *Handbook of Market Research*. Cham: Springer.
- Sekaran, U., & Bougie, R. (2009). Research Methods for Business: A Skill Building Approach (5th Edition). *International Journal of Information Technology and Management - IJITM*.
- Sekaran, U., & Bougie, R. (2017). *Metode Penelitian untuk Bisnis: Pendekatan Pengembangan-Keahlian* (Edisi 6). Salemba Empta.
- Sheikh Elsouk, S. M., Elsubbagh, S., Ayoun, B., & Radwan, A. (2021). The Mediating Role of Psychological Contract Fulfillment in the Relationship Between Organizational Support and Employee Performance. *Psychology and Behavioral Sciences*, 10(1), 25–38. <https://doi.org/10.11648/j.pbs.20211001.14>
- Singh, S., & Dhan, S. A. (2023). A theoretical Review of Psychological Contract. *Social Science and Humanities Journal*, 7(08). <https://doi.org/10.18535/sshj.v7i08.866>
- Sulistiawan, J., & Andyani, D. (2020). Psychological Contracts, Innovative Work Behavior, and Knowledge Sharing Intention: The Role of Work Engagement and Job Resources. *Jurnal Aplikasi Manajemen*, 18(4), 741–753. <https://doi.org/10.21776/ub.jam.2020.018.04.13>
- Thurlings, M., Evers, A. T., & Vermeulen, M. (2015). Toward a Model of Explaining Teachers' Innovative Behavior: A Literature Review. *Review of Educational Research*, 85(3), 430–471. <https://doi.org/10.3102/0034654314557949>
- Tong, S., Jia, N., Luo, X., & Fang, Z. (2021). The Janus face of artificial intelligence feedback: Deployment versus disclosure effects on employee performance. *Strategic Management Journal*, 42(9), 1600–1631. <https://doi.org/10.1002/smj.3322>

- Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: The business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893–1924. <https://doi.org/10.1108/BPMJ-10-2019-0411>
- Wang, Z. (2025). Linking innovative knowledge sharing and employees' innovative behaviour: the mediating role of thriving at work. *Knowledge Management Research and Practice*, 23(1). <https://doi.org/10.1080/14778238.2023.2261411>
- Wijayati, D. T., Rahman, Z., Fahrullah, A., Rahman, M. F. W., Arifah, I. D. C., & Kautsar, A. (2022). A study of artificial intelligence on employee performance and work engagement: The moderating role of change leadership. *International Journal of Manpower*, 43(2), 486–512. <https://doi.org/10.1108/IJM-07-2021-0423>
- Yuan, K. H., Wen, Y., & Tang, J. (2023). Sensitivity Analysis of the Weights of the Composites Under Partial Least-Squares Approach to Structural Equation Modeling. *Structural Equation Modeling*, 30(1). <https://doi.org/10.1080/10705511.2022.2106487>
- Zhao, K., & Ji, W. (2024). The influence of gratitude and personality traits on career resilience and career success among college students. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1340200>