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Extending Technology Acceptance Model in AI-Enabled Recruitment: Perceived Ease of Use and Trust as Mediators of Applicant Attitudes

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Abstract:

The rapid advancement of Artificial Intelligence (AI) has transformed contemporary recruitment practices through the automation of selection processes, including resume screening, recruitment chatbots, and AI-based interviews. Although AI is widely credited with improving recruitment efficiency, applicant acceptance remains a critical concern, primarily because of unresolved issues of trust, transparency, and system usability. Prior studies have largely examined these factors in isolation: some focus on Perceived Ease of Use (PEU) as a usability-driven determinant of technology adoption. While others emphasize Perceived Trust (PT) as dominant predictor of applicant attitudes toward AI-based selection. What remains absent, however, is an integrative model that simultaneously positions PEU and PT as parallel mediators linking applicant's perception of AI use their attitudes toward it. This omission is non-trivial, because PEU and PT capture conceptually distinct mechanisms cognitive effort versus relational confidence that may operate jointly rather than independently in shaping acceptance. The present study directly addresses this gap by specifying and testing such an integrative mediation model. This study examines the effect of Perceived Use of AI in the Hiring Process (PUAHP) on Attitude Toward AI-Enabled Recruitment (ATT), both directly and through the mediating roles of Perceived Ease of Use (PEU) and Perceived Trust (PT). A quantitative explanatory study was conducted using a cross-sectional survey of 184 job applicants in Semarang City who had participated in AI-based recruitment processes within the preceding twelve months. The data were analysed using Structural Equation Modelling–Partial Least Squares (SEM-PLS). The findings shows that PUAHP has a positive and significant influence on ATT, PEU, and PT. Mediation analyses further demonstrate that PEU and PT significantly mediate the relationship between PUAHP and ATT, with PT emerging as the dominant mediator. These results indicate that applicants' trust in AI systems is the principal mechanism shaping favourable attitudes toward AI-enabled recruitment. Theoretically, this study extends the Technology Acceptance Model (TAM) by integrating trust into the analysis of AI-enabled selection. Practically, it suggests that organisations should strengthen the transparency, fairness, and usability of AI systems to strengthen applicant acceptance of AI-enabled recruitment technologies.

Keywords: AI-Enabled Recruitment; Artificial Intelligence; Perceived Ease of Use; Perceived Trust; Technology Acceptance Model

1. Introduction

The rapid development of Artificial Intelligence (AI) has reshaped contemporary organisational practice, particularly in recruitment and personnel selection. Organisations increasingly leverage AI to streamline recruitment processes, thereby reducing time and cost (Sewang et al., 2025). Common applications of AI in recruitment including algorithmic resume screening, video-based interviews, and chatbots for initial candidate communication (Carolina et al., 2025). AI-driven automation has been credited with improving efficiency, the consistency of hiring decisions, and predictive accuracy (Deepa et al., 2024; Moravec et al., 2024). Despite these advantages, the adoption of AI in recruitment has raised concerns regarding algorithmic bias, transparency, and applicant trust. Horodyski (2023) reports that applicants generally perceive AI positively, with time savings most frequently cited as a key advantage. Van Esch et al. (2019) further reported that positive attitudes toward AI-using organisations increase application completion rates. Nevertheless, Hunkenschroer and Luetge (2022) suggest that applicant focused research on AI-enabled recruitment is still thinner than organisational or technical side work, and that much of the available evidence concentrates on single outcomes, such as application completion, rather than on the mechanisms through which AI perceptions shape attitudes. Read this way, the literature still leaves room for studies that test the mediating pathways linking AI perceptions to applicant acceptance. Accordingly, the present study responds to that gap by examining how perceived use of AI in the hiring process relates to applicant attitudes through perceived ease of use and perceived trust.

To understand the acceptance of individuals of a given technology, the Technology Acceptance Model (TAM), originally developed by Davis (1989), remains the most widely adopted theoretical framework. Davis (1989) posits that Perceived Usefulness (PU) and Perceived Ease of Use (PEU) influence Attitude (ATT) prior to shaping actual usage intentions. Subsequent TAM extensions TAM2 (Venkatesh & Davis, 2000) and UTAUT (Venkatesh et al., 2003) progressively marginalised the attitude construct in favour of direct behavioural intention pathways; however, Or's (2024) meta-analysis demonstrated that reintegrating attitude substantially improves explanatory power, particularly in voluntary use contexts such as job applications. Within this theoretical trajectory, AI-enabled recruitment is best understood as a voluntary, high stakes application of technology acceptance, where applicants directly experience AI-mediated selection and therefore form attitudes that matter both theoretically and practically. Building on TAM, Hosain et al. (2025) extended the model by incorporating Perceived Trust (PT) as a mediator in the relationship between Perceived Use of AI in the Hiring Process (PUAHP) and applicant outcomes among 418 job applicants in Bangladesh. However, Hosain et al. (2025) did not include attitude as a dependent variable, despite Davis's (1989) explicit assertion that Attitude is the construct most appropriately suited to capturing the affective and evaluative responses of users toward a technology. Likewise, most prior research has examined PEU and PT as independent factors (Makhdom & Emam, 2025), leaving a notable gap in studies that integrate PUAHP, PEU, and PT to explain ATT within a single, coherent framework.

The novelty of this study lies in the simultaneous examination of three causal pathways within an integrative model: (1) The direct effect of Perceived Use of AI in the Hiring Process (PUAHP) on Attitude Toward AI-Enabled Recruitment (ATT), assessing whether applicants' perceptions of AI in recruitment shape their attitudes; (2) The effect of Perceived Ease of Use (PEU) on ATT, drawing on Davis's (1989) argument that individuals tend to develop more favourable attitudes toward technologies that minimise operational effort; and (3) The effect of Perceived Trust (PT) on ATT, premised on the proposition that applicants' trust in the transparency and fairness of AI systems fosters more positive attitudes toward AI-enabled recruitment. In contrast to Hosain et al. (2025), this study positions ATT as the central outcome variable, in closer alignment with TAM's core proposition that technological perceptions shape attitudes, which in turn determine behaviour. Accordingly, this study seeks to address the identified gap by empirically investigating how PUAHP, PEU, and PT each contribute to the formation of ATT in the context of AI-enabled recruitment. Theoretically, the study extends Davis's (1989) TAM originally developed to explain user acceptance of technology into the underexplored domain of AI-enabled recruitment. Practically, the findings are expected to inform the design of recruitment systems that are not only efficient but also perceived by applicants as easy to use and trustworthy, thereby fostering broader acceptance of AI in personnel selection.

2. Literature Review

Perceived Use of AI in the Hiring Process (PUAHP) and Attitude Toward AI-Enabled Recruitment (ATT)

The implementation of AI in recruitment process from resume screening to video-based interviews has become standard organisational practice (Horodyski, 2023; van Esch et al., 2019; Dadaboyev et al., 2025). Perceived Use of AI in the Hiring Process (PUAHP) refers to applicants' perceptions of the extent to which AI is employed in the recruitment processes they undergo (Hosain et al., 2025). This construct is theoretically significant because

applicants' perceptions of AI deployment in recruitment can shape their responses and attitudes toward the selection process as a whole (van Esch et al., 2020; Horodyski, 2023). Hosain et al. (2025), adapting PUAHP measurement items from Upadhyay and Khandelwal (2018) demonstrated that PUAHP correlated positively with all variables in their model among 418 job applicants in Bangladesh. However, these findings should be read as context-specific rather than broadly generalisable, because the study was conducted in a different institutional and digital-literacy environment from Indonesia's urban labour market. Moreover, the instrument measured PUAHP at a general level, without distinguishing between specific AI modalities such as automated CV screening or video-based AI interviews, which may evoke different applicant responses. Hosain et al. (2025) sample likewise came from Bangladesh, so the two studies are informative but not fully comparable in context, sample, or measurement emphasis. The present study addresses these limitations by replicating and extending the model in an Indonesian urban context, thereby contributing to its cross-cultural validation.

Attitude Toward AI-Enabled Recruitment (ATT) refers to the affective and cognitive evaluation by applicants of the use of AI in recruitment processes. Within the TAM framework, Davis (1989) conceptualised ATT as the construct linking technological perceptions to actual usage intentions. TAM has nonetheless attracted criticism for its limited scope. In high-stakes AI-mediated contexts such as personnel selection, the original model's exclusion of affective and relational constructs most notably trust leaves an important explanatory gap (Hunkenschroer & Luetge, 2022; Du, 2024). That limitation becomes more evident in later extensions: although TAM2 (Venkatesh & Davis, 2000) and the Unified Theory of Acceptance and Use of Technology (UTAUT; Venkatesh et al., 2003) moved away from attitude, Or (2024) shows that reincorporating attitude improves the model's explanatory power, especially in voluntary-use contexts. In the recruitment domain, van Esch et al. (2019) further demonstrate that applicants' attitudes toward organisations employing AI significantly influence application completion, suggesting that TAM's original focus on usefulness and ease of use is not sufficient on its own for this setting. Zhang and Yencha (2022) reported that public attitudes toward algorithmic hiring remain largely negative, with individual differences observed across gender, educational attainment, and income. Calluso and Devetag (2025) found that TAM plays a significant role in shaping willingness to use AI-assisted hiring and mediates the relationship between conscientiousness and the willingness to engage with AI-enabled recruitment. Verheijen et al. (2025), in a qualitative study, similarly found that applicants preferred hybrid AI–human recruitment models, with transparency and human oversight identified as critical determinants of acceptance. It follows logically that when applicants perceive AI as a reasonable and supportive element of the selection process, their evaluative attitudes toward AI-enabled recruitment likewise improve. Horodyski (2023) observed that applicants who experienced AI-based recruitment tended to perceive it favourably, particularly because of the temporal efficiency it affords. Rukadikar and Khandelwal (2025), in a study of 388 Indian graduates, confirmed that trust, usefulness, and AI fairness positively influenced applicants' intentions to engage with AI-enabled recruitment tools.

H1: PUAHP has a positive influence on ATT.

Perceived Use of AI in the Hiring Process (PUAHP), Perceived Ease of Use (PEU), and Perceived Trust (PT)

Perceived Ease of Use (PEU) is a foundational TAM construct, defined by Davis (1989) as the degree to which an individual believes that using a particular system will be free of effort. This definition rests on the premise that effort constitutes a finite cognitive resource that individuals must allocate across competing responsibilities (Davis, 1989; Radner & Rothschild, 1975). All else equal, , technologies perceived as easier to use are more readily adopted (Davis, 1989; Dhingra & Mudgal, 2019; Bazine, 2025). In AI-enabled recruitment, the more clearly applicants recognise AI as functionally deployed within the process, the more legible—and therefore the easier to use—the system become. Consistently, Hosain et al. (2025) repots a positive correlation between PUAHP and PEU among job applicants in Bangladesh. Horodyski (2023) similarly observed that although AI-based tools may initially appear complex, this impression tends to diminish as applicants become familiar with the application process, such that those who recognise AI deployment generally find the process easier to navigate. Almeida et al. (2025), in a study conducted in Portugal, also found that interactional experience with AI recruitment tools enhanced recruiters' perceptions of ease of use.

Perceived Trust (PT), within the context of technology acceptance, refers to users' positive beliefs concerning the reliability, fairness, and integrity of a technological system (Mayer et al., 1995; Hosain et al., 2025). Trust comprises three principal dimensions: integrity, ability, and benevolence (Palvia, 2009). Although the construct of trust was not included in the original TAM (Davis, 1989), recent research has consistently identified it as a critical factor in the acceptance of AI technologies (Mansori, 2025; Du, 2024; Daly et al., 2025). When

applicants perceive AI as a legitimate component capable of enhancing the quality of the selection process, they are more inclined to develop trust in the system. Hosain et al. (2025) demonstrated a positive correlation between PUAHP and PT. Xiong and Kim (2025) showed that the inclusion of AI transparency information in job advertisements increased applicants' organisational trust. Du's (2024) systematic review of 43 articles further suggested that, despite ongoing concerns regarding bias and transparency, applicants who perceive AI to be deployed functionally tend to develop higher levels of trust.

H2a: PUAHP has a positive influence on PEU.
H2b: PUAHP has a positive influence on PT.

Perceived Ease of Use (PEU), Perceived Trust (PT), and Attitude Toward AI-Enabled Recruitment (ATT)

The relationship between PEU and attitude constitutes a core proposition of TAM. Davis (1989) contended that individuals are more inclined to develop favourable attitudes toward technologies they perceive as easy to use, as such ease reduces the cognitive effort required for operation. Or's (2024) meta-analysis confirmed that PEU significantly influences ATT, which in turn shapes intention to use. In the recruitment context, applicants who perceive AI-enabled systems as easy to use are likely to develop more favourable attitudes toward AI-enabled recruitment, as reduced ease of use eases both cognitive load and application-related stress. Almeida et al. (2025) found that PEU influenced recruiters' attitudes toward AI tools in selection. Bhatt and Jhunjhunwala (2025) reported similar findings from the applicant perspective, identifying ease of use as a key determinant of favourable attitudes toward AI-based recruitment systems. Shao et al. (2024), in a national survey of 1,252 respondents in the United States, likewise demonstrated that technological factors, including PEU, influenced user attitudes toward AI technologies. Fatein (2025), in a PLS-SEM study of 320 HR professionals in Egyptian start-ups, found that PEU strongly influenced Attitude Toward Use (ATU) in the context of AI adoption for recruitment.

Trust constitutes a parallel determinant of attitudes. Users who perceive an AI system as reliable, fair, and transparent are more inclined to develop favourable attitudes toward the technology (Mansori, 2025; Du, 2024; Daly et al., 2025). Within the recruitment context, Xiong and Kim (2025) demonstrated that AI transparency enhances both positive attitudes and organisational trust among applicants. Skarzyńska and Beyer (2025), employing a modified TAM, found that trust significantly influenced both attitude and implementation intention regarding AI adoption. Daly et al. (2025) further argued that attitudes toward AI are inherently dynamic, with trust functioning as a key mechanism in transforming negative or instrumental attitudes into positive ones as user experience accumulates. Yadav and Satsangi (2025) reported that, although 81% of respondents were aware of AI recruitment tools, levels of trust remained moderate, and 85% continued to prefer human involvement—evidence that trust serves as a decisive differentiator between favourable and unfavourable attitudes toward AI-enabled recruitment.

H3a: PEU has a positive influence on ATT.
H3b: PT has a positive influence on ATT.

The Mediating Roles of PEU and PT in the Relationship Between PUAHP and ATT

Beyond their direct effects, PEU and PT are theorised to mediate the relationship between PUAHP and ATT. TAM holds that technological perceptions translate into attitudes through cognitive evaluations of ease of use and usefulness (Davis, 1989); accordingly, applicants' perceptions of AI deployment may shape attitudes not only directly but also indirectly, by rendering the selection process more legible and thus easier to navigate. Hosain et al. (2025) report partial mediation by PEU between PUAHP and outcome variables; Geddam et al. (2024) document that PU and PEU influence Behavioural Intention to Use both directly and indirectly via Attitude Toward Use; and Almeida et al. (2025) identify an attitude-mediated indirect effect of PEU on intention to use AI in recruitment.

PT is likewise positioned as a mediator. When AI is perceived as functionally and transparently deployed, applicants are more likely to trust the system, and this trust in turn fosters more favourable attitudes. Hosain et al. (2025) demonstrated that PT partially mediated the relationship between PUAHP and dependent variables in their model. Daly et al. (2025) further argued that trust serves as a pivotal mechanism in transforming attitudes toward AI shifting instrumental attitudes that initially demand evidence into more favourable orientations as users develop trust through experience. Qureshi and Saoud (2025) trust as a significant mediator between technological perceptions and AI adoption intentions, and Rukadikar and Khandelwal (2025) show that engagement intention mediates the relationship between applicants' AI perceptions and their actual engagement with AI recruitment tools. Considered jointly, the evidence supports the proposition that PEU and PT operate as complementary mediating mechanisms linking PUAHP to ATT.

H4a: PEU mediates the relationship between PUAHP and ATT.

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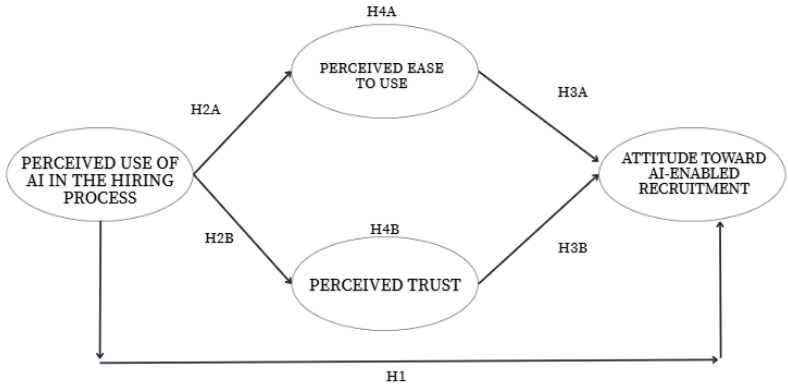
H4b: PT mediates the relationship between PUAHP and ATT.

In sum, the preceding discussion establishes a coherent theoretical chain linking PUAHP, PEU, PT, and ATT within the TAM tradition. PUAHP is proposed to shape ATT both directly and indirectly through PEU and PT, while PEU and PT are each expected to strengthen ATT by lowering perceived effort and increasing confidence in the recruitment system. Taken together, these relationships suggest that PEU and PT operate as complementary mediators that help explain how perceptions of AI deployment in recruitment are translated into applicant attitudes. In this sense, the model advances TAM by adapting it to AI-enabled recruitment and by specifying the key pathways through which technology perceptions become evaluative responses. The conceptual framework underpinning this study is presented in Figure 1

Figure 1. Conceptual Framework



3. Method

This study adopted a quantitative explanatory approach designed to test the causal relationships between the independent variable (Perceived Use of AI in the Hiring Process / PUAHP), the dependent variable (Attitude Toward AI-Enabled Recruitment / ATT), and the mediating variables (Perceived Ease of Use / PEU and Perceived Trust / PT). A quantitative approach is not merely compatible with these objectives but is optimal relative to the alternatives. A qualitative design, although useful for exploring perceptions and generating hypotheses, is not well suited to testing mediation pathways among latent variables. Likewise, a mixed-methods design, while potentially richer in scope, would require substantially greater resources without materially improving the precision of the hypothesised structural model. Given that the constructs of interest (PUAHP, PEU, PT, ATT) are well operationalised in prior literature and the hypotheses are derived deductively from TAM, a quantitative survey-based design represents the most efficient and theoretically appropriate choice. The explanatory approach was selected because the study focused on testing hypotheses and explaining empirical relationships among statistically measurable variables (Creswell, 2012). Data were collected through a cross-sectional survey, enabling the simultaneous analysis of multiple relationships without intervention an approach well suited to perception-based behavioural research. A cross-sectional design does, however, carry an important limitation: because all data are collected at a single time point, the design cannot establish temporal precedence among variables, meaning that the path coefficients in the structural model should be interpreted as covariation patterns rather than experimentally verified causal sequences. This limitation also weakens claims about the directionality of the PUAHP → PEU and PUAHP → PT paths, which, although theoretically motivated, could in principle operate in reverse. Readers should therefore treat the path coefficients as estimates of theoretically specified directional relationships, not as proof of strict causal priority (Hanson et al., 2005).

The target population consisted of job applicants in Semarang City, Indonesia, who had participated in recruitment processes involving AI. Because the precise population size could not be determined, purposive (non-probability) sampling was used. Eligible respondents were those who: (1) were at least 18 years of age; (2) had applied for employment within the preceding 12 months; and (3) had encountered at least one AI-based selection component—automated CV screening, a recruitment chatbot, or an AI-mediated video interview. A total of 184

respondents participated in the study, satisfying the minimum sample size requirement for SEM-PLS analysis of 5–10 times the number of indicators (Hair et al., 2019). Data were collected through a structured online questionnaire distributed via social media platforms and job-seeker forums.

The research instrument employed a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire consisted of statement items adapted from established prior studies. The Perceived Use of AI in the Hiring Process (PUAHP) construct was adapted from Hosain et al. (2025), itself developed from Upadhyay and Khandelwal (2018); a sample item read: "Artificial Intelligence (AI) is a gift to the advancement of knowledge in the modern era." The Perceived Ease of Use (PEU) construct was adapted from Davis (1989) and contextualised to AI-enabled recruitment; a sample item read: "I prefer ease of use when searching for and applying to jobs." The Perceived Trust (PT) construct was adapted from Hosain et al. (2025), drawing on the trust dimensions of Mayer et al. (1995); a sample item read: "I believe that the use of Artificial Intelligence (AI) in recruitment can be conducted objectively and fairly." Finally, the Attitude Toward AI-Enabled Recruitment (ATT) construct, adapted from Davis (1989) and van Esch et al. (2019), measured applicants' affective and cognitive evaluations of AI in recruitment, with a sample item reading: "Using Artificial Intelligence (AI) is a bad/good idea."

Data were analysed using Structural Equation Modelling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4.0 software. SEM-PLS was selected for its capacity to estimate complex structural models involving latent variables and its suitability for exploratory and predictive research (Hair et al., 2019). The analysis proceeded in two main stages. The first stage involved the assessment of the measurement model (Outer Model), encompassing convergent validity through Average Variance Extracted (AVE ≥ 0.50), discriminant validity via the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT < 0.90), and reliability through Composite Reliability (CR ≥ 0.70) and Cronbach's alpha (α ≥ 0.60). The second stage involved the assessment of the structural model (Inner Model), including the coefficient of determination (R^2), effect size (f^2), and path significance through bootstrapping with 5,000 subsamples at a 5% significance level. Mediation effects of PEU and PT in the PUAHP–ATT relationship were assessed using the specific indirect effects procedure within bootstrapping.

4. Findings and discussion

Respondent Characteristics

The 184 respondents were predominantly young adults: 67% were aged 18–25, 25% were aged 26–35, and 8% were above 35. This profile is well aligned with the study's focus on applicant perceptions, as the majority of respondents are at the early-career or active job-search stage. Female respondents (59%) slightly outnumbered males (41%). The sample drew most heavily from the creative and marketing sectors (25%), with healthcare contributing the smallest share (13%). Geographically, respondents were distributed across all districts of Semarang City, with concentrations in Gunungpati (22%) and Tembalang (13%) both major higher-education hubs, consistent with the demographic skew toward younger applicants.

Outer Model

Convergent Validity

The results of the convergent validity test indicate that all indicators across the four constructs satisfied the prescribed criteria. The outer loading values for all retained indicators exceeded the 0.70 threshold, ranging from 0.725 to 0.836. PUAHP4 exhibited the highest loading on Perceived Use of AI in the Hiring Process (0.822), PEU4 on Perceived Ease of Use (0.836), PT5 on Perceived Trust (0.829), and ATT2 on Attitude Toward AI-Enabled Recruitment (0.820). Furthermore, the Average Variance Extracted (AVE) values for all constructs exceeded the 0.50 threshold: PUAHP (0.582), PEU (0.621), PT (0.646), and ATT (0.622). These results confirm that each construct accounts for more than 50% of the variance in its indicators, thereby establishing convergent validity (Hair et al., 2019).

Table 1. Convergent Validity Tes

Variables	Indicators	*Outer Loading*	AVE	Results

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Perceived Use of AI in the Hiring Process	PUAHP1	0,725	0,582	Valid
	PUAHP2	0,730		Valid
	PUAHP3	0,779		Valid
	PUAHP4	0,822		Valid
	PUAHP7	0,755		Valid
Perceived Ease of Use	PEU1	0,738	0,621	Valid
	PEU3	0,815		Valid
	PEU4	0,836		Valid
	PEU5	0,798		Valid
	PEU6	0,750		Valid
Perceived Trust	PT1	0,806	0,646	Valid
	PT3	0,781		Valid
	PT4	0,797		Valid
	PT5	0,829		Valid
Attitude Toward AI-Enabled Recruitment	ATT1	0,794	0,622	Valid
	ATT2	0,820		Valid
	ATT3	0,779		Valid
	ATT4	0,760		Valid

Note: The following items were eliminated owing to factor loadings below the 0.70 threshold: **PUAHP5** ("AI can free recruitment professionals from manual, repetitive tasks such as CV sorting, allowing them to focus on more important tasks such as interviewing candidates", loading = 0.615); **PUAHP6** ("When properly implemented, AI-based recruitment can be free from bias", loading = 0.666); **PEU2** ("I prefer not to apply through websites that are difficult to access", loading = 0.663); **PT2** ("The use of AI in recruitment is highly effective", loading = 0.335); and **PT6** ("AI can reduce the complexity required in the recruitment process", loading = 0.531)

Source: Primary data processed (2026).

Discriminant Validity

Heterotrait–Monotrait (HTMT) Ratio

The HTMT analysis indicates that all inter-construct values fell below the 0.85 threshold, with the highest ratio of 0.754 observed between Perceived Trust and Attitude Toward AI-Enabled Recruitment, and the lowest ratio of 0.555 between Perceived Ease of Use and Perceived Use of AI in the Hiring Process. These results confirm that all four constructs exhibit satisfactory discriminant validity, indicating that each is conceptually and empirically distinct and that no substantive construct overlap exists.

Table 2. Discriminant Validity — Heterotrait–Monotrait (HTMT) Ratio.

Variables	Perceived Use of AI in the Hiring Process	Attitude Toward AI-Enabled Recruitment	Perceived Ease of Use	Perceived Trust

Perceived Use of AI in the Hiring Process				
Attitude Toward AI-Enabled Recruitment	0.637			
Perceived Ease of Use	0,555	0,662		
Perceived Trust	0,622	0,754	0,614	

Source: Primary data processed (2026)

Fornell-Larcker Criterion

The Fornell–Larcker analysis demonstrates that the square root of the AVE for each construct exceeds its correlations with other constructs. The square-root AVE values were 0.763 for PUAHP, 0.789 for ATT, 0.788 for PEU, and 0.804 for PT—all of which exceed the inter-construct correlations (which ranged from 0.475 to 0.610). These results affirm that each construct is empirically distinct and does not measure overlapping phenomena, thereby confirming discriminant validity.

Table 3. Discriminant Validity — Fornell–Larcker Criterion.

Variables	Perceived Use of AI in the Hiring Process	Attitude Toward AI-Enabled Recruitment	Perceived Ease of Use	Perceived Trust
Perceived Use of AI in the Hiring Process	0,763			
Attitude Toward AI-Enabled Recruitment	0,523	0,789		
Perceived Ease of Use	0,475	0,557	0,788	
Perceived Trust	0,512	0,610	0,522	0,804

Source: Primary data processed (2026)

Reliability

All constructs satisfied the prescribed reliability criteria. Cronbach's alpha values ranged from 0.797 to 0.848, Composite Reliability (rho_a) values from 0.797 to 0.854, and Composite Reliability (rho_c) values from 0.868 to 0.891. All values exceed the recommended thresholds ($\alpha \geq 0.60$; $CR \geq 0.70$), indicating that the instruments are reliable and exhibit internal consistency in measuring the intended constructs.

Table 4. Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Perceived Ease of Use	0.848	0.854	0.891

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Perceived Use of AI in the Hiring Process	0.820	0.820	0.874
Perceived Trust	0.817	0.820	0.879
Attitude Toward AI-Enabled Recruitment	0.797	0.797	0.868

Source: Primary data processed (2026).

Inner Model

***Effect Size* (F²)**

Following Cohen's (1988) criteria, f² values are interpreted as follows: small (0.02 ≤ f² < 0.15), medium (0.15 ≤ f² < 0.35), and large (f² ≥ 0.35)

Table 5. Effect Size (F²)

	Perceived Use of AI in the Hiring Process	Attitude Toward AI-Enabled Recruitment	Perceived Ease of Use	Perceived Trust
Perceived Use of AI in the Hiring Process		0.058	0.291	0.356
Attitude Toward AI-Enabled Recruitment				
Perceived Ease of Use		0.093		
Perceived Trust		0.161		

Source: Primary data processed (2026)

The PUAHP → PT path exhibited the largest effect size (f² = 0.356), followed by PUAHP → PEU (f² = 0.291), confirming that PUAHP is more effective in shaping trust and perceived ease of use than in directly forming attitudes. This pattern is consistent with the TAM proposition that technological perceptions operate primarily through mediating mechanisms before shaping attitudes.

***R-Square* (R²)**

In accordance with Hair et al.'s (2019) criteria for SEM-PLS, R² values are classified as weak (R² < 0.25), moderate (0.25 ≤ R² < 0.50), and strong (R² ≥ 0.50).

Table 6. R-Square (R²)

	R-square	R-square adjusted
Attitude Toward AI-Enabled Recruitment	0.481	0.472
Perceived Ease of Use	0.225	0.221
Perceived Trust	0.263	0.259

Source: Primary data processed (2026).

ATT recorded the highest R² value (0.481), indicating that the structural model accounts satisfactorily for the formation of applicant attitudes. The lower R² values for PEU (0.225) and PT (0.263) fall in the weak to moderate range according to Hair et al. (2019) classification criteria (weak: R² < 0.25; moderate: 0.25 ≤ R² < 0.50), indicating that PUAHP alone does not fully account for variability in these constructs and that additional predictors beyond PUAHP such as prior AI experience, digital literacy, or industry-specific norms may contribute to applicants' perceptions of ease of use and trust.

Hypothesis Testing

Based on the p-values obtained, all five direct-path hypotheses were supported, with no hypotheses rejected.

Table 7. Hypothesis Testing Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
PUAHP → ATT	0.210	0.215	0.088	2.377	0.018

PUAHP → PEU	0.475	0.485	0.068	7.017	0.000
PUAHP → PT	0.512	0.517	0.067	7.618	0.000
PEU → ATT	0.269	0.271	0.072	3.706	0.000
PT → ATT	0.362	0.364	0.103	3.530	0.000

Notes: PUAHP = *Perceived Use of AI in the Hiring Process*; PEU = *Perceived Ease of Use*; PT = *Perceived Trust*; ATT = *Attitude Toward AI-Enabled Recruitment*;

Source: Primary data processed (2026)

The PUAHP → ATT path yielded a p-value of 0.018 (< 0.05) and a t-statistic of 2.377 (> 1.96), thereby supporting H1. Perceived Use of AI in the Hiring Process (PUAHP) exerts a positive effect on Attitude Toward AI-Enabled Recruitment (ATT), but the small direct effect size ($f^2 = 0.058$) suggests that PUAHP is not, by itself, the main source of applicant acceptance. Instead, PUAHP appears to work as a cue that makes the AI presence in recruitment more salient and therefore more evaluable. This gives the model a more specific theoretical meaning than a simple direct-effect interpretation; in this AI-enabled recruitment setting, awareness of AI functions less as a standalone attitudinal driver and more as a trigger that activates the mediating appraisal processes through which applicants form their attitudes. In that sense, the present finding advances TAM by showing that, in high-stakes recruitment contexts, perceived AI deployment is necessary but not sufficient for favourable attitudes, because acceptance is ultimately filtered through the quality of the applicant's encounter with the system.

The PUAHP → PEU path yielded a p-value of 0.000 (< 0.05) and a t-statistic of 7.017 (> 1.96), thereby supporting H2a. Perceived Use of AI in the Hiring Process (PUAHP) demonstrates a positive and significant effect on Perceived Ease of Use (PEU), with a path coefficient of 0.475. The high t-statistic (7.017) indicates a very strong level of significance, accompanied by a medium effect size ($f^2 = 0.291$). This finding affirms that the more applicants recognise the substantive deployment of AI in recruitment, the more they perceive the system as easy to use. The result is consistent with Hosain et al. (2025), who reported a positive correlation between PUAHP and PEU among job applicants in Bangladesh, and is further supported by Almeida et al. (2025), who found that interactional experience with AI recruitment tools enhanced perceptions of ease of use.

The PUAHP → PT path yielded a p-value of 0.000 (< 0.05) and a t-statistic of 7.618 (> 1.96), thereby supporting H2b. This path exhibited both the highest t-statistic and the largest path coefficient in the entire model (path coefficient = 0.512; $f^2 = 0.356$). Perceived Use of AI in the Hiring Process (PUAHP) is shown to exert a positive and significant effect on Perceived Trust (PT), indicating that as applicants' perceptions of AI deployment grow stronger, their trust in AI-based recruitment systems is directly enhanced. This finding reinforces the arguments of Hosain et al. (2025) and Du (2024) that transparency and the perceived functionality of AI form the cornerstone of trust formation. In the context of AI-enabled recruitment, when applicants recognise that AI is being deployed in a substantive and structured manner during the selection process, they tend to perceive the system as reliable and trustworthy, with trust developing organically from this perception of use.

The PEU → ATT path yielded a p-value of 0.000 (< 0.05) and a t-statistic of 3.706 (> 1.96), thereby supporting H3a. Perceived Ease of Use (PEU) is shown to exert a positive and significant effect on Attitude Toward AI-Enabled Recruitment (ATT), with a path coefficient of 0.269. This effect confirms the core proposition of the Technology Acceptance Model (TAM; Davis, 1989), which holds that ease of use reduces users' cognitive burden, thereby fostering more favourable attitudes toward the technology. In AI-enabled recruitment, applicants who perceive AI systems as easy to use are more likely to develop favourable attitudes, as the application process is unimpeded by significant technical barriers. This finding is consistent with Or's (2024) meta-analysis confirming the role of PEU in shaping ATT, and is further supported by Almeida et al. (2025) and Fatein (2025), who reported strong effects of PEU on attitudes toward the use of AI tools in recruitment.

The PT → ATT path yielded a p-value of 0.000 (< 0.05) and a t-statistic of 3.530 (> 1.96), thereby supporting H3b. Perceived Trust (PT) is shown to exert a positive and significant effect on Attitude Toward AI-Enabled Recruitment (ATT), with a path coefficient of 0.362 and a medium effect size ($f^2 = 0.161$). The larger path coefficient of PT on ATT (0.362) relative to that of PEU on ATT (0.269) indicates that trust constitutes a more dominant mechanism in shaping applicants' favourable attitudes toward AI-enabled recruitment. Users who trust the reliability, fairness, and transparency of AI systems tend to develop more favourable attitudes toward the technology (Mansori, 2025; Du, 2024; Daly et al., 2025). In the recruitment domain, Xiong and Kim (2025) demonstrated that AI transparency enhances both favourable attitudes and organisational trust, while Skarzyńska and Beyer (2025) found that trust significantly influenced attitude in AI adoption using a modified TAM framework.

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Mediation Analysis (Indirect Effects)

Specific indirect effects testing reveals that both mediation paths are statistically significant. The PUAHP → PT → ATT path produced an indirect path coefficient of 0.186 (t-statistic = 3.359; p-value = 0.001), while the PUAHP → PEU → ATT path produced an indirect path coefficient of 0.127 (t-statistic = 3.387; p-value = 0.001).

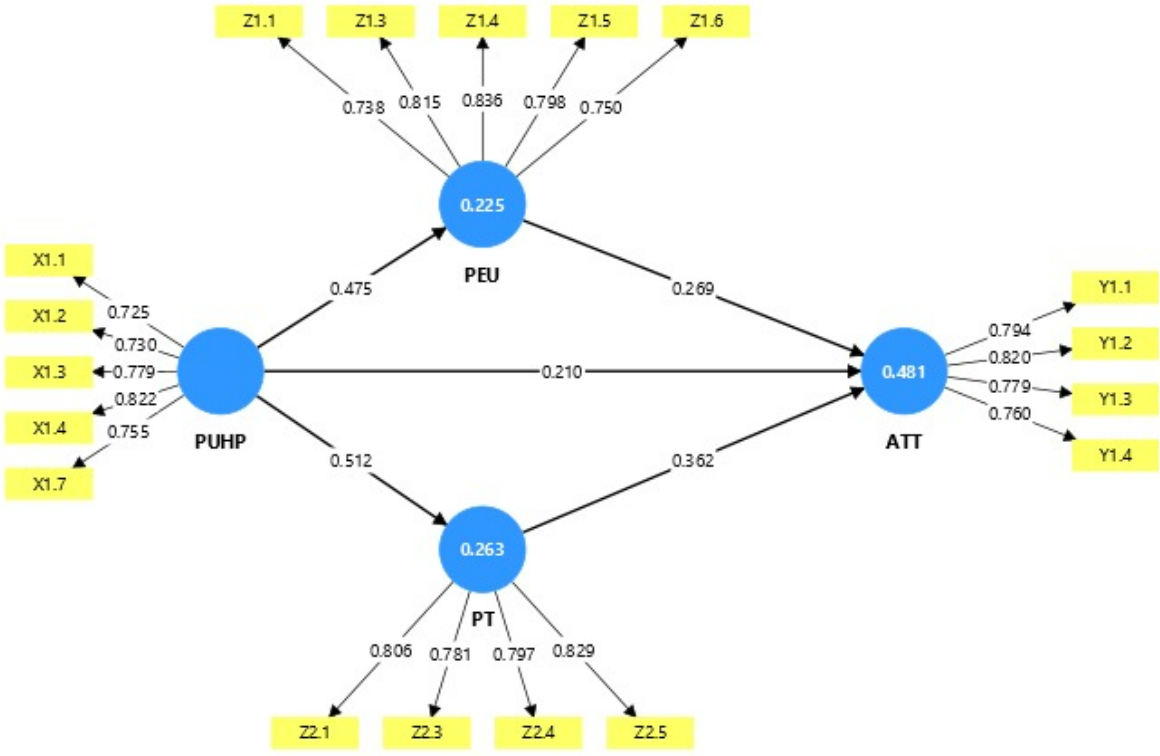
Table 8. Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Statistics (|O/STDEV|)	P values
PUAHP → PT → ATT	0.186	0.187	0.055	3.359	0.001
PUAHP → PEU → ATT	0.127	0.130	0.038	3.387	0.001

Source: Primary data (2026)

These results confirm that both Perceived Trust and Perceived Ease of Use function as partial mediators in the relationship between PUAHP and ATT, thereby supporting H4a and H4b. A comparison of the two pathways reveals that the mediation through PT (0.186) is stronger than that through PEU (0.127). This finding indicates that trust constitutes a more dominant mechanism than ease of use in explaining how perceptions of AI utility translate into favourable attitudes toward AI-enabled recruitment.

Figure 2. Results of the Structural Model Analysis



Source: SmartPLS output

5. Conclusion and Recommendation

This study set out to address three objectives: (1) to examine the direct effect of PUAHP on ATT; (2) to test the mediating roles of PEU and PT in the PUAHP→ ATT relationship; and (3) to extend TAM by integrating both PEU and PT as simultaneous mediators in the context of AI-enabled recruitment. All three objectives were addressed by the SEM-PLS analysis of 184 job applicants in Semarang City. Taken together, the findings do more than confirm the hypothesised paths; they show that the model's explanatory value lies not simply in whether AI is perceived to

be present, but in how that presence is processed by applicants. The stronger indirect effect through trust than through ease of use suggests that, in high-stakes AI-mediated contexts such as personnel selection, applicants evaluate technology primarily through relational and ethical considerations before functional convenience. This shifts the theoretical emphasis of TAM in AI recruitment: trust emerges as the more determining mechanism through which perceptions of AI utility are translated into applicant attitudes, while ease of use remains important but secondary.

Conceptually, the study makes three contributions to theory, each corresponding to one of the stated objectives. First, it addresses the objective of examining the direct effect of PUAHP on ATT by showing that perceived AI deployment is positively associated with applicant attitudes, although the direct effect is modest. Second, it addresses the objective of testing the mediating roles of PEU and PT by demonstrating that both variables transmit the effect of PUAHP to ATT, with trust operating more strongly than ease of use. Third, it addresses the objective of extending TAM by showing that trust, a construct absent from the original model proposed by Davis (1989), is central in explaining applicant responses in AI-enabled recruitment. Taken together, these findings indicate that the model does not simply replicate TAM in a new setting; it refines TAM by identifying which pathways are most consequential in a high-stakes recruitment context. Practically, organisations adopting AI in recruitment are encouraged to actively communicate the benefits and transparency of AI systems to applicants for instance, by clarifying assessment criteria and disclosing human oversight mechanisms to foster the trust that underlies favourable attitudes. The design of AI-based recruitment interfaces must likewise prioritise ease of use to prevent technological barriers among applicants less familiar with the technology. This study is limited by the absence of moderating variables such as prior technological experience and digital literacy, as well as by its focus on a specific population and industrial context, which may restrict the generalisability of the findings.

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