Unveiling artificial intelligence (AI)-recruitment processes in HRM practices on job applicants' satisfaction

Zhe Wang
School of Management, Universiti Sains Malaysia, Malaysia
Email: wangzhe0709@gmail.com

Lilis Surienty*
School of Management, Universiti Sains Malaysia, Malaysia
Email: lilis@usm.my

* Corresponding Author

Abstract

Purpose: Artificial intelligence (AI) technology is widely accepted and used worldwide in management processes. AI plays an important role in HRM, especially in recruitment. For instance, AI identifies accurate descriptions for a job not only to match the expectations of the employers but also to convey the information to prospective applicants clearly. Limited studies have explored applicants' perceptions of AI recruitment processes and their satisfaction. Thus, this study investigates the connection between the perception of AI-recruitment and applicant satisfaction.

Design/methodology/approach: Data was gathered through a survey from 137 Chinese university students in their final year, all of whom are preparing to enter the workforce.

Findings: There is a positive relationship between the perception of AI-recruitment, emotional intelligence (EI), and applicants' satisfaction. Additionally, EI did not moderate the relationship between the perception of AI-recruitment and applicants' satisfaction.

Research limitations/implications: Firstly, there were limited reference measurements. Secondly, this study only focused on recruitment practices. Finally, the data was collected using purposive sampling among final-year Chinese university students in China. Future studies should have diverse samples and broader HRM exploration.

Practical implications: Our findings revealed that organizations' AI-recruitment platforms must address the users' experience. The pleasant experience will attract high-quality applicants and benefit the organizational growth.

Originality/value: This study adds to the literature on applying AI techniques in HRM practices. Currently, there are limited studies from the applicant's perspective, and incorporating EI as an influencing factor, this study will fill this gap.

Keywords: AI-recruitment, Applicants' satisfaction, Emotional intelligence (EI), HRM practices.

Introduction

In the contemporary globalized landscape, conventional business paradigms are facing formidable challenges. Given the substantial diminishment of geographical barriers due to technological advancements, local enterprises are no longer the sole competitors. Consequently, it is imperative for organizations to maintain a consistent and effective global competitive stance (Erixon, 2018). Organizations need to actively embrace and incorporate the

latest technological advancements to stay competitive and resilient amid rapidly evolving times. Recognizing the pivotal role of human capital in this context, it becomes paramount for every organization to harness and optimize the expertise and knowledge within its workforce. Consequently, the acquisition and retention of employees through recruitment processes have assumed heightened significance in the contemporary landscape (Pasban & Nojedeh, 2016).

While traditional recruitment focuses on identifying and hiring the right talent, this study focuses on applicant satisfaction, which is often overlooked. Applicant satisfaction directly influences an organization's reputation, candidate experience, and, ultimately, its ability to attract top talent in the future (Stoilkovska et al., 2015). By understanding and improving applicant satisfaction, Organizations can improve their recruitment process to be more positive and effective.

Moreover, the new technology - AI- is increasingly used in HRM management to enhance recruitment procedures. It helps conduct in-depth analyses of applicant data, streamlining the recruitment process and improving the overall candidate experience (Vardarlier & Zafer, 2020). This paper aims to justify the focus on applicant satisfaction by demonstrating its significant impact on the overall success and efficiency of the recruitment process.

Prior to the integration of AI-recruitment methods, organizations encountered a multitude of pressing challenges during the recruitment season, necessitating immediate attention. These challenges encompassed the imperative to identify the most suitable candidates while concurrently managing recruitment costs. In the HRM department, recruiters were required to sustain unwavering commitment and engagement with chosen talents throughout the recruitment process, extending their involvement until the finalization of the onboarding phase. In the year 2018, there was a widespread embrace of AI tools by recruiters (Upadhyay & Khandelwal, 2018). The adoption of AI within recruitment processes aimed at delegating traditionally human-performed recruitment tasks to AI systems, thereby facilitating process streamlining (Geetha & Reddy, 2018). Nevertheless, to realize this objective, engaging in further discourse concerning AI recruitment is essential, spanning its adoption in the recruitment process, resultant outcomes, and the satisfaction of position applicants. Further investigation is necessary to explore the perceptions of AI-adopted recruitment processes and assess job applicants' satisfaction levels during these processes (Horodyski, 2023). As posited by Carmeli and others (2009), EI has a considerable impact on job performance and individual satisfaction levels. Given the inherent challenges and stressors that characterize contemporary workplaces, as highlighted by Iskamto (2021), it becomes incumbent upon employers to accord priority to the selection of candidates who possess a high level of EI, especially for roles that entail significant interpersonal interactions. Consequently, the present study incorporates EI as a moderating variable with the aim of aiding organizations in gaining a deeper understanding of the expectations and prerequisites articulated by prospective applicants within the context of the AI-recruitment process. This strategic inclusion of EI within the research framework empowers organizations to acquire insights critical for enhancing their AI-recruitment procedures.

This study aims to achieve the following objectives: (1) to investigate the impact of the perception of AI-recruitment processes on the satisfaction of applicants; (2) to find the connection between EI and the satisfaction of job applicants; and (3) to determine if EI moderates the relationship between perceptions of AI recruitment and applicant satisfaction. In subsequent sections of the present study, delve into a deep review of the previous studies about AI recruitment within HRM practices. In the methodology section, the research approach and methods employed are delineated in detail. The ensuing section of this paper presents the findings of the study, while the subsequent discussion section offers a critical analysis and interpretation of these results. In the section addressing limitations, the study's constraints and

boundaries are candidly addressed, and the concluding section provides a summary of the study's outcomes along with pertinent recommendations.

Literature Review

This section plays a pivotal role in contextualizing our research by reviewing existing literature on recruitment, AI-recruitment, applicants' satisfaction, EI, and relevant theories. This exploration aids in understanding AI-recruitment and its potential relationship with various variables.

Recruitment Processes in HRM Practices

Recruitment is identifying suitable candidates to form a pool of applicants for a company's vacant job positions (Stoilkovska et al., 2015). Attracting and selecting the best candidates for employment is crucial for organizations, and the recruitment processes are the key to achieving this. According to TP and G van (2014), the traditional recruiting process includes job openings, conducting job analysis, performing job evaluation, drafting job descriptions, outlining person specifications, attracting applicants, screening, and final acceptance. An organization's effectiveness in recruitment strategies is vital in determining the quality of human resources (Gamage, 2014). The job market's intense competition is making it highly difficult to hire the most qualified and talented employees (Jeffrey & John, 1999). Nowadays, organizations can no longer rely on traditional recruitment sources. Instead, they employ more innovative methods, such as AI-recruitment processes, to attract new employees and differentiate themselves from their competitors (Basu et al., 2023).

AI-recruitment Processes in HRM Practices

The rapid evolution of technology presents a significant challenge to organizations. They are tasked with managing and implementing AI-recruitment processes, including job applications and selection procedures (Van Esch et al., 2019). Russell and colleagues (2010) define AI as systems capable of perceiving their environment through sensors and autonomously acting upon it through effectors. This transformative technology reshapes routine recruiting tasks into computer-driven processes (Frail & László, 2021), with the primary goal of executing tasks independently, free from external influence.

The integration of AI into HRM practices has garnered widespread recognition as a new era in the management of human resources (Horodyski, 2023). AI-recruitment systems have evolved from being supplementary features to becoming indispensable components. As AI adoption in the industry has surged, it has transitioned from experimental status to a mainstream tool. This integration into the recruitment process is pivotal for enhancing efficiency. AI's powerful function in recruitment processes, such as rapid resume scanning, digital candidate interaction, and behavioral and values assessment during selection, have the potential to revolutionize recruitment processes (Gayatri et al., 2023).

HR professionals must meticulously craft comprehensive job descriptions to ensure the efficacy of traditional recruitment processes. These descriptions should explicitly delineate expected job responsibilities and desirable attributes for optimal performance (TP & G van, 2014). Various AI-powered software options, such as Bello, Moka, HCM, and Ivva in China, enhance position descriptions of and customize words to suit different applicants (Ma, 2018). As the critical task of reviewing CVs demands meticulous attention to detail. The CV serves as a candidate's initial introduction and must be treated with the utmost care (Metcalfe, 1992). AI tools play a crucial role in screening job applicants, enabling candidate interaction with specified job openings before or after application submission (Geetha & Reddy, 2018).

Incorporating AI-powered software like SaaS, Hina, and Xunfei is imperative to minimize bias and eliminate human errors, ultimately boosting HR productivity and efficiency.

Concerning the interview process, organizations increasingly employ video interviews, leveraging AI technology to track verbal responses (content), tone (pitch, jitter, frequency, shimmer, loudness), and non-verbal cues (facial expressions). This aids in predicting personality traits such as confidence and enthusiasm (Tao, 2021). Software solutions like Hina, Xunfei, and Italent support AI-based interviews, facilitating thousands of simultaneous interviews on the network. This flexibility allows applicants to be interviewed at their convenience, reducing communication costs and enhancing the efficiency of the interview process.

Applicants' Satisfaction

Applicants' perceptions of e-recruitment and related selection processes have a significant impact on their perspectives of online application systems (Sylva & Mol, 2009). The satisfaction level derived from the organizational recruitment procedure and the possibility of accepting the position is notably correlated with the quality of the information provided to applicants and the interpersonal skills of recruiters (Maurer et al., 1992). Recent studies highlight the significant influence of how satisfied applicants are on their view of a company and their inclination to pursue job opportunities (Acarlar & Bilgiç, 2013). Considering that the recruitment process serves as the initial point of contact with prospective applicants, their satisfaction significantly influences their decision to apply for a position (Claus Wehner et al., 2015). Notably, there is a shortage of research investigating applicants' satisfaction with integrating AI in recruitment processes. Applicants' satisfaction levels are impacted by how attractive and useful they find the AI tools used in recruitment processes by organizations (Horodyski, 2023).

Emotional Intelligence(EI)

Emotional Intelligence (EI) has its roots in previous studies on emotions and social intelligence (Carmeli et al., 2009). This essential aspect of social intelligence includes the capacity to recognize, understand, distinguish, and utilize insights regarding one's own and others' emotions and feelings. This knowledge is utilized to regulate a person's ideology and behaviors. Mayer and Salovey, in 1990, delineate four pivotal components: 1)Perception, which involves accurately expressing and evaluating emotions through verbal and nonverbal cues. 2) Assimilation, which involves generating emotions to help with problem-solving. 3) Understanding emotions is essential for fostering both intellectual and emotional development. 4) Emotion management includes the regulation of one's own feelings as well as those of others (Mayer & Salovey, 1997).

Emotional Intelligence (EI) plays a critical role in predicting crucial organizational outcomes, notably employee satisfaction (Sy et al., 2006). The role of employees' EI in the workplace is paramount and cannot be neglected. Extensive studies have confirmed a strong link between high EI, increased working satisfaction, and a more substantial commitment to work (Carmeli, 2003). Moreover, EI holds the potential to mitigate the adverse effects of stressful situations on work performance (Gao et al., 2013). Previous research underscores EI as a pivotal factor in moderating satisfaction and influencing factors (Gao et al., 2013; Yin, 2015).

Theory

The theory of person-environment (P-E) fit, which French and colleagues first proposed in 1974, represents a valuable guideline for comprehending the fitness of the working environment and related workers, as articulated by Caplan (1987). This theory has extensive

application within the field of management science (Seong et al., 2015), considering individual factors like needs, abilities, norms, values, and aspirations (Capan, 1987) alongside work-related compensation, requirements, organizational culture, and working processes that comprise the environment of organizations (van de Klundert et al., 2018). It is widely acknowledged that, similar to organizations, job applicants possess their perception of fit when seeking positions (Cable & Judge, 1994). Research substantiates that perceptions of fit and actual fit significantly impact attitudes and behaviors, with a particularly positive relationship with job satisfaction. Emphasis should be placed on investigating how job applicants influence fit through recruitment and selection processes (Saks & Ashforth, 1997). When AI-recruitment aligns with applicants' personal requirements, it increases the likelihood of their satisfaction with the process and their subsequent interest in the organization.

The conservation of resource (COR) theory offers insights into the relationship between EI and satisfaction. Hobföll (1989) classified resources into four categories: object (mansion), condition (partner), personal characteristic (EI), and energy (money). In 2001, Hobföll classified resources into two categories: internal and external. Internal resources encompass physical, emotional, and cognitive energy, as well as internal intelligence and control. In contrast, external resources pertain to support from organizations or society. EI is considered a personal characteristic and internal resource. According to the COR theory, employees with high EI prioritize acquiring new resources over concerns about losing them (Ren & Zhang, 2014).

In summary, the literature covers a wide range of aspects related to AI-recruitment, applicants' satisfaction, and the pivotal role of EI. Refining the structure, enhancing the clarity of citations, maintaining an academic tone, and emphasizing the relevance of each subtopic can further elevate the quality of this literature section.

Hypothesis Development

Perception of AI-recruitment Processes and Applicants' Satisfaction

Organizations worldwide have increasingly integrated AI into various HRM processes, encompassing the creation of job descriptions, job opening advertisements, employee screenings, and the facilitation of AI-based interviews (Sen et al., 2023). Incorporating AI into these recruitment processes aims to achieve specific objectives and efficiently identify the most suitable candidates. The perceived value of AI in recruitment processes assumes a pivotal role in assessing its suitability for diverse job-related tasks. It is noticeable that the recruitment process fulfills its functional objectives and effectively engages and attracts potential applicants (Van Esch et al., 2019).

This study defines perception as the outcome of sensory inputs and internal cognitive processes, encompassing attention, expectation, and prior knowledge. It is crucial to acknowledge that perception extends beyond mere visual observation; it is significantly influenced by accumulated experiences and knowledge gained throughout one's life (Hardstone et al., 2021). In 2008, Upadhyay and Khandelwal asserted that AI is an arbiter of fairness in the resume screening process, offering equal opportunities to all candidates. This equitable treatment fosters a positive perception of AI-recruitment among applicants. Furthermore, AI-recruitment systems could provide valuable feedback to unsuccessful applicants, offering insights into areas of improvement and shedding light on their strengths and weaknesses. From the applicants' perspective, this feedback mechanism enhances their self-awareness.

AI-based interviews employ technologies encompassing action, face, pose, and speech recognition. The video interview data can be efficiently processed using deep learning architectures, often utilizing graphic processing units. This approach enables applicants from

diverse geographical locations to participate at their convenience, thereby economizing time and resources that would have been expended on transportation (Sen et al., 2023). AI-based interviews contribute to applicants' straightforward and convenient experiences. Compared to traditional interview methods, they are recognized for their capacity to provide impartial and unbiased assessments of applicants (Suen et al., 2019). Duong and Pham Thi (2022) underline that improving fairness in the recruitment process advances applicants' career development and enhances their overall satisfaction. Thus, the integration of AI into recruitment processes has the potential to influence applicants' satisfaction levels significantly.

According to Vedapradha and colleagues (2019), incorporating AI technology into HRM practices represents a groundbreaking development with substantial benefits, particularly within the recruitment domain. Citing the case of NASA, Davenport and Ronanki (2018) reported that, after adopting AI into its HR processes, the agency completed 86% of its HR tasks without human intervention. This underscores the vast potential of AI in supporting HR management. Reducing human involvement in recruitment can effectively mitigate biases, enhance impartiality, and elevate candidate satisfaction. Thus, the following hypotheses can be formulated:

H1: The perception of AI recruitment is significantly positively related to applicants' satisfaction.

EI and Applicants' Satisfaction

Emotional Intelligence (EI) holds a position of considerable significance in various contexts, including burnout, adaptability, and overall life satisfaction (Cazan & Năstasă, 2015). EI pertains to an individual's self-perception of emotional capabilities, personality, and behavioral tendencies. These attributes are critical in an individual's capacity to effectively manage environmental stressors and demands (Salovey & Mayer, 1990). Previous studies unequivocally revealed the results that high EI levels of individuals tend to experience greater life satisfaction, reduced anxiety and stress levels, and a diminished susceptibility to burnout. These advantages extend to students and employees in organizational settings (Gao et al., 2013). Matheny and colleagues (2008) emphasize that an individual's ability to identify and regulate stress significantly influences satisfaction. Shooshtarian and colleagues (2013) also pointed out that employees' EI is positively related to their satisfaction. Among doctors, higher self-rated EI has been linked to increased job satisfaction (Weng et al., 2011).

While the literature on applicants' satisfaction and EI remains limited, it is essential to acknowledge that applicants' satisfaction is associated with EI. Applicants' satisfaction concerns the level of contentment experienced by applicants during their interaction with an organization's recruitment process. EI is pivotal in influencing individuals' satisfaction levels, both in their personal and professional spheres. Consequently, it directly affects applicants' overall satisfaction, shaping their perceptions of the recruitment process. Therefore, the related proposed hypothesis can be posited:

H2: Emotional intelligence (EI) is significantly positively related to applicants' satisfaction.

Moderating Effect of EI

Emotional Intelligence (EI) involves a person's ability to perceive, understand, and manage emotions for themselves and others. This includes self-awareness, empathy toward others' emotions, and effective emotional management in various contexts. Research has documented that EI is a critical moderator in relationships involving diverse variables (Gao et al., 2013; Yin, 2015). Gao and colleagues (2013) noted that EI played a moderating role in the conflict between employees' work-family and working satisfaction, mitigating the strength of the negative association among individuals with high EI levels compared to those with lower EI

levels. A study conducted in Pakistan's telecommunications industry further highlights that employees with higher EI experience reduced stress levels, heightened happiness, and greater life satisfaction. This underscores the significant moderating effect of EI in the linkage of job-related stress and related outcomes (Naseem, 2018). Yin (2015) suggested that it is crucial to moderate the scholars' cognition of perceptual work needs and their strategies for handling emotions in working contexts. These strategies encompass surface acting, deep acting, or authentic emotional expression. EI is a highly prized trait in personal and professional relationships, significantly enhancing effective communication, conflict resolution, and satisfaction.

Given the potential influence of EI on applicants' satisfaction and their perception of AI-recruitment processes, EI could also have a moderating effect on the relationship between these two constructs. Thus, the following hypothesis can be advanced:

H3: Emotional Intelligence (EI) moderates the relationship between the perception of AI-recruitment and applicants' satisfaction.

Figure 1 shows the model of this study, presenting relations between different variables.
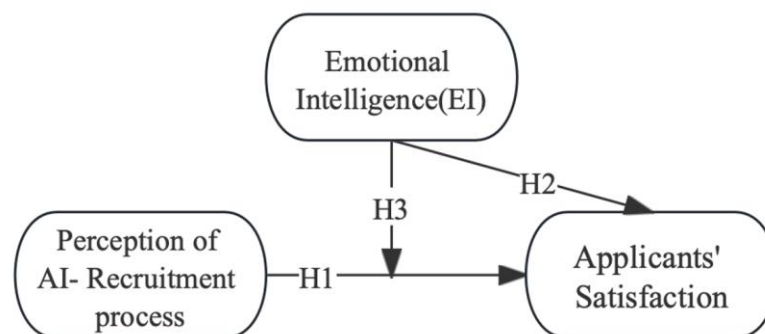

Figure 1 Model of variables

Methods

Paragraph 1 appears here. The required format is Times New Roman font size 12, single spacing throughout. Do NOT leave any space at the start of each paragraph.

This is an example of paragraph 2. The required format is Times New Roman font size 12, single spacing throughout. Do NOT leave any space at the start of each paragraph.

Research Design and Data Collection

This study pursues a comprehensive examination of the interrelationships among the perception of AI-recruitment processes, EI, and applicants' satisfaction in China. To achieve this objective, a quantitative research approach was selected as the most appropriate method for investigating these complex relationships.

The measurement of the perception of AI-recruitment processes was initially drawn from the work of Zwakman and colleagues (2021) and subsequently modified to align with the specific focus of this study. The measurement comprises 15 items, such as "I thought online e-recruitment was easy to operate."

The measurement used to assess applicant satisfaction was adapted from Leonnard (2019) and Rodríguez and colleagues (2020), with modifications tailored to the research objectives. This scale encompasses 10 items, including "I think the online e-recruitment process is reliable."

Furthermore, the assessment of EI was conducted using the measurement established by Wang and Law (2002), which is a 16-item measurement, sample item "I have a good understanding of my own emotions."

Data collection used purposive sampling methods to target participants meeting two criteria: 1) university students and postgraduates actively seeking employment in China, and 2) individuals experienced with AI-driven recruitment methods during job applications. This sampling approach was chosen for its practicality and accessibility to the desired participant pool. It is pertinent to note that a representative sample size for research of this nature typically falls within the range of more than 30 but less than 500 participants, aligning with the insights of Hill (1998).

The questionnaire comprises two distinct sections: the first section gathers participants' individual information. In contrast, the second section is dedicated to the comprehensive exploration and measurement of the research variables. The second section consists of 41 questions, adopting a 7-point Likert scale with 1 to indicate "Strongly Disagree" and 7 to indicate "Strongly Agree," encompassing 15 questions addressing the perception of AI-recruitment processes, 10 questions focusing on applicants' satisfaction, and 16 questions targeting EI. The translation of questionnaire items from English to Chinese was executed by proficient bilingual teachers in Chinese high schools, following the meticulous back-to-back translation methodology (Brislin, 1980). Additionally, the questionnaire was thoroughly reviewed by two human resource directors affiliated with Chinese organizations. The feedback obtained from this review was meticulously incorporated into the questionnaire to ensure its alignment with the research objectives and cultural nuances.

Subsequently, the collected data were subjected to statistical analysis using software tools, specifically SPSS 23 and Smart PLS 4.0. These analytical methods were utilized to extract valuable insights and reach sound conclusions from the research data, allowing for a comprehensive examination of the presented hypotheses.

Findings

Demographic characteristics
Table 1 presents the demographic details of the participants. 31.4% of the 137 participants were male, and 68.6% were female. Regarding age, 84.7% of the respondents were between 18 and 30, 13.9% were between 30 and 42, and 1.4% were above 42. In terms of education, 5.8% of the participants held a college degree, 31.4% held a bachelor's degree, and 62.8% held a graduate degree.

Table 1 Participants' Demographics

Characteristics	Frequency	Percent
Gender		
Male	43	31.4%
Female	94	68.6%
Age		
18-30	116	84.7%
31-42	19	13.9%
42 above	2	1.4%
Education		
Below Bachelor	8	5.8%
Bachelor	43	31.4%
Master	86	62.8%

Constructure Reliability and Validity

As shown in Table 2, the values for Cronbach's alpha of variables are presented for the perception of AI-recruitment(= 0.912), applicant satisfaction (= 0.94), and EI (= 0.923). According to Cronbach's research (1951), Cronbach's alpha measures the extent of conformity on a standardized scale of 0 to 1. Variables' Cronbach's alphas exceed 0.90, considered excellent for analytical objectives. The Standard Deviation of the three variables is demonstrated as the perception of AI-recruitment 0.96497, applicant satisfaction 0.96497, and EI 0.73633.

Outer loading of 0.7 or larger is regarded as highly satisfactory. While the value of outer loading of 0.5 is acceptable, variables with loading below 0.5 should be excluded (Memon & Rahman, 2014). Fornell and Larcker (1981) propose that if the average variance extracted (AVE) is below 0.5, but the composite reliability is above 0.6, the construct's convergent validity is still adequate. Ideally, the AVE should be above 0.5, although a value of 0.4 is still acceptable (Lam, 2012). The AVE in this study is more than 0.4, which is acceptable. The research is considered acceptable if the composite reliability value is greater than 0.6, and a composite reliability value larger than 0.7 is considered satisfactory with the research progress. However, values surpass 0.95, indicating that indicators measure the same variable, thus invalidating the constructed measure (Hair, 2017). Table 3 in this study shows that all indicators have outer loadings above 0.5, AVE values above 0.4, and composite reliability values acceptable below 0.95.

Table 2 Cronbach's Alpha, Mean, and STED

Variables	Cronbach's alpha	Mean	STED	Items
Perception of AI-recruitment	0.912	5.9966	0.96497	15
Applicants' Satisfaction	0.94	5.3321	0.96497	10
Emotional Intelligence	0.923	5.3307	0.73633	16

Table 3 Construct Reliability and Validity

Construct	Indicators	Outer loading	Composite Reliability	AVE
Perception of AI- recruitment	APEI1	0.544	0.94	0.653
	APEI2	0.754		
	APEI3	0.738		
	APEI4	0.589		
	APEI5	0.757		
	APEI6	0.718		
	APEI7	0.744		
	APEI8	0.553		
	APEI9	0.67		
	APEI10	0.642		
	APEI11	0.572		
	APEI12	0.754		
	APEI13	0.738		
	APEI14	0.589		
	APEI15	0.757		

Emotional Intelligence	EI1	0.582	0.93	0.472
	EI2	0.772		
	EI3	0.812		
	EI4	0.604		
	EI5	0.755		
	EI6	0.703		
	EI7	0.504		
	EI8	0.698		
	EI9	0.67		
	EI10	0.713		
	EI11	0.716		
	EI12	0.501		
	EI13	0.787		
	EI14	0.766		
	EI15	0.614		
	EI16	0.715		
Applicants' satisfaction	APPS1	0.633	0.92	0.473
	APPS2	0.703		
	APPS3	0.804		
	APPS4	0.836		
	APPS5	0.765		
	APPS6	0.816		
	APPS7	0.849		
	APPS8	0.86		
	APPS9	0.878		
	APPS10	0.901		

Testing Hypotheses

Hair et al. (2017) proposed that using 10,000 bootstrap samples for a one-tailed test, setting the significance level at 0.01 to evaluate the path coefficient. Further explained that the hypothesis would be accepted if the t-value exceeds 2.33 and the p-value is below 0.01 in a one-tailed test. Table 4 indicates that the path coefficients for H1 variables demonstrate a significant positive correlation between AI recruitment perception and applicant satisfaction(β value: 0.468, t-value: 5.922, and p-value $<$ 0.01). Additionally, as for H2 a significant positive relationship between EI and applicants' satisfaction (β value : 0.259, t-value : 3.082, and p value: $<$0.01). Thus, H1 and H2 are supported.

Table 4 Path Coefficient for Relationship

	Relationships	Path Coefficients (β)	T-Values	P-Values	Standard Errors	Decision
H1	Perception of AI recruitment -> Applicant satisfaction	0.468	5.922	0.000	0.084	Supported
H2	EI -> Applicant satisfaction	0.259	3.082	0.001	0.078	Supported

H3	EI x Perception of AI recruitment -> Applicant satisfaction	0.004	0.051	0.048	0.076	Unsupported

Note: Bootstrap Samples = 10000, significance level at 1% (one-tailed test).

Moderator Testing

This study employed the same method for testing the moderating effect, using 10,000 bootstrap samples for a one-tailed test, setting the significance level at 0.01. The findings indicate that H3 was not supported. EI does not significantly moderate the relationship between the perception of AI recruitment and applicant satisfaction ($\beta = 0.004$, t-value = 0.051). This finding confirms the lack of support for H3.

Discussion and Conclusion

The study verifies a significant positive correlation between applicants' AI recruitment perception and their satisfaction levels. This outcome is consistent with the research by Wu et al. (2023), which also highlighted a positive influence of AI perception on the satisfaction level of customers. This underscores the importance of applicants' satisfaction in influencing their decision to join an organization. High levels of satisfaction increase the likelihood of applicants choosing to become part of the organization. AI technology integrated into HRM practices can identify high-potential candidates before formal job applications, offering convenience and contributing significantly to talent acquisition. Moreover, AI ensures equal opportunity for all candidates, fostering a fair and unbiased recruitment process (Al-Alawi et al., 2021).

This study reveals that EI significantly impacts applicants' satisfaction. The present finding is consistent with prior research illustrating that EI directly impacts life satisfaction (Kafetsios & Zampetakis, 2008; Palmer et al., 2002). While limited research explicitly explores the connection between EI and applicants' satisfaction, our study helps bridge this gap. EI plays a crucial role in shaping individuals' satisfaction levels in both personal and professional contexts, directly influencing applicants' overall satisfaction as well as applicants' perceptions of the recruitment procedure.

However, the results of the present study did not support the notion that EI moderates the relationship between applicants' perception of AI recruitment processes and their satisfaction. This outcome deviates from prior research that suggested a moderating role for EI in various contexts (Gao et al., 2013; Yin, 2015). Instead, our findings indicate a correlation that is significant and positive between the perception of AI-driven recruitment, the satisfaction of applicants, and EI.

In conclusion, our study underscores the significance of applicants' perception of AI-recruitment processes and EI in influencing applicants' satisfaction. These findings have implications for organizations striving to enhance their AI-recruitment processes. Effective AI integration can attract highly skilled applicants, thereby bolstering overall competitiveness. While the moderation role of EI was not supported in this study, it adds to the evolving knowledge base in this area.

Theoretical Implications

The present study objects to investigate the influence of applicants' perceptions of AI-recruitment processes on their satisfaction and the effect of EI. Furthermore, the research examines how EI moderates the relationship between applicants' perceptions and their satisfaction. One of the key theoretical contributions of this study is addressing a gap in the theory of P-E fit within AI-recruitment processes and applicant satisfaction. By applying the

P-E fit theory, this study offers a novel perspective for the public on how applicants' perceptions of AI recruitment processes align with their EI and ultimately affect their satisfaction levels. It underscores the importance of the fit between these perceptions and applicants' satisfaction, which in turn impacts their decisions regarding future employment opportunities. Furthermore, it is worth noting that prior research on AI recruitment from the applicants' perspective has been limited, making this study a pioneering effort to broaden the two theories: P-E fit and conservation of resources by examining the intricate relationships between the perception of AI-recruitment processes, EI, and applicants' satisfaction.

Practical and Social Implications
The study results are practical for organizations, employees in the HRM department, and applicants. Organizations can optimize their recruitment processes in HRM and dramatically improve the quality of recruitment by leveraging the insights gained from this study. By deepening their understanding of the AI-recruitment process, applicants can significantly increase their chances of finding a satisfactory position.

From an applicant's perspective, this study is crucial for enhancing their understanding of the AI-recruitment processes, which is a prerequisite for securing the ideal job. Furthermore, applicants who are satisfied with the AI-recruitment processes tend to prefer future employment with the organization.

Finally, the present findings can profoundly impact the advancement of AI technology in various aspects of social life. Since AI-recruitment is already extensively utilized in various organizations, the findings from this study can enhance public acceptance of AI and support its application in other domains, ultimately fostering a more progressive future for societal development.

Limitations and Suggestions for Future Research
Firstly, the present study only had limited measurements to conduct this research. There needs to be more research on AI-recruitment processes, the perception of applicants, and applicants' satisfaction to provide a more mature measurement. To address this, it is necessary to improve the accuracy of measurements for the perception of AI-recruitment processes and applicants' satisfaction in future studies. As such, further studies are recommended to enhance the measurement of AI-recruitment perception and applicants' satisfaction.

Second, AI-recruitment is part of the application of AI in HRM practices. This study only focused on this practice. This requires researchers to study applying AI technology in HRM practices. In that case, exploring AI technology in HRM practices will be more complete. Therefore, it is suggested that future research integrate AI technology in all components of HRM practices for a comprehensive study.

In conclusion, this study's data originated from China, with samples gathered through purposive sampling. To enhance the findings' validity, future research should broaden the data collection scope and employ more rigorous sampling techniques.

Acknowledgment

References
Acarlar, G., & Bilgiç, R. (2013). Factors influencing applicant willingness to apply for the ad vertised job opening: The mediational role of credibility, satisfaction and attraction. *The I*

nternational Journal of Human Resource Management, *24*(1), 50–77. https://doi.org/10.1080/09585192.2012.667427

Aguilar-Luzón, M. C., Calvo-Salguero, A., & Salinas, J. M. (2014). Beliefs and environmental behavior: The moderating effect of emotional intelligence. *Scandinavian Journal of Psychology*, 55(6), 619–629. https://doi.org/10.1111/sjop.12160

Al-Alawi, A. I., Naureen, M., AlAlawi, E. I., & Naser Al-Hadad, A. A. (2021). The Role of Artificial Intelligence in Recruitment Process Decision-Making. *2021 International Conference on Decision Aid Sciences and Application (DASA)*, 197–203. https://doi.org/10.1109/DASA53625.2021.9682320

Barsade, S. G., & Gibson, D. E. (2007). Why Does Affect Matter in Organizations? *Academy of Management Perspectives*, *21*(1), 36–59. https://doi.org/10.5465/amp.2007.24286163

Basu, S., Majumdar, B., Mukherjee, K., Munjal, S., & Palaksha, C. (2023). Artificial Intelligence–HRM Interactions and Outcomes: A Systematic Review and Causal Configurational Explanation. *Human Resource Management Review*, *33*(1), 100893. https://doi.org/10.1016/j.hrmr.2022.100893

Cable, D. M., & Judge, T. A. (1994). Pay preferences and job search decisions: A person-organization fit perspective. *Personnel Psychology*, *47*(2), 317–348. https://doi.org/10.1111/j.1744-6570.1994.tb01727.x

Caplan, R. D. (1987). Person-environment fit theory and organizations: Commensurate dimensions, time perspectives, and mechanisms. *Journal of Vocational Behavior*, *31*(3), 248–267. https://doi.org/10.1016/0001-8791(87)90042-X

Carmeli, A. (2003). The relationship between emotional intelligence and work attitudes, behavior and outcomes: An examination among senior managers. *Journal of Managerial Psychology*, *18*(8), 788–813. https://doi.org/10.1108/02683940310511881

Carmeli, A., Yitzhak-Halevy, M., & Weisberg, J. (2009). The relationship between emotional intelligence and psychological wellbeing. *Journal of Managerial Psychology*, *24*(1), 66–78. https://doi.org/10.1108/02683940910922546

Cazan, A.-M., & Năstasă, L. E. (2015). Emotional Intelligence, Satisfaction with Life and Burnout among University Students. *Procedia - Social and Behavioral Sciences*, *180*, 1574–1578. https://doi.org/10.1016/j.sbspro.2015.02.309

Claus Wehner, M., Giardini, A., & Kabst, R. (2015). Recruitment Process Outsourcing and Applicant Reactions: When Does Image Make a Difference? *Human Resource Management*, *54*(6), 851–875. https://doi.org/10.1002/hrm.21640

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *PSYCHOMETRIK,* 6(3).

Davenport, T. H., & Ronanki, R. (2018). Artificial intelligence for the real world. *Harvard Business Review*, *96(1)*, 108-116.

Erixon, F. (2018). The Economic Benefits of Globalization for Business and Consumers. *The Economic Benefits of Globalization for Business and Consumers:*

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research,* 18(1), 39. https://doi.org/10.2307/3151312

Fraij, J., & László, V. (2021). A Literature Review: Artificial Intelligence Impact on the Recruitment Process. *International Journal of Engineering and Management Sciences*, *6*(1). https://doi.org/DOI: 10.21791/IJEMS.2021.1.10

Gamage, A. S. (2014). *Recruitment and Selection Practices in Manufacturing SMEs in Japan: An analysis of the link with business performance*. *1*(1).

Gao, Y., Shi, J., Niu, Q., & Wang, L. (2013). Work-Family Conflict and Job Satisfaction: Emotional Intelligence as a Moderator: Work-Family Conflict and Job Satisfaction. *Stress and Health*, *29*(3), 222–228. https://doi.org/10.1002/smi.2451

Gayatri, A. P., Lavanya, P., Rajitha, Ch., Butta, N. K., & Supraveen, U. J. (2023). Artificial Intelligence Deployment And The Potency Of Hrm Functions. *2023 International Conference on Computer Communication and Informatics (ICCCI)*, 1–6. https://doi.org/10.1109/ICCCI56745.2023.10128552

Geetha, R., & Reddy, D. B. S. (2018). *Recruitment through artificial intelligence: A conceptual study*. International Journal of Mechanical Engineering and Technology (IJMET).

Hair, J. F., Bush, R. P., & Ortinau, D. J. (2003). *Marketing research: Within a changing information environment* (2nd ed). McGraw-Hill/Irwin.

Hair, J. F., M. Hult, G. T., M. Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). *SAGE Publications*.

Hardstone, R., Zhu, M., Flinker, A., Melloni, L., Devore, S., Friedman, D., Dugan, P., Doyle, W. K., Devinsky, O., & He, B. J. (2021). Long-term priors influence visual perception through recruitment of long-range feedback. *Nature Communications*, *12*(1), 6288. https://doi.org/10.1038/s41467-021-26544-w

Hill, D. R. (1998). What sample size is "enough" in internet. *An Electronic Journal for the 21st Century*, *6*(3).

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. American Psychologist, 44(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Hobföll, S. E. (2001). The Influence of Culture, Community, and the Nested‐Self in the Stress Process: Advancing Conservation of Resources Theory. *Applied Psychology,* 50(3), 337‐421. https://doi.org/10.1111/1464-0597.00062

Horodyski, P. (2023). Applicants' perception of artificial intelligence in the recruitment process. *Computers in Human Behavior Reports*, *11*, 100303. https://doi.org/10.1016/j.chbr.2023.100303

Iskamto, D. (2021). Stress and Its Impact on Employee Performance. *International Journal of Social and Management Studies*, *3*(2), 142–148.

Jeffrey, P., & John, F. V. (1999). Putting people first for organizational success. *Academy of management perspectives.*

Kafetsios, K., & Zampetakis, L. A. (2008). Emotional intelligence and job satisfaction: Testing the mediatory role of positive and negative affect at work. *Personality and Individual Differences,* 44(3), 712–722. https://doi.org/10.1016/j.paid.2007.10.004

Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, *49*(1), 1–49. https://doi.org/10.1111/j.1744-6570.1996.tb01790.x

Lam, L. W. (2012). Impact of competitiveness on salespeople's commitment and performance. *Journal of Business Research*, 65(9), 1328–1334. https://doi.org/10.1016/j.jbusres.2011.10.026

Leonnard. (2019). Exploring The Relationship among E-Service Quality, E-Trust, E-Satisfaction and Loyalty at Higher Education Institutions. *Journal on Efficiency and Responsibility in Education and Science,* 12(4), 103–110. https://doi.org/10.7160/eriesj.2019.120401

Ma, H.(2018, October 8)"人工智能语境下人力资源招聘工作变革[Transforming HR Recruitment in the Context of Artificial Intelligence]." https://www.sohu.com/a/258552880_723377

Matheny, K. B., Roque-Tovar, B. E., & Curlette, W. L. (2008). Perceived stress, coping resources, and life satisfaction among U. S. and mexican college students: A cross-cultural study. *Anales de Psicologia*.

Maurer, S. D., Howe, V., & Lee, T. W. (1992). Organizational recruiting as marketing management: An interdisciplinary study of engineering graduates. *Personnel Psychology*, *45*(4), 807–833. https://doi.org/10.1111/j.1744-6570.1992.tb00969.x

Memon, A. H., & Rahman, I. A. (2014). SEM-PLS Analysis of Inhibiting Factors of Cost Performance for Large Construction Projects in Malaysia: Perspective of Clients and Consultants. *The Scientific World Journal*, 1–9. https://doi.org/10.1155/2014/165158

Metcalfe, A. W. (1992). The Curriculum Vitae: Confessions of a Wage-Labourer. *Work, Employment and Society*, *6*(4), 619–641. https://doi.org/10.1177/095001709264005

Naseem, K. (2018). *Job Stress, Happiness and Life Satisfaction: The Moderating Role of Emotional Intelligence Empirical Study in Telecommunication Sector Pakistan*.

Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, 33(7), 1091–1100. https://doi.org/10.1016/S0191-8869(01)00215-X

Pasban, M., & Nojedeh, S. H. (2016). A Review of the Role of Human Capital in the Organization. *Procedia - Social and Behavioral Sciences*, 249–253. https://doi.org/10.1016/j.sbspro.2016.09.032

Ren, Q., & Zhang, W. (2014). "国外情绪劳动策略最新研究进展评述[A review of latest foreign researches on emotional labor strategies]." *East China Economic Management,*28 (3). https://doi.org/ 10.3969/j.issn.1007-5097.2014.03.029

Rodríguez, P. G., Villarreal, R., Valiño, P. C., & Blozis, S. (2020). A PLS-SEM approach to understanding E-SQ, E-Satisfaction and E-Loyalty for fashion E-Retailers in Spain. *Journal of Retailing and Consumer Services,* 57, 102201. https://doi.org/10.1016/j.jretconser.2020.102201

Russell, S. J., Norvig, P., & Davis, E. (2010). *Artificial intelligence: A modern approach* (3rd ed). Prentice Hall.

Saks, A. M., & Ashforth, B. E. (1997). A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel Psychology*, *50*(2), 395–426. https://doi.org/10.1111/j.1744-6570.1997.tb00913.x

Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, *9*(3), 185–211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Sen, S., Kadam, S., & Ravi Kumar, V. V. (2023). Role of Artificial Intelligence-Enabled Recruitment Processes in Sourcing Talent. *2023 6th International Conference on Information Systems and Computer Networks (ISCON)*, 1–5. https://doi.org/10.1109/ISCON57294.2023.10112009

Seong, J. Y., Kristof-Brown, A. L., Park, W.-W., Hong, D.-S., & Shin, Y. (2015). Person-Group Fit: Diversity Antecedents, Proximal Outcomes, and Performance at the Group Level. *Journal of Management*, *41*(4), 1184–1213. https://doi.org/10.1177/0149206312453738

Shooshtarian, Z., Ameli, F., & Lari, M. A. (2013). The Effect of Labor's Emotional Intelligence on Their Job Satisfaction, Job Performance and Commitment. *Iranian Journal of Management Studies*.

Stoilkovska, A., Ilieva, J., & Gjakovski, S. (2015). Equal employment opportunities in the recruitment and selection process of human resources. *Journal of Economics*.

Suen, H.-Y., Chen, M. Y.-C., & Lu, S.-H. (2019). Does the use of synchrony and artificial intelligence in video interviews affect interview ratings and applicant attitudes? *Computers in Human Behavior*, *98*, 93–101. https://doi.org/10.1016/j.chb.2019.04.012

Sy, T., Tram, S., & O'Hara, L. A. (2006). Relation of employee and manager emotional intelligence to job satisfaction and performance. *Journal of Vocational Behavior*, *68*(3), 461–473. https://doi.org/10.1016/j.jvb.2005.10.003

Sylva, H., & Mol, S. T. (2009). E-Recruitment: A study into applicant perceptions of an online application system. *International Journal of Selection and Assessment*, *17*(3), 311–323. https://doi.org/10.1111/j.1468-2389.2009.00473.x

Tao,Y.(2021)." 人工智能在企业招聘中的应用 [Artificial Intelligence in Corporate Recruitment]" *Science and Technology & Innovation*. https://doi.org/ 10.15913/j.cnki.kjycx.2021.21.066

T P, T., & G van, der W. (2014). A recruitment and selection process model. *Administratio Publica*, *22*(3).

The effects of leader and follower emotional intelligence on performance and attitude: An exp loratory study (2002). *The Leadership Quarterly*. https://doi.org/10.4324/9781315250601

Upadhyay, A., & Khandelwal, K. (2018). Applying artificial intelligence: Implications for recruitment. *Strategic HR Review*, *17*. https://doi.org/10.1108/SHR-07-2018-0051

Van de Klundert, J., van Dongen- van den Broek, J., Yesuf, E. M., Vreugdenhil, J., & Yimer, S. M. (2018). 'We are planning to leave, all of us'—A realist study of mechanisms explaining healthcare employee turnover in rural Ethiopia. *Human Resources for Health*, *16*(1), 37. https://doi.org/10.1186/s12960-018-0301-0

Van Esch, P., Black, J. S., & Ferolie, J. (2019). Marketing AI recruitment: The next phase in job application and selection. *Computers in Human Behavior*, *90*, 215–222. https://doi.org/10.1016/j.chb.2018.09.009

Vardarlier, P., & Zafer, C. (2020). *Use of Artificial Intelligence as Business Strategy in Recruitment Process and Social Perspective* (pp. 355–373). https://doi.org/10.1007/978-3-030-29739-8_17

Vedapradha, R., Hariharan, R., & Shivakami, R. (2019). Artificial Intelligence: A Technological Prototype in Recruitment. *Journal of Service Science and Management*, *12*(03), 382–390. https://doi.org/10.4236/jssm.2019.123026

Weng, H.-C., Hung, C.-M., Liu, Y.-T., Cheng, Y.-J., Yen, C.-Y., Chang, C.-C., & Huang, C.-K. (2011). Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction: Emotional intelligence and doctor and patient satisfaction. *Medical Education*, *45*(8), 835–842. https://doi.org/10.1111/j.1365-2923.2011.03985.x

Wong., C., & Law., K. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*,243 – 274. https://doi.org/10.1016/S1048-9843(02)00099-1.

Wu, S., Song, S., Yuan, Y., Hu, Z.(2023) "顾客感知价值对顾客满意度的影响 ——自我—人工智能联结的中介作用[The Impact of Customer Perceived Value on Customer Satisfaction - The Mediating Role of Self-Artificial Intelligence Linkage]." *Journal of beijing institute of technology (social sciences edition),*25(3).https://doi.org/ 10.15918/j.jbitss1009-3370.2023.3329

Yin, H. (2015). The effect of teachers' emotional labour on teaching satisfaction: Moderation of emotional intelligence. *Teachers and Teaching*, *21*(7), 789–810. https://doi.org/10.1080/13540602.2014.995482

Zwakman, D. S., Pal, D., & Arpnikanondt, C. (2021). Usability Evaluation of Artificial Intelligence-Based Voice Assistants: The Case of Amazon Alexa. *SN Computer Science,* 2(1), 28. https://doi.org/10.1007/s42979-020-00424-4

Appendix

The information questions about participants and items for Perception of AI-recruitment, Emotional Intelligence, and Applicants' Satisfaction.

1.   I am a university student in China

Yes   ○   No   ○

2.   I have used the AI-recruitment process to apply jobs.

Yes   ○   No   ○

3. Your gender

Male   ○   Female   ○

4. Your age

20-30   ○ 31-40   ○ 40 above ○

5. Your level of highest education is

Less than bachelor's degree ○   Bachelor's degree   ○
Master's degree ○ Doctoral degree   ○

6. Please provide the time of your most recent use of the E-recruiting program online.

Perception of AI-recruitment, Emotional Intelligence, and Applicants' Satisfaction items.

1. Perception of AI-recruitment Items
1. In the process of online e-recruitment, I thought the instructions for each part were clear.
2. I thought online e-recruitment was easy to operate.
3. I thought every step of the e-recruitment process was acceptable.
4. I thought the e-recruitment process was fair.
5. The e-recruitment contains all the processes of the general recruitment process.
6. I thought uploading my resume and videos during the online e-recruitment process was easy.
7. There is no limit to the size of the uploading of resume files during the online e-recruitment process.
8. I thought it was crucial to be able to prepare a job search video recording in advance for the online recruitment process.
9. Being flexible about the timing of online interviews is essential to me during online e-recruitment.
10. I thought the e-recruitment process allowed me to complete all relevant items without missing any items.
11. I thought various resume upload options were critical during the online e-recruitment process.

12. During e-recruitment, I thought the compatibility for uploading resume files was important.
13. I thought documenting interview conversations during online e-recruitment was crucial.
14. During the e-recruitment process, I could modify files that had been uploaded before submitting them.
15. My interaction with the online e-recruitment process was smooth.

2. Emotional Intelligence Items

Self-emotion appraisal (SEA)
1. I have a good sense of why I have certain feelings most of the time.
2. I have a good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

Others' emotion appraisal (OEA)
5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have a good understanding of the emotions of people around me.

Use of emotion (UOE)
9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivated person.

Regulation of emotion (ROE)
12. I would always encourage myself to try my best.
13. I am able to control my temper and handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

3. Applicants' satisfaction Items

1. Overall, the online e-recruitment process sequence is stable.
2. Overall, I am positive about using online e-recruitment for applying for jobs.
3. During the online e-recruitment screening criteria provided by organizations during the job search convinces me.
4. I think the online e-recruitment process is reliable.
5. The online e-recruitment system is not complex to get started with.
6. Using the online e-recruitment process is cost-effective for me.
7. I am pleased with the efficiency of online e-recruitment.
8. The system services for AI recruitment are satisfactory.
9. I am glad that I can use online e-recruitment in my job search.
10. I prefer to use online e-recruitment for job search.