Impact of Artificial Intelligence Adoption on the Psychological Contract and Job Satisfaction of Chinese Employees - The Moderator Role of Industry Characteristics

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Abstract:

From the perspective of Chinese employees, this study delves into the evolving employment relationship amidst digital transformation, specifically examining the impact of AI on job satisfaction and psychological contracts. Utilizing an online survey, data was collected from 321 Chinese employees, and subsequent statistical analysis of the gathered metrics evaluated the psychological foundations and behavioral outcomes associated with AI integration in the workplace. The findings reveal that, although AI implementation positively correlates with job satisfaction and the reinforcement of psychological contracts, the existence of transformational leadership tends to attenuate this positive correlation.

Keywords: Digital transformation, AI, Job satisfaction, Psychological contract

1. Introduction

The employment relationship stands as a pivotal component in human society, facilitating the efficient allocation of social resources and promoting equity (Blau, 2017). Over the course of three industrial revolutions, both business practices and scientific inquiries into human capital and employment relationships have underscored the significance of a positive employment relationship. This relationship serves as a crucial catalyst for enhancing performance and fostering sustainable competitive advantages within business organizations (Acemoglu & Pischke, 1999; Becker & Huselid, 2006). To strengthen this positive dynamic between the two parties involved, numerous theories have been formulated and implemented, including those pertaining to leadership, organizational citizen behavior, psychological contract, engagement, and job satisfaction (Judge et al., 2001). Furthermore, with the advent of digitalization, the field of management and organizational behavior has undergone significant transformations, with artificial intelligence (AI) now playing a pivotal role in shaping this relationship.

Industry 4.0 represents a transformation in production that builds upon the preceding three industrial revolutions, with electronic information technology serving as a pivotal driver (Malik et al., 2021). The seamless integration of sophisticated hardware, innovative software, and extensive network capabilities has not only revolutionized the demand for skilled talent but also reshaped human resource management (HRM) practices, underscoring the urgent need for digital expertise (Prikshat et al., 2023)there is increasing evidence of literature reviews pertaining to the use of AI applications in different management disciplines (i.e., marketing, supply chain, accounting, hospitality, and education. Related technologies have emerged as a trending topic for participation and discussion. While AI found early applications in business during the 1980s, ethical considerations and technological constraints prevented its widespread adoption. However, with the advent of big data, communication technology, and electronic terminal devices, its application began to gain momentum around 2010 (Brynjolfsson & McIntyre, 2014). The debate surrounding AI is fraught with both positive impacts and ethical considerations. Previous literature has highlighted the beneficial effects of AI on organizational and individual performance, innovativeness, and competitiveness (Holmström, 2022). Conversely, there is also a growing body of research exploring the negative implications of AI adoption, such as increased job insecurity and anxiety among employees (Ford, 2016). Previous research has primarily focused on the outcomes of AI adoption and limited psychological indicators. Therefore, exploring the impact of AI on employment relationships holds significant importance for guiding future development.

This paper will focus on the effects of AI on employment relationships with theories of psychological contract and job satisfaction in China. Meanwhile, considering various industries have their industry characteristics, which could affect the attitudes of employees. To quantify disparities in employee responses to AI adoption across industries, transformational leadership a variable to measure. This study provides four hypotheses and obtained responses from Chinese employees through an online questionnaire. Results showed that AI had bene-ficial effects on employees' experience.

2. Literature Review

2.1 AI in business management

The definition of AI evolved to describe a system endowed with the capabilities to gather external data, assimilate information through learning, and apply its understanding to address and resolve problems (Kaplan & Haenlein, 2019). Currently, AI impacts human society through various applications. These technologies and tools have been applied in several industries. Big data analysis highlighted consumer preferences and predicted future trends. The data assisted expert system enhanced decision-making and problem-solving, while machine learning encouraged automation to reduce repetitive tasks in the workplace (Marr, 2019). Digital technologies have such positive influences on businesses to cover the risks. In 2018, Davenport and Westerman discussed the negative issues and executive departures raised by companies such as GE and Lego in their transformation. As a motivation for digital transformation, AI adoption could have similar issues to discuss and manage. AI in business organizations might improve automation, possibly replacing and changing specific duties with robots or machines, resulting in changes to procedures and structures (Brynjolfsson & McIntyre, 2014).

AI adoption could increase individual performance and engagement with some concerns from individuals, such as duties, skills needs, work content and environment (Prentice et al., 2023). Researchers reviewed related AI-HRM papers to conclude the positive effects from implementing AI in companies, including performance (organizational and individual levels), efficiency, processes, innovation behaviors, talent identification (Prikshat et al., 2023)there is increasing evidence of literature reviews pertaining to the use of AI applications in different management disciplines (i.e., marketing, supply chain, accounting, hospitality, and education. Sociologists pointed that AI may have social roles and interactive behaviors with employees, and that while reducing repetitive work behaviors and risky behaviors to enhance employees' experience in the work

environment, however, unethical AI implementation could have negative effects, such as unemployment, information security and wealth concentration (Khogali & Mekid, 2023)a detailed analysis of the positive implications and drawbacks of AI technology in human society is necessary. The development of AI technology has created new markets and employment opportunities in vital industries, including transportation, health, education, and the environment. According to experts, the rapidly increasing improvements in AI will continue. As part of humankind's continual efforts to create more prosperous technological growth, automation and AI are changing people's lives and are widely considered to be game-changers in a variety of industries. This study presents a review of how automation and AI may affect businesses and jobs. To determine some of the prospective long-term consequences of AI on human civilisation, this study investigates a variety of connected primary impacting potentials, including job losses, employees' well-being, dehumanisation of jobs, fear of AI, and examples of autonomous technology developments, such as autonomous-vehicle challenges. A diverse methodology of narrative review and thematic pattern was used to add to transdisciplinary or multidisci-plinary work, particularly in the theoretical development of AI technologies.","container-title":"Technology in Society","DOI":"10.1016/j.techsoc.2023.102232","ISSN":"0160-791X","journalAbbreviation":"Technology in Society","language":"en","page":"102232","source":"-ScienceDirect","title":"The blended future of automation and AI: Examining some long-term societal and ethical impact features","title-short":"The blended future of automation and AI","volume":"73","author":[{"family":"K-hogali","given":"Hisham O."},{"family":"Mekid","-given":"Samir"}],"issued":{"date-parts":[["2023",5,1]]}}],"schema":"https://github.com/citation-style-language/schema/raw/master/csl-citation.json"} . Currently AI have no ability to replace the positions of human employees, but the changes from technology disturb some employees (Autor, 2015). Employees appreciate the convenience of AI aid, but also hold concerns about being replaced by AI. The organization's training play an important part in reducing fears. (Presbitero & Teng-Calleja, 2022)understanding the extent of its consequences on employees is limited. Hence, this study examines employee perceptions of AI and the consequent influences on employee job attitudes and career behaviors. Utilizing the career self-management perspective, the authors explore the mechanisms related to employee perceptions of AI and potential career exploration behaviors.Design/methodology/approach The authors tested several hypotheses using employee survey data (N = 345 call center agents. In terms of current research, AI has developed variety applications, but limited

discussion on AI applications for HRM within commercial organizations (Budhwar et al., 2022).

2.2 Hypothesis

2.2.1 AI and Employees' Job satisfaction

Job satisfaction (JS) was described as an assessment that employees make of their employment based on their own experiences. It has three dimensions: cognitive, emotional, and behavioral (Locke, 1969). A few researches noticed the effects of AI on job satisfaction. Rhee and Jin (2021) noted that employees with higher perceptions had strong anxiety about AI potentially replacing their positions, this anxiety and job insecurity reduces their job satisfaction. Kapur (2022) conclude that AI increased the efficiency for employees to improve their job satisfaction. Compared with exploring the effects of AI on job satisfaction, researchers focused on applying AI measured job satisfaction of employees (Çavuş et al., 2023)and this incessant decline in mental stimuli may turn employees into \"professional zombies.\" The diversity in work needs and preferences across generations has become a key organizational factor, generational differences have been studied in Western countries, not much information is available about generational cohorts and satisfaction (i.e. career, life and job satisfaction. In China, researchers surveyed engagement of employees from health industry. The results showed AI adoption have positive on engagement with increasing additional workload, which led to the influence of AI adoption on job satisfaction have uncertainties (Wang et al., 2021)despite this, the associated ethical implications remain open to debate. This research investigates how signals of AI responsibility impact healthcare practitioners' attitudes toward AI, satisfaction with AI, AI usage intentions, including the underlying mechanisms. Our research outlines autonomy, beneficence, explainability, justice, and non-maleficence as the five key signals of AI responsibility for healthcare practitioners. The findings reveal that these five signals significantly increase healthcare practitioners' engagement, which subsequently leads to more favourable attitudes, greater satisfaction, and higher usage intentions with AI technology. Moreover, 'techno-overload' as a primary 'techno-stressor' moderates the mediating effect of engagement on the relationship between AI justice and behavioural and attitudinal outcomes. When healthcare practitioners perceive AI technology as adding extra workload, such techno-overload will undermine the importance of the justice signal and subsequently affect their attitudes, satisfaction, and usage intentions with AI technology.","container-title":"Information Systems Frontiers","DOI":"10.1007/s10796-021-10154-4","ISSN":"1387-3326, 1572-9419","journalAbbrevia-

tion":"Inf Syst Front","language":"en","source":"DOI.org (Crossref. Technologies introduced could cause changes, such as change duties or replacement, even the processes and structure could be transformed (Bharadwaj, 2000). Employees could feel insecurity and anxiety in the organizations, leading decreasing job satisfaction and intention to leave (Jiang & Lavaysse, 2018)uncertainty, and control and their relationship with psychological strain, job satisfaction, and turnover intentions. Self-report data were obtained from staff at a psychiatric hospital undergoing restructuring. Results indicated that uncertainty had a direct and an indirect (via feelings of lack of control. Therefore, this project had the first hypothesis:

H1(a): AI adoption decrease JS in China.

Noy and Zhang (2023) examined the effects of ChatGPT on 444 employees, to conclude training could reduce employee resistance, improve writing and productivity, and increase employees' job satisfaction. Therefore, the hypothesis by following:

H1(b): AI adoption increase JS in China.

2.2.2 AI and Psychological Contract

Psychological contract (PC) refers to the expectations and responsibilities that both parties in an employment relationship should fulfill for each other (Robinson et al., 1994). Psychological contract could reflect more effects of employment relationship than written contract, including job security and satisfaction, career development, justice, and loyalty (Rousseau, 1995)particularly those contracts that exist between workers and the organization. A contract is an exchange agreement between employee and employer. The contract may include written terms (e.g., union agreement, job offer letter. AI adoption could lead to panics from employees about losing jobs, trust issues between AI and human employees, and additional expectations, which means organizational support is important to employees to adapt (Arslan et al., 2019). In China, these changes were happening at both the micro and macro levels due to the impacts of AI adoption. There was a diminishing demand for low-skilled people and an increasing demand for medium- and high-skilled individuals in the employment structure (Ma et al., 2022). The limited understanding for AI adoption on employment relationship could not provide more guidance for business practices in China. Therefore, this project had hypothesis by following:

H2(a): AI adoption positive relate to PC in China.

Insufficient alignment between AI and the organization's environment hinders the effective use of AI in facilitating equitable and transparent management decisions. Individuals may harbour scepticism towards the capabilities of AI (Kong et al., 2021)bringing enlightenment to both

employees and managers. Design/methodology/approach Data were collected from a survey of 432 employees who worked in full-service hotels in China. Structural equation modeling (SEM, and such suspicion may result in a assumptions:

H2(b): AI adoption positive relate to PC in China.

2.2.3 Leadership

Researchers have dissected leadership into distinct styles, such as transactional, transformational, and ethical leadership, formulating a comprehensive leadership framework. After 2010, leadership research entered a new phase to align with digital transformation trends. In the digital age, leadership have played an important role to achieve the aims of transformation (Yela Aránega et al., 2023)Motivation and Risk-taking have a direct and significant impact. They are the most developed competencies and, therefore, the ones that have the greatest impact on the Kinder Leadership style (that is, one based more on kindness, caring, gentleness, and graciousness towards colleagues. Studies proposed that the success of digital transformation was influenced not only by technology but also by leaders' capacity to manage the employment relationship. They argued that leaders' ability to handle various technology implementations will ultimately shape the process and results of digital transformation (Gilli et al., 2023)this study aims to explain the impact digital transformation has on leadership due to organizational size.Design/methodology/approach Cross-border study with experts from multinational enterprises (MNEs. Transformational leadership (TL), characterized by its attributes of adaptability, flexibility, and inspiration, offers significant implications for firms across industries and sizes of organizations in practical applications, particularly to employees' performance and behavior (Bass & Riggio, 2006). Evidence from a study involving fifty librarians across four Arab nations showed that transformational leadership spurs the development of skills and mindsets necessary for AI adaptation (Shal et al., 2024)exploring attitudes, beliefs, and understanding of AI technologies, while the second implemented the Multifactor Leadership Questionnaire (MLQ 5×. Currently, the discussion about AI applications in management and employment relationship is in its infancy in China (Yang et al., 2023). Moreover, while the effects of transformational leadership on job satisfaction and psychological contracts has been explored, it has not been specifically linked to AI integration(Scuotto et al., 2022). This project had following hypothesis:

H3: TL significantly moderates the positive effect of AI adoption on JS, and the extent of this effect varies across industries.

H4: TL significantly moderates the positive impact of AI adoption on the PC, with the extent of the impact varying due to industry differences.
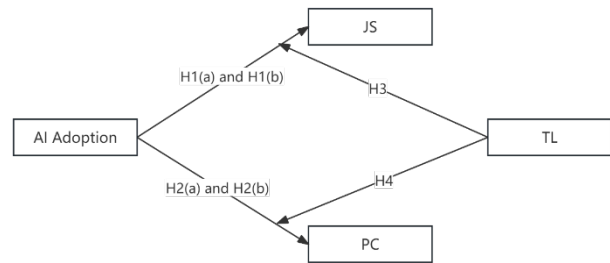

Fig. 1. Research model

3. Method

3.1 Sample

The aim of this program was exploring the effects of AI adoption on psychological contract and employees' job satisfaction in China. Based on the aim, the survey applied quantitative research to present the influences of AI adoption on employment relationship with data. Referring to previous research (I. A. Wong et al., 2023; S. I. Wong & Berntzen, 2019)despite this, the associated ethical implications remain open to debate. This research investigates how signals of AI responsibility impact healthcare practitioners' attitudes toward AI, satisfaction with AI, AI usage intentions, including the underlying mechanisms. Our research outlines autonomy, beneficence, explainability, justice, and non-maleficence as the five key signals of AI responsibility for healthcare practitioners. The findings reveal that these five signals significantly increase healthcare practitioners' engagement, which subsequently leads to more favourable attitudes, greater satisfaction, and higher usage intentions with AI technology. Moreover, 'techno-overload' as a primary 'techno-stressor' moderates the mediating effect of engagement on the relationship between AI justice and behavioural and attitudinal outcomes. When healthcare practitioners perceive AI technology as adding extra workload, such techno-overload will undermine the importance of the justice signal and subsequently affect their attitudes, satisfaction, and usage intentions with AI technology.","container-title":"Information Systems Frontiers","DOI":"10.1007/s10796-021-10154-4","ISSN":"1387-3326, 1572-9419","journalAbbreviation":"Inf Syst Front","language":"en","source":"DOI.org (Crossref, this project was conducted using a questionnaire and data was analyzed with SPSS 29.0. The target group is employees currently working in China.

The questionnaire consisted of five sections, including basic information and five-points Likert scales of four variables. AI adoption employed and edited from benefits

(Martela & Ryan, 2016), automation (Chen et al., 2015) and justice (Newman et al., 2020). JS had 13 items with 3, including JS (Liu et al., 2007), job engagement (Rich et al., 2010) and overload scale (Tarafdar et al., 2007)this paper uses concepts from sociotechnical theory and role theory to explore the effects of stress created by information and computer technology (ICT. The original PC scale (Dabos & Rousseau, 2004)research directors were identified as primary agents for the university (employer has 23 items. It was edited to retain the 21 items that were appropriate for this study. TL referred to the design of Bass and Avolio (1995) with 26 items. This project retained 10 items which are primarily related to innovation and well-being.

3.2 Data collection

The questionnaire was edited as an online version with SurveyMonkey, using both English and Chinese. The questionnaire link was sent to 500 employees working in China by email and WeChat. There were 434 responses (86.80%). 402 responses are valid for analysis. According to Global Industry Classification Standard, these responses were divided into 10 industries. However, the sample size of six industries was insufficient to meet the analytical requirements (under 40). 321 responses (64.2%) from four industries (services, information technology, industrial manufacturing, and consumer staples) were included for analysis in this project. Demographic information analysis is presented in Table 1

Table 1. Demographic analysis (N=321)

	Category	n	%
Gender	Male	155	48.3
	Female	156	48.6
Age	18-23	10	3.1
	24-33	255	79.4
	34-43	55	17.1
	44 and above	1	0.3
Education	Junior College	63	19.6
	Bachelor	230	71.7
	Master	25	7.8
	Above Master	3	0.9
Industry	Services	93	29.0
	Information technology	111	34.6
	Industrial Manufacturing	61	19.0
	Consumer Staples	56	17.4

There was a large proportion of people born in the 1990s (79.4%). Participants with a bachelor's degree or higher degrees comprised 80.4% of the sample. The average number of functions used per participant was 2.73. This data is less than 3.8 from the survey of McKinsey (2022).

4. Result

4.1 Analysis of reliability and validity

The reliability result is represented in Table 2, the Cron-bach's α scores for four scales were above 0.8 ($\alpha > 0.7$) and internal consistency was acceptable. Each item's CITC coefficient was greater than 0.4 (>0.3). The results of validity testing for the four variables were represented in Table 3. The KMO score of AI adoption was .876 (>0.7, $p < 0.01$). The KMO values for the other three variables showed structural validity (>0.9, $p<0.01$). This questionnaire is valid for analysis.

Table 2. Reliability test results, Mean and SD for items.

Variable	items	Mean	SD	CITC coefficient	α coefficient after deleting that item	Cronbach α coefficient
AI adoption	AI 1	3.270	1.276	.471	.864	0.865

	AI 2	3.230	1.234	.561	.855	
	AI 3	3.370	1.071	.621	.849	
	AI 4	3.600	1.128	.623	.848	
	AI 5	3.460	1.134	.691	.842	
	AI 6	3.430	1.130	.592	.851	
	AI 7	3.740	1.098	.649	.846	
	AI 8	3.630	1.065	.592	.851	
	AI 9	3.500	1.087	.594	.851	
JS	JS 1	3.667	1.051	.630	.827	0.846
	JS 2	3.604	1.059	.686	.823	
	JS 3	3.592	1.083	.658	.825	
	JS 4	3.701	1.111	.596	.829	
	JS 5	3.810	1.030	.598	.829	
	JS 6	3.651	1.068	.665	.824	
	JS 7	3.903	1.025	.633	.827	
	JS 8	3.794	0.985	.659	.826	
	JS 9	3.508	1.121	.511	.835	
	JS 10	2.209	1.071	-.753	.906	
	JS 11	3.483	1.173	.588	.829	
	JS 12	3.635	1.078	.671	.824	
	JS 13	3.636	1.126	.610	.828	
PC	PC 1	3.650	1.007	.682	.947	0.950
	PC 2	3.580	1.022	.665	.947	
	PC 3	3.630	1.125	.644	.948	
	PC 4	3.680	0.985	.601	.948	
	PC 5	3.590	1.054	.652	.947	
	PC 6	3.790	1.049	.647	.948	
	PC 7	3.720	0.999	.735	.946	
	PC 8	3.490	1.093	.649	.947	
	PC 9	3.750	1.029	.695	.947	
	PC 10	3.730	0.960	.656	.947	
	PC 11	3.560	1.011	.695	.947	
	PC 12	3.850	0.978	.712	.947	
	PC 13	3.570	1.044	.666	.947	
	PC 14	3.640	1.046	.618	.949	
	PC 15	3.640	1.096	.672	.947	
	PC 16	3.720	1.027	.694	.947	
	PC 17	3.580	1.081	.681	.947	
	PC 18	3.800	1.047	.662	.947	
	PC 19	3.650	1.045	.663	.947	
	PC 20	3.640	1.015	.681	.947	

	PC 21	3.650	1.094	.702	.947	
TL	TL 1	3.700	0.981	.685	.869	0.885
	TL 2	3.670	1.039	.627	.873	
	TL 3	3.680	1.120	.667	.870	
	TL 4	3.750	1.006	.637	.873	
	TL 5	3.720	0.999	.661	.871	
	TL 6	3.820	1.040	.691	.869	
	TL 7	3.750	0.993	.700	.868	
	TL 8	3.620	1.123	.654	.871	
	TL 9	3.750	1.084	.720	.866	
	TL 10	1.350	0.476	-.071	.903	

Note: SD= Standard Deviation

Table 3. Validity test for variables

Variable	KMO	Approx Chi-Square	Df	P
AI adoption	.876	1153.786	36	.000<.001
JS	.939	2005.802	78	.000<.001
PC	.965	3745.400	210	.000<.001
TL	.916	1402.677	45	.000<.001

4.2 Hypothesis testing

Table 4 Mean, SD and Correlation analysis for four variables (N=321)

	Mean	SD	AI adoption	JS	PC	TL
AI adoption	3.471	.790	1			
JS	3.546	.638	.764**	1		
PC	3.662	.733	.720**	.832**	1	
TL	3.480	.703	.689**	.782**	.851**	1

Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, n.s. denotes not significant.

Table 4 shows the correlation relationship between the four variables. The results confirm that AI adoption is positively correlated with JS ($r = 0.764$, $p < 0.01$), PC ($r = 0.720$, $p < 0.01$), and TL ($r = 0.689$, $p < 0.01$).

Table 5 Linear regression analysis (N=321)

	Non-standardized coefficient		Standardized coefficient	p
	B	SE	β	
constant	1.404	.104		0.000
AI adoption	.617	.029	.764	0.000
R^2	.764			
Ad R^2	.583			
F	445.883			

Note: Dependent variable: JS

Table 5 suggests that AI Adoption has a significant explanatory power of 76.4% in relation to the variation in JS. Furthermore, it indicates that it has positive effects on JS (B=0.617, p<0.01). Thus, H1 (a) is not supported, H1 (b) is supported.

Table 6 Linear regression analysis (N=321)

	Non-standardized coefficient		Standardized coefficient	p
	B	SE	β	
constant	1.343	.129		0.000
AI adoption	.668	.036	.720	0.000
R^2	.518			
Ad R^2	.516			
F	342.466			

Note: Dependent variable: PC

Table 6 shows a significant and beneficial correlation between AI adoption and PC (51.8%, B=0.668, p<0.01). Therefore, H2 (a) is supported, H2 (b) is not supported. Table 7 shows the comparison of the four industries in AI-JS and AI-PC. Consumer Staples is significant in both sets of relationships, but explains less relative to other industries.

Table 7. Four Industry Regression Comparisons (AI-JS, AI-PC)

	AI-JS		AI-PC	
	B	R^2	B	R^2
Industry 1	.617	.605	.601	.420
Industry 2	.652	.598	.747	.612
Industry 3	.611	.591	.732	.667
Industry 4	.509	.505	.503	.350

Note: Service=Industry 1 (n=93), information technology=Industry 2 (n=111), industrial manufacturing=Industry 3 (61), and consumer staples=Industry 4 (n=56)

To test the moderating effects of TL between AI-JS and AI-PC, this project introduced PROCESS from Hayes. The results of the integration of the four industries are shown in Table 8

Table 8. The moderator role of TL on AI-JS and AI-PC among 4 target industries.

	AI*TL on JS					AI*TL on PC				
	B	t	p	R^2	F	B	t	p	R^2	F
Industry 1	-.065	-1.320	.000	.746	87.319	-.110	-2.252	.000	.738	83.479
Industry 2	-.006	-.085	.000	.730	96.576	-.005	-.079	.000	.808	149.823
Industry 3	-.043	-.462	.000	.735	52.717	.142	2.108	.000	.854	111.684
Industry 4	-.083	-.899	.000	.642	31.056	.055	.495	.000	.633	29.974

The results show that the 2 models are statistically significant in the four industries. However, the result rejected H3. TL weakened the positive relationship between AI-JS. H4 was rejected in two industries, being accepted in industrial manufacturing (B = 0.142, p<0.01) and consumer staples (B = 0.055, p <0.01).

5. Discussion

The aim of this project is to explore the effects of AI adoption on employment relationship for four industries though the theories of job satisfaction and psychological contract from employees' perspectives in China.

5.1 Findings

This survey suggested that AI adoption enhances job satisfaction and psychological contract, corroborating prior studies which show these factors boost employee and organizational performance (Samson & Swink, 2023). Research also indicates a positive link between AI and performance metrics (Davenport, 2018; Grewal et al., 2021; Holmström, 2022), However, it has not adequately addressed the transformations in employee psychology, specifically concerning matters of acceptance and job insecurity. (Rhee & Jin, 2021; I. A. Wong et al., 2023).

AI's integration into workplaces appears to not only increase performance but also offer fairer management by reducing human biases. Nonetheless, the transition may cause job insecurity. For employees less adaptable to change, organizational support is crucial for fostering acceptance (Ahn & Chen, 2022), while those highly aware may face negative emotions, increasing turnover intention (Zhong et al., 2022). Individuals' reactions could differ based on personal attributes, though the aggregate organizational impact remains markedly positive.

Our study reveals a surprising aspect of transformational leadership's role in the context of AI adoption. While transformational leadership is known to foster a supportive workplace environment which enhances communication and skills, it unexpectedly dampened the positive effects of AI on job satisfaction and the psychological contract in the service and IT sectors. Despite this, our analysis confirms transformational leadership's overall positive influence on AI adoption (R^2= 0.475, B=0.774, p<0.01), psychological contract fulfillment (R^2 = 0.742, B=0.888, p<0.01), and job satisfaction (R^2= 0.612, B=0.711, p<0.01).

The study included transformational leadership for its potential to mitigate negative employee reactions and encourage positive behaviors amid technological changes, and to reflect industry-specific leadership dynamics (Erdogan & Bauer, 2015). Although it acted as a moderating variable that weakened some positive effects, transformational leadership generally had a favorable impact on AI adoption and employee responses. The exact cause of the mitigated positive impact remains unclear due to data limitations.

5.2 Limitation

The observed reduction in the effects of transformational leadership may cause from biases in scale design and question selection, potentially overlooking certain variables. As a cross-sectional analysis, the study can't match the insights gained from longitudinal research, which better captures the enduring effects of technological and organizational shifts that unfold over time. Although statistically significant, our findings, derived from random sampling, may not fully represent organizational characteristics such as size or specific regional contexts. They provide a broad overview of AI adoption's impact on Chinese employees, without delving into nuanced, long-term dynamics.

5.3 Future Research

This research developed within the dynamic landscape of AI's rapid integration into digital transformation. the influences of AI have intensified in recent years, disrupting social norms and organizational cultures. Our study confirms the role of AI in enhancing employment relationships by testing a model. Nevertheless, AI's evolution prompts ethical debates, with researchers considering AI as quasi-employees, and public opinion on AI's misuse or job replacement remains polarized. According to these developments, this paper suggests three suggestions for future research:

1. Ethics in AI employment: AI presents complex challenges for future employment relations. Organizations and individuals partially depend on AI for efficiency and cost reduction, but this raise concerns over job security, skill requirements, and potential anti-technology sentiments (Autor, 2015). Wealth concentration due to AI could exacerbate these issues. Ethical research aims not to hinder AI progress but to guide its development and maintain societal stability.

2. Future skills: Anxiety over AI-induced unemployment is prevalent, but current findings suggest that AI will alter rather than eliminate jobs, demanding new skills and changing collaboration patterns. In China, government-led skills restructuring from primary to tertiary education is underway, though specific strategies and impacts are still evolving. Digital literacy emerges as a significant challenge, especially for those less familiar with technology.

3. Leadership evolution: Our study conservatively employed transformational leadership as a moderating factor, but digital transformation has spurred new leadership styles. Future research should assess digital leadership, an emerging concept in the digital transformation era, as it faces challenges in uncertain environments and is not yet fully conceptualized.

5.4 Management implications

At the organizational level, AI enhances performance,

optimizes processes, and facilitates talent management, necessitating research on AI applications. Organizations must balance technological benefits with employee well-being, considering AI's current inability to replicate human interaction and care.

Leaders in the digital era face novel challenges and must not only manage but also inspire and support their teams through change. Proactive leadership can mitigate resistance to AI, increasing loyalty and productivity. Individuals adapt, improving their skills to meet evolving demands. Trust in the organization and a positive approach to change are essential for navigating the AI-driven workplace positively. This study focus on the employer-employee relationship highlights job satisfaction and psychological contract as measures of organizational climate's effect on individuals. This inquiry does not directly address AI's impact on organizational performance or strategy but provides insight into personal and collective responses to AI's growing role in the workplace.

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