Environment and Social Psychology (2025) Volume 10 Issue 3 ISSN: 2424-8975 (O)
doi: 10.59429/esp.v10i3.3547 2424-7979 (P)

RESEARCH ARTICLE

Research on the influence of AI empowerment on the transformation willingness of accountants: Based on multidimensional analysis and empirical testing

Mujie Song

aSSIST University, Seoul, 03767, Republic of Korea

*** Corresponding author:** Mujie Song, songmujie99@163.com

ABSTRACT

The application of Artificial Intelligence (AI) technology is propelling the digital transformation of the accounting industry, and accordingly, the professional roles and skill requirements of accounting personnel are changing. Based on the Technology Acceptance Model (TAM) and Task-Technology Fit (TTF) theory, this study constructs an AI empowerment framework that includes technology usefulness, ease of use, and task fit, and introduces self-efficacy and professional identity as mediator variables to examine the impact of AI empowerment on accountants' willingness to transition. The study employs the questionnaire survey method to collect data from 400 accounting personnel, and conducts empirical tests through regression analysis and mediating effect analysis. The research findings indicate that the task matching degree has the most significant influence on the transformation willingness ($\beta = 0.402$, $p < 0.001$), followed by technical usefulness ($\beta = 0.211$, $p < 0.001$), while the influence of the ease of use of technology is relatively weaker ($\beta = 0.114$, $p < 0.05$). Both self-efficacy and professional identity play significant mediating roles in the path of technical usefulness. However, in the path of the ease of use of technology, only the mediating effect of professional identity is significant ($\beta = 0.0456$, $p < 0.05$). In addition, the task matching degree can indirectly affect the transformation willingness through the chain mediating path of "self-efficacy → professional identity" ($\beta = 0.0239$, $p < 0.05$). This study expands the application of the TAM and TTF theories in the research on the transformation of the accounting industry, and emphasizes the crucial roles of technology matching degree, self-efficacy, and professional identity in the context of AI enablement. Enterprises should optimize technology adaptability, strengthen skill training, and shape professional identity to enhance the transformation willingness and practical capabilities of accounting personnel.

Keywords: artificial intelligence (AI); transformation of accountants; technology acceptance model (TAM); task fit degree; professional identity

1. Introduction

Against the backdrop of the rapid development of information technology (IT), artificial intelligence (AI) is profoundly influencing the operational models of various industries. Relying on automated processes, data analysis, and intelligent decision-making, AI technology not only enhances work efficiency and accuracy but

ARTICLE INFO
Received: 1 March 2025 | Accepted: 18 March 2025 | Available online: 28 March 2025

CITATION
Song MJ. Research on the influence of AI empowerment on the transformation willingness of accountants: Based on multidimensional analysis and empirical testing. *Environment and Social Psychology* 2025; 10(3): 3547. doi:10.59429/esp.v10i3.3547

COPYRIGHT
Copyright © 2025 by author(s). *Environment and Social Psychology* is published by Arts and Science Press Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), permitting distribution and reproduction in any medium, provided the original work is cited.

also serves as a crucial driving force for the digital transformation of the accounting industry[1-3]. The research by Liang et al. (2024)[4] indicates that AI improves the accuracy and processing efficiency of financial reports, automates numerous repetitive tasks, and assists management in making strategic decisions. The popularization of AI technology has not only optimized financial accounting, auditing, and tax management processes but also led to significant changes in the professional roles of accountants and promoted the reconstruction of their professional skill systems[5,6].

The professional roles of accountants are transforming traditional "data processors" to "decision-support providers". This transformation places higher demands on their professional skills and professional identity[7]. Modern accountants are required to not only master technical skills (such as data analysis and accounting software operation) but also possess business acumen, critical thinking, problem-solving abilities, and teamwork skills[8]. Moreover, with the in-depth development of financial automation, accountants must proficiently use advanced spreadsheets, enterprise resource planning (ERP) systems, and AI-assisted decision-making tools to adapt to the intelligent financial management environment[9,10]. Future accounting professionals also need to have interdisciplinary comprehensive capabilities, including data analysis, big data technology, management accounting, and strategic planning, to address the increasingly complex challenges of corporate financial management[11].

The widespread application of AI technology has not only improved work efficiency but also given rise to new work models. Meanwhile, it has intensified the pressure on accountants' professional transformation[12]. Traditional accounting functions are no longer limited to basic bookkeeping. Instead, accountants are required to master multiple skills such as data analysis, information technology application, and financial decision - support. Facing the transformation opportunities brought about by AI empowerment, accountants encounter numerous challenges in terms of professional identity, skill improvement, and work-style adjustment. How to effectively enhance the technological adaptability of accountants, strengthen their professional identity, and promote their role transformation in the intelligent financial environment has become a common concern in both academic and industrial circles.

This study aims to explore the impact of AI empowerment on the transformation of accountants, especially how the perceived usefulness, perceived ease of use of AI technology, and task matching degree affect accountants' transformation willingness and transformation behavior. By establishing the mediating roles of self-efficacy and professional identity, this study will conduct an in-depth analysis of how these variables interact to influence accountants' enthusiasm and actions in accepting and applying AI technology. Specifically, this study mainly focuses on the following questions:

(1) How do the usefulness, ease of use, and task-matching degree of AI technology affect accountants' transformation willingness?

(2) Do self-efficacy and professional identity play mediating roles between AI empowerment and transformation willingness?

(3) Can transformation willingness effectively promote transformation behavior, and what external factors restrict actual transformation behavior?

The role of accountants is gradually shifting towards a technology-supported decision-support role. Understanding and analyzing the factors influencing the professional transformation of accountants is of great significance for promoting the development of the industry and optimizing vocational education. The core objective of this study is to gain a deep understanding of the psychological and behavioral responses of accountants when facing AI technology empowerment, providing a theoretical basis and practical guidance for the transformation and development of the accounting industry.

2. Literature review and theoretical foundation

2.1. Impact of artificial intelligence on the accounting industry

The rapid development of artificial intelligence (AI) technology is profoundly reshaping the operational models of various industries. Particularly in the accounting field, its application has brought significant changes and challenges. In recent years, the widespread use of technologies such as robotic process automation (RPA), machine learning (ML), and natural language processing (NLP) has made the business processes of the accounting industry more intelligent and automated[13-15]. Traditional accounting work mainly relied on manual verification, data entry, and bookkeeping. However, the introduction of AI has gradually replaced these repetitive and rule-based tasks, significantly improving the efficiency of financial processing[1]. In addition, AI not only can perform transactional accounting operations but can also provide financial analysis and decision-making support through data mining, pattern recognition, and intelligent prediction, thus promoting the transformation of the accounting profession from "data recorders" to "decision - support providers"[16]. This trend requires accountants to enhance their data analysis and strategic planning capabilities to adapt to the career changes brought about by technological empowerment.

The application of AI in the accounting industry is mainly reflected in several aspects: (1) Automation and Efficiency Improvement: AI improves the efficiency and accuracy of accounting work by automating data entry, reconciliation, and routine bookkeeping activities, reducing the risk of human errors[17]. (2) Data Analysis and Decision-Making Support: AI uses machine learning and natural language processing technologies to analyze large amounts of data, identify patterns, and predict financial trends, thereby supporting more informed decision-making[18]. (3) Risk Management and Auditing: AI enhances the ability to detect abnormal and fraudulent activities during the auditing process by continuously monitoring and analyzing financial data, helping enterprises identify and mitigate potential risks[19,20]. Moreover, the application of artificial intelligence (AI) in financial forecasting models can help enterprises make more scientific decisions. By analyzing large amounts of data, and identifying patterns, and trends, it provides high-precision forecasts, thus reducing investment risks and improving the accuracy of decision-making[21,22]. However, although AI can effectively improve the efficiency and accuracy of accounting work, it also poses a threat of substitution to traditional accounting roles. The application of AI technology also requires professional skills and ethical considerations regarding the use of algorithms[23]. The effectiveness of AI models depends on high-quality data, and data quality and privacy are also important concerns[22].

The application of AI in financial forecasting has significantly improved the accuracy of forecasts and the scientific nature of decision-making. Despite the challenges of data quality, privacy, and ethics, AI also provides enterprises with powerful tools to optimize financial management and decision-making processes. By integrating AI technology, enterprises can better respond to market dynamics and make more informed decisions. The application of AI has enabled the accounting industry to enter a new technology-driven era. Traditional accountants face the pressure of continuous learning and knowledge updating to adapt to this technology-driven transformation.

2.2. Transformation of accountants

With the rapid development of AI technology, the roles of traditional accountants face unprecedented challenges and opportunities. According to existing research, AI technology not only changes the work content of the accounting industry but also profoundly affects the career development direction of accountants. With the wide application of AI in the accounting industry, repetitive and basic tasks are gradually being replaced by automation, such as bill entry, voucher review, and financial statement

generation[24]. This change has led to a huge transformation in the daily work tasks of accountants and the traditional role of "bookkeeper" is gradually being replaced by the role of "analyst".

The application of AI technology requires accountants to have higher technical literacy and interdisciplinary capabilities. In an AI-empowered financial environment, accountants not only need to keep their traditional financial knowledge updated but also master data analysis, basic programming, and AI system operation to adapt to intelligent work processes[25,18]. The introduction of AI has not only changed the way financial work is carried out but also motivated accountants to learn new technical tools and data analysis methods to enhance their role in data-driven decision-making[26]. For example, by using machine learning and data mining, accountants can identify trends from massive financial data, optimize financial forecasting models, and improve the accuracy of risk management[27,2]. This change has prompted accountants to gradually transform into more forward-looking roles such as data analysts, financial planners, and strategic advisors. Using machine learning and data mining technologies, financial staff can extract potential information from financial data and provide more accurate financial forecasts and risk assessments for enterprises[27,2].

The introduction of AI also has an impact on the professional identity and career adaptability of accountants. The research by Goretzki, L., & Messner, M. (2019)[28] shows that with the automation of work content, the traditional professional identity of accountants is challenged. One of the anxieties faced by accountants is whether their roles and professional values can still be reflected with the assistance of AI[29]. The research by Bévort, F., & Suddaby, R. (2016)[30] indicates that the transformation of accountants is not only a transformation at the skill level but also a reconstruction of professional identity. To effectively cope with this transformation, enterprises and institutions need to provide continuous technical training and career planning support for accountants[31].

The introduction of AI technology has also promoted the transformation of accountants, from a task-executing role to a decision-participating role. The intelligent support of AI enables accountants not only to process financial data but also to participate in strategic decision-making and enterprise risk management. Research shows that AI can help accountants engage in more advanced tasks such as predictive analysis, financial planning, and decision-making support, promoting the development of accounting work towards higher - value-added directions[32]. However, to achieve this transformation, the self-efficacy of accountants is crucial. Accountants with high self-efficacy are more willing to actively respond to technological changes and are more likely to adapt to new work models[33].

AI technology brings not only the automation of accounting work but also the role transformation of accountants. This requires accountants to adapt to new technologies and at the same time enhance their strategic analysis capabilities, technological adaptability, and acceptance of new technologies. Although this transformation process may encounter challenges, it also provides more development opportunities for accountants.

2.3. Perceived usefulness, perceived ease of use, and task matching degree

The Technology Acceptance Model (TAM) is an important theoretical framework for explaining users' acceptance behavior of new technologies. Its core variables include Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)[34]. PU refers to the degree to which an individual believes that using a certain technology can improve their work efficiency, while PEOU measures the ease of use of the technology, that is, whether users think the technology is easy to learn and operate. In the accounting industry, the perceived usefulness of AI technology is mainly reflected in its ability to improve data processing efficiency, reduce human errors, and provide real-time decision - making support[35]. At the same

time, the perceived ease of use affects whether accountants are willing to actively adopt AI technology. For example, factors such as an intuitive AI financial software interface and automated report-generation tools can enhance accountants' willingness to adopt the technology. The ease of use of technology is manifested in whether the operation interface of the AI system is simple, clear, and easy to handle business, which determines the willingness of accountants to adopt AI technology and their work effectiveness[36].

The Task matching degree (TTF) theory focuses on the degree of fit between technology and work tasks, emphasizing whether technology can effectively meet work requirements and ultimately affect an individual's performance[37]. The TTF theory holds that only when the technological characteristics highly match the task requirements are individuals more likely to adopt the technology and improve work efficiency. This theory includes three key elements: Task Characteristics, Technology Characteristics, and Task matching degree (TTF): the degree of adaptation of technology to meet specific task requirements[37]. In the accounting industry, whether the application of AI technology can truly help accountants' complete complex financial analysis, optimize the audit process, and reduce the cost of manual verification is a key factor affecting its acceptance. If an AI system can accurately meet the needs of accounting work, such as intelligent report generation, risk assessment, and automated compliance checking, the task-matching degree of accountants will be improved, thereby enhancing their willingness to transform.

The complementarity of TAM and TTF makes them applicable to the background of this study: TAM focuses on individuals' subjective perception of technology, while TTF emphasizes the degree of fit between technology and task requirements[38]. This study believes that in the AI-empowered accounting environment, relying solely on the usefulness and ease of use of technology may not be sufficient to explain the transformation willingness of accountants. It is necessary to consider whether AI technology can meet the actual needs of accounting work (task matching degree). Therefore, this study introduces the task matching degree (TTF variable) to explore the relationship between the technology adoption and career transformation of accountants under AI empowerment.

2.4. Self - efficacy and professional identity

Self-efficacy refers to an individual's confidence in their ability to complete a specific task[39]. During the professional transformation process of accountants, self-efficacy has a significant impact on whether they are willing to accept new technologies, update their professional skills, and actively adapt to a new work environment. Research shows that individuals with higher self-efficacy are more willing to accept new technologies and actively engage in learning and adaptation[33].

Professional identity, on the other hand, refers to an individual's perception and sense of belonging as a member of a certain professional group[40]. The professional identity of accountants is not only closely related to the motivation of their professional development but also determines their attitudes and adaptability when facing industry changes. With the continuous development of artificial intelligence technology, the professional identity of accountants is becoming more diverse, reflecting differences in their specialized fields and career stages[41]. The identity of accountants is not only related to their image inside and outside the organization but also challenged by increasing demands, conflicting expectations, and technological advancements[42]. The dynamic and fluid nature of professional identity requires accountants to constantly adjust and adapt throughout their careers[43]. As the professional roles of accountants change, they are required to re-examine their professional identity and redefine their self-role transformation under the empowerment of artificial intelligence.

In conclusion, it can be inferred that self - efficacy and professional identity play a mediating role between AI empowerment and the transformation willingness of accountants.

2.5. Transformation willingness and transformation behavior

The willingness to transform accountants refers to the degree to which they are willing to actively adapt to technological changes, update their skills, and change their work methods. Transformative behaviour, on the other hand, refers to the actions related to transformation taken by individuals in actual work, such as learning new skills, using new technologies, and adjusting work processes. There is a close relationship between transformation willingness and transformative behavior. Transformation willingness usually affects whether an individual takes positive transformative actions[44]. Existing research shows that when accountants have a high level of recognition and enthusiasm for technological transformation, they are more likely to take action to adapt to new work requirements and thus achieve professional transformation[45].

2.6. Research model and hypotheses

Based on the above literature review and theoretical foundation, this study sets three independent variables - perceived usefulness of skills, perceived ease of use of skills, and task matching degree. These three dimensions describe the characteristics of AI empowerment. There are two mediating variables - self-efficacy and professional identity, and the dependent variable is the transformation willingness of accountants. At the same time, a dimension is set to measure the impact relationship between the transformation willingness of accountants and their personal transformative behavior. Based on this, this study proposes six research hypotheses, and the research model is shown in **Figure 1**.

H1: The technological usefulness of AI empowerment has a significant positive impact on accountants' willingness to transform.

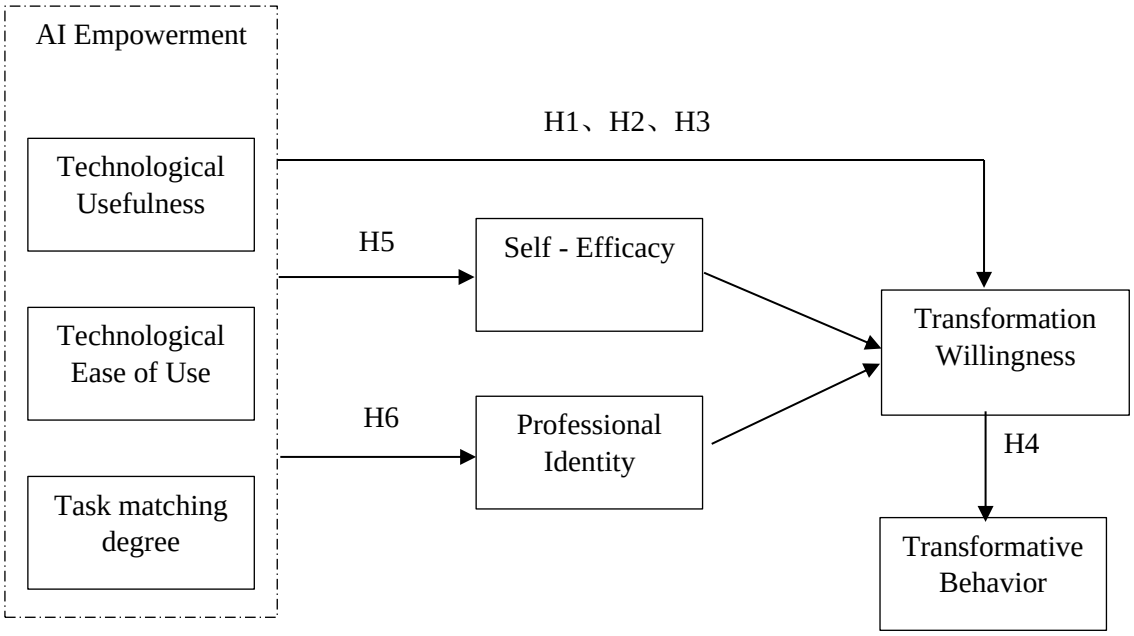


Figure 1. Research model.

H2: The ease of use of AI empowerment has a significant positive impact on accountants' willingness to transform.

H3: The task matching degree of AI empowerment has a significant positive impact on accountants' willingness to transform.

H4: Accountants' willingness to transform has a significant positive impact on transformative behavior.

H5: Self-efficacy plays a mediating role between AI empowerment and accountants' willingness to transform.

H6: Professional identity plays a mediating role between AI empowerment and accountants' willingness to transform.

3. Research methods

3.1. Research subjects

This study will use anonymous questionnaires, which will be distributed online via Wenjuanxing to people working in the accounting and finance industry. Data will be collected according to the following criteria: (1) The respondents are over 18 years old; (2) They are currently in full - time employment and not interns.

3.2. Research instruments

This study adopts established measurement scales, integrating measurement questions of dimensions developed by domestic and foreign scholars in line with the needs of this research.

3.2.1. Technology acceptance model (TAM) scale

The Technology Acceptance Model (TAM) scale developed by Davis (1989)[34] is used. This scale consists of two core dimensions: Perceived Usefulness and Perceived Ease of Use, and uses a Likert 1 - 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Since this study mainly focuses on the impact of AI-empowered technologies on the transformation of accountants, it is changed to measure the two dimensions of technological usefulness and technological ease of use.

3.2.2. Task matching degree (TTF) Scale

The Task matching degree (TTF) scale developed by Goodhue and Thompson (1995)[37] is adopted. This scale sets 8 dimensions with a total of 34 questions for the study and uses a Likert 1 - 7-point scale from 1 (strongly disagree) to 7 (strongly agree). Based on the needs of this study, a task-matching degree is set to measure whether accountants can meet job requirements when using AI technology.

3.2.3. Self - efficacy scale

The self-efficacy scale compiled by Ng, T. W., and Lucianetti, L. (2016)[46] is used. This scale involves a total of 7 main dimensions (organizational trust, perceived respect, creative self-efficacy, persuasive self-efficacy, change self-efficacy, innovative behavior, psychological collectivism) with 42 questions for measurement, and uses a Likert 1 – 5 point scale from 1 (strongly disagree) to 5 (strongly agree).

3.2.4. Professional identity scale

The professional identity scale developed by Brown, R., et al. (1986)[47] is adopted. This scale is constructed based on three dimensions: Awareness of group membership, Evaluation, and Affect, with a total of 10 questions for the study. The first 5 questions (1 - 5) are affirmative statements, and the last 5 questions (6 - 10) are negative statements. A Likert 5 - 5-point scale from 1 (never) to 5 (always) is used.

3.2.5. Transformation willingness scale

The transformation willingness scale compiled by Venkatesh, V., et al. (2003) [36] is used. This scale is based on five dimensions for research and uses a Likert 7 - 7-point scale from 1 (strongly disagree) to 7 (strongly agree).

3.2.6. Transformative behavior scale

The transformative behavior scale compiled by Ajzen, I. (1991) [48] is used. This scale sets 5 dimensions for research and uses a Likert 7 - point scale from 1 (strongly disagree) to 7 (strongly agree).

4. Data Results and analysis

This study uses SPSS version 22 and the PROCESS v4.1 plugin for data analysis.

4.1. Descriptive analysis

This study adopted an online anonymous questionnaire survey (Wenjuanxing) targeting in-service accountants in enterprises and institutions. A total of 400 valid samples were collected.

(1) Gender Distribution: In the sample, men accounted for 49.8% (199 people), and women accounted for 50.2% (201 people), with a relatively balanced ratio. The balanced gender distribution helps to reduce gender bias and improve the universality of research conclusions.

(2) Age Distribution: Accountants aged 31 - 40 accounted for the largest proportion. Among them, those aged 31 - 35 accounted for 20.3% (81 people), and those aged 36 - 40 accounted for 24.8% (99 people). Accountants in this age group usually have relatively rich working experience and are also more likely to adapt to emerging technologies (Peng et al., 2023).

(3) Educational Background Structure: Those with a bachelor's degree or above dominated. Specifically, undergraduates accounted for 49.0% (196 people), postgraduates accounted for 23.8% (95 people), and doctoral students accounted for 1.8% (7 people), indicating that the overall educational level of the research subjects is relatively high.

(4) Years of Work Experience: Accountants with 1 - 6 years of work experience accounted for the largest proportion (41.8%). Among them, those with 1 - 3 years of work experience accounted for 21.3% (55 people), and those with 4 - 6 years of work experience accounted for 20.5% (82 people). This indicates that the samples of this study mainly consist of accountants in the early stage of their careers, who are more likely to face career challenges under AI empowerment.

To further understand the characteristics of the overall sample, a descriptive analysis of the seven variables in the theoretical model is carried out next, and the results present rich information. In terms of the mean values, the mean values of technological usefulness, technological ease of use, task matching degree, self-efficacy, professional identity, transformation willingness, and transformative behavior are 2.8400, 2.8550, 2.9725, 2.8083, 2.9925, 2.9767, and 3.0608 respectively, all of which are close to the median value. This indicates that accountants' perception of each dimension is at a moderate level. Among them, the mean value of transformative behavior is relatively high, suggesting that accountants have already taken certain transformation measures in practice; the mean value of self-efficacy is relatively low, which may reflect their lack of confidence in their ability to cope with transformation. From the analysis of the degree of dispersion, the standard deviation of each dimension ranges from 0.63803 to 0.70854, and the degree of dispersion is moderate, indicating that there are certain differences in individuals' views on each dimension. The standard deviation of professional identity is relatively large, reflecting the uneven cognition of accountants in this regard. The analysis of skewness and kurtosis shows that the skewness and kurtosis values of each dimension are mostly close to 0, indicating that the data distribution is approximately symmetric and similar to the normal distribution, and there is no obvious extreme distribution. This shows that the overall results of the questionnaire are reliable and can reflect the true attitudes and behaviors of accountants. The statistical description results of each dimension are shown in **Table 1**:

Table 1. Descriptive statistical results of each dimension.

Dimension	Number of Questions	Minimum Value	Maximum Value	Mean Value	SD	Skewness	Kurtosis
Technological Usefulness	3	1	5	2.8400	0.63803	0.175	0.094
Technological Ease of Use	3	1	5	2.8550	0.64292	0.119	-0.291
Task matching degree	3	1	5	2.9725	0.64074	-0.014	-0.306
Self - Efficacy	3	1	5	2.8083	0.65651	-0.021	-0.015
Professional Identity	3	1	5	2.9925	0.70854	0.056	-0.154
Transformation Willingness	3	1	5	2.9767	0.68359	-0.140	-0.284
Transformative Behavior	3	1	5	3.0608	0.64537	-0.122	0.054

4.2. Reliability analysis

In order to conduct the research more effectively and ensure the smoothness of the writing, this study numbers each variable. The numbering situation is shown in **Table 2**:

Table 2. Table of numbering situations of variable dimensions.

Variable	Dimension	Numbering	Number of Items
Independent Variable	Technological Usefulness	A	3(A1, A2, A3)
	Technological Ease of Use	B	3(B1, B2, B3）
	Task matching degree	C	3(C1, C2, C3)
Mediating Variable	Self - Efficacy	D/M1	3(D1, D2, D3)
	Professional Identity	E/M2	3(E1, E2, E3)
Dependent Variable	Transformation Willingness	F	3(F1, F2, F3)
Other Variables	Transformative Behavior	G	3(G1, G2, G3)

In this analysis, the reliability of the scale was analyzed through SPSS version 22. The specific analysis results are shown in **Table 3**:

Table 3. Reliability analysis of each dimension.

Dimension	Number of Questions	Sample Size	Cronbach's α
Technological Usefulness	3	400	0.796
Technological Ease of Use	3	400	0.794
Task matching degree	3	400	0.783
Self - Efficacy	3	400	0.827
Professional Identity	3	400	0.829
Transformation Willingness	3	400	0.812
Transformative Behavior	3	400	0.814
Overall Scale	21	400	0.887

To assess the internal consistency of the questionnaire, we conducted a reliability analysis of Cronbach's α coefficient for each dimension. The reliability analysis was carried out by using SPSS 22 to analyze Cronbach's α coefficient to evaluate the internal consistency of the questionnaire. Generally speaking, when $\alpha > 0.70$, it indicates that the reliability of the scale is acceptable, and when $\alpha > 0.80$, it shows good

reliability[49]. The research results (see **Table 3**) show that the Cronbach's α values of all variables are higher than 0.70. Among them, the overall reliability of the questionnaire reaches 0.887, which indicates that the measurement tool in this study has a high level of internal consistency and can be used for subsequent data analysis.

4.3. Common method bias test

In this analysis, factor analysis was conducted on the scale using SPSS version 22. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were carried out, and the method of varimax rotation was applied. The KMO value was 0.879. This result indicates that the questionnaire data in this study has a high degree of commonality, and there is a strong correlation among the variables. The data passed Bartlett's test of sphericity ($p = 0.000 < 0.05$). Since the p-value is much smaller than the significance level of 0.05, it is considered that the correlation matrix among the variables is not an identity matrix, which shows that there is a significant correlation among the variables. The Harman's single-factor method test shows that the variance explained by the first common factor is 31.78%, which is less than the critical value of 40%. This indicates that the common method bias is not severe in this study.

4.4. Correlation analysis among variables

To further understand the correlations among variables and provide a basis for demonstrating the research hypotheses. Through correlation analysis, the relationships among different variables can be revealed, thus enabling an in-depth exploration of the influence mechanism of AI empowerment on the transformation of accountants. The correlation analysis was conducted using the Pearson correlation coefficient in SPSS version 22, and the relationships among multiple variables were analyzed, including gender, age, educational background, years of work experience, technical usefulness, technical ease of use, task match degree, self-efficacy, professional identity, willingness to transform, and transformative behavior, etc. The analysis results are shown in **Table 4**:

Table 4. Correlations among various variables.

Item N=400		1	2	3	4	5	6	7	8	9	10	11
1.Gender	*r*	1										
	p											
2.Age	*r*	-0.056	1									
	p	0.264										
3.Educational Background	*r*	0.161**	0.085	1								
	p	0.001	0.091									
4.Years of Work Experience	*r*	-0.010	0.155**	0.006	1							
	p	0.839	0.002	0.908								
5.A	*r*	-0.030	0.075	-0.041	0.094	1						
	p	0.548	0.135	0.416	0.061							
6.B	*r*	-0.064	0.067	-0.085	0.130**	0.562**	1					
	p	0.203	0.184	0.090	0.009	0.000						
7.C	*r*	0.041	0.043	-0.048	0.124*	0.332**	0.407**	1				
	p	0.418	0.388	0.335	0.013	0.000	0.000					
8.D	*r*	-0.004	0.097	-0.021	0.111*	0.427**	0.554**	0.383**	1			
	p	0.942	0.052	0.673	0.027	0.000	0.000	0.000				

Item N=400		1	2	3	4	5	6	7	8	9	10	11
9.E	*r*	0.013	-.011	-0.066	0.000	0.270**	0.170**	0.050	0.153**	1		
	p	0.795	0.831	0.190	0.994	0.000	0.001	0.320	0.002			
10.F	*r*	0.010	0.011	-0.037	0.096	0.382**	0.371**	0.486**	0.293**	0.407**	1	
	p	0.843	0.821	0.467	0.055	0.000	0.000	0.000	0.000	0.000		
11.G	*r*	-0.087	0.087	-0.049	0.027	0.481**	0.353**	0.357**	0.227**	0.101*	0.245**	1
	p	0.082	0.083	0.324	0.584	0.000	0.000	0.000	0.000	0.043	0.000	

Table 4. (*Continued*)

Note: Pearson correlation coefficients (r) are presented with corresponding p-values(p).

***. The correlation is significant at a confidence level (two-tailed) of 0.01.*

**. The correlation is significant at a confidence level (two-tailed) of 0.05.*

From the perspective of demographic variables, the correlations between the respondents' age and variables such as technical usefulness, ease of use of technology, and task matching degree are not significant (the correlation coefficients are -0.056, 0.067, and 0.043 respectively, and the p-values are 0.264, 0.184, and 0.388 respectively). There is a certain positive correlation between the respondents' educational attainment and variables such as technical usefulness, ease of use of technology, and task matching degree (the correlation coefficients are 0.161, 0.085, and -0.048 respectively, and the p-values are 0.001, 0.091, and 0.335 respectively). The correlations between the respondents' working years and variables such as technical usefulness, ease of use of technology, and task matching degree are weak (the correlation coefficients are -0.010, 0.155, and 0.006 respectively, and the p-values are 0.839, 0.002, and 0.908 respectively).

The Pearson correlation coefficient (r) was used in the correlation analysis to evaluate the degree of correlation among variables. The results are shown in **Table 4**. There is a significant positive correlation between technical usefulness and transformation willingness ($r = 0.382$, $p < 0.01$). There is a significant positive correlation between the ease of use of technology and transformation willingness ($r = 0.371$, $p < 0.01$). The task-matching degree has the greatest impact on the transformation willingness, and the correlation coefficient between them is the highest ($r = 0.486$, $p < 0.01$). There is a significant positive correlation between transformation willingness and transformation behavior ($r = 0.245$, $p < 0.01$). There is a significant positive correlation between self-efficacy and transformation willingness ($r = 0.293$, $p < 0.01$), and there is a relatively strong correlation between professional identity and transformation willingness ($r = 0.407$, $p < 0.01$). The correlation between professional identity and transformation behavior is relatively low ($r = 0.101$, $p < 0.05$), suggesting that it may mainly affect attitudes rather than directly drive behaviours.

In conclusion, through the correlation analysis among variables, the hypotheses of this study have been preliminarily verified. Technical usefulness, ease of use of technology, and task matching degree are the key factors driving the transformation willingness of accounting personnel, and the positive impact of transformation willingness on transformation behavior is supported by the data. In addition, self-efficacy and professional identity play significant mediating roles between AI enablement and transformation willingness. These results provide strong theoretical support for subsequent hypothesis testing and path analysis.

4.5. Linear regression analysis

To verify the research hypotheses H1-H3 and further explore the impact of AI empowerment factors on the transformation willingness of accountants, this study conducts an empirical test using multiple linear regression analysis. In the regression model, technical usefulness, technical ease of use, and task match

degree are set as independent variables and transformation willingness is set as the dependent variable. The analysis uses SPSS 22 to conduct ordinary least squares (OLS) regression and conducts F-test, multicollinearity test, and Durbin-Watson test to ensure the robustness of the model. The formula of the regression model is: Transformation Willingness = 0.857 + 0.211 * Technical Usefulness + 0.114 * Technical Ease of Use + 0.402 * Task Match Degree. The specific analysis results are shown in **Table 5**:

Table 5-1. Results of linear regression analysis of multivariate and transition willingness.

	Unstandardized Coefficients		**Standardized Coefficients**	***t***	***p***	**Collinearity Statistics**	
	B	***SE***	***β***			**Tolerance**	**VIF**
constant	0.857	0.168	-	5.096	0.000***	-	-
Technical Usefulness	0.211	0.055	0.197	3.831	0.000***	0.672	1.489
Technical Ease of Use	0.114	0.056	0.107	2.026	0.043*	0.630	1.588
Task Match Degree	0.402	0.050	0.377	8.092	0.000***	0.819	1.221
R^2	0.298						
Adjusted R^2	0.293						
F	F(3,396)=56.017，p=0.000						
D-W	1.979						

Dependent Variable: Transformation Willingness

*p<0.05 ** p<0.01** p<0.001*

From the analysis results in **Table 5-1**, the coefficient of determination (R^2) = 0.298, indicating that this model can explain 29.8% of the variation in transformation willingness. The F-value = 56.017, with $p < 0.001$, suggesting that the model as a whole is significant. All Variance Inflation Factor (VIF) values are less than 5, indicating that there is no serious problem of multicollinearity. The Durbin-Watson (D-W) value = 1.979, which is close to 2, indicating that there is no autocorrelation problem. The positive impact of technical usefulness on transformation willingness is significant ($\beta = 0.211$, $p < 0.001$), so Hypothesis H1 holds; the positive impact of the ease of use of technology on transformation willingness is relatively weak ($\beta = 0.114$, $p < 0.05$), so Hypothesis H2 holds; the positive impact of task matching degree on transformation willingness is the strongest ($\beta = 0.402$, $p < 0.001$), so Hypothesis H3 holds.

The task matching degree is the most important factor influencing the transformation willingness of accounting personnel ($\beta = 0.402$), and its influence is much higher than that of technical usefulness ($\beta = 0.211$) and the ease of use of technology ($\beta = 0.114$). This indicates that in the context of AI enablement, accounting personnel pay more attention to whether the technology can truly meet their work needs, rather than just its usefulness or ease of use[37]. Technical usefulness significantly affects transformation willingness ($\beta = 0.211$), which is consistent with the TAM theory. That is, when individuals believe that AI technology can help improve efficiency, they are more willing to accept technological changes[34]. The influence of the ease of use of technology is relatively weak ($\beta = 0.114$, $p < 0.05$), which indicates that when the complexity of the AI-enabled financial system is high, even if the operation is convenient, it still requires professional knowledge support[36].

In conclusion, the regression analysis results of this study verify Hypotheses H1-H3, further supporting the explanatory power of the combination of the TAM and TTF theories for the career transformation of accounting personnel.

Table 5-2. Results of the linear regression analysis of transformation willingness and transformative behavior.

	Unstandardized Coefficients		Standardized Coefficients	*t*	*p*	Collinearity Statistics	
	B	***SE***	***β***			**Tolerance**	**VIF**
constant	2.372	.140		16.931	0.000***	-	-
Technical Usefulness	0.231	.046	.245	5.041	0.000***	1.000	1.000
Technical Ease of Use			0.060				
Task Match Degree			0.058				
R^2			F(3,398)=25.412，p=0.000				
Adjusted R^2			2.006				

Dependent Variable: Transformative Behavior

p<0.05 ** p<0.01 p<0.001*

From **Table 5-2**, when transformation willingness is taken as the independent variable and transformation behavior as the dependent variable for linear regression analysis, it can be seen from the above table that the model formula is: Transformation Behavior = 2.372 + 0.2311 * Transformation Willingness. The R-squared value of the model is 0.060, which means that transformation willingness can explain 6% of the reasons for the variation in employees' transformation behavior. When conducting an F-test on the model, it is found that the model passes the F-test (F = 25.412, p = 0.000 < 0.01) it indicates that transformation willingness will have an impact on the transformation behavior of accounting personnel. The final specific analysis shows that: the regression coefficient value of transformation willingness is 0.231 (t = 5.041, p = 0.000 < 0.01), which means that transformation willingness has a significant positive impact on transformation behavior, that is, Hypothesis H4 holds.

4.6. Verification of the mediating effects of self-efficacy and professional identity

To further demonstrate the mediating effects of self-efficacy and professional identity, this study uses the PROCESS v4.1 version of the plugin for analysis. The specific analysis results of the mediating effects of self-efficacy and professional identity between technical usefulness and transformation willingness are shown in **Table 6-1**, and the model path diagram is shown in **Figure 2-1**:

Table 6-1. Results of the mediating effects of self-efficacy and professional identity between technical usefulness and transformation willingness.

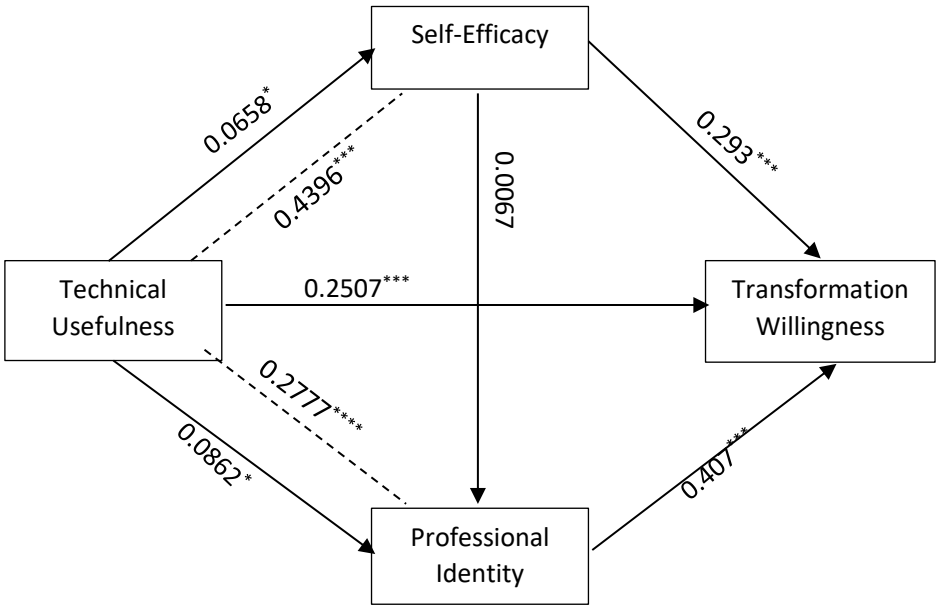
path	***β***	***SE***	***t***	***p***	**95% CI (LLCI, ULCI)**
1.A→M1	0.4396***	0.0466	9.4263	0.0000***	（0.3479，0. 5313）
2.A→M2	0.2777***	0.0593	4.6827	0.0000**	（0.1611，0.3943）
3.M1→F	0.1497*	0.0497	3.0091	0.0028*	（0.0519，0.2475）
4.M2→F	0.3103***	0.0433	7.1705	0.0000***	（0.2253，0.3954）
5.A→F （Direct Effect）	0.2507***	0.0525	4.7726	0.0000***	（0.1474，0.3540）
6.A→M1→F （Indirect Effect）	0.0658*	0.0223	-	-	（0.0237，0.1119）
7.A→M2→F （Indirect Effect）	0.0862*	0.0213	-	-	（0.0482，0.1317）
8.A→M1→M2→F （Chain Mediation）	0.0067	.0080	-	-	（-0.0084，0.0231）

path	*β*	*SE*	*t*	*p*	95% CI (LLCI, ULCI)
Total Effect	0.4095	0.0496	8.2506	.0000	（0.3119，0.5070）

Table 6. (*Continued*)

p<0.05 ** p<0.01 p<0.001*

Type of Bootstrap: Percentile Bootstrap Method



represent 1 A→M1 and 2 A→M2

Figure 2-1. Path diagram of the mediating effects of self-efficacy and professional.

According to the results of the mediating effect analysis in **Table 6-1**, we found that the regression coefficient of technical usefulness on self-efficacy (A→M1) is 0.4396 ($p < 0.001$), and the regression coefficient on professional identity (A→M2) is 0.2777 ($p < 0.001$), both reaching a significant level. In the verification of the mediating path, the regression coefficient of self-efficacy on transformation willingness (M1→F) is 0.1497 ($p < 0.05$), and the regression coefficient of professional identity on transformation willingness (M2→F) is 0.3103 ($p < 0.001$), indicating that both play mediating roles in the process of technical usefulness influencing transformation willingness. In addition, the direct effect of technical usefulness on transformation willingness (A→F) is 0.2507 ($p < 0.001$), and the indirect effects A→M1→F (0.0658, $p < 0.05$) and A→M2→F (0.0862, $p < 0.05$) are both significant, which further supports the existence of the dual mediating effect. The regression coefficient of the chain mediating path A→M1→M2→F is only 0.0067, and the 95% confidence interval contains 0 (-0.0084, 0.0231), indicating that this path is not significant. This means that self-efficacy will not further enhance the transformation willingness by influencing professional identity but directly plays a role as an independent mediating variable.

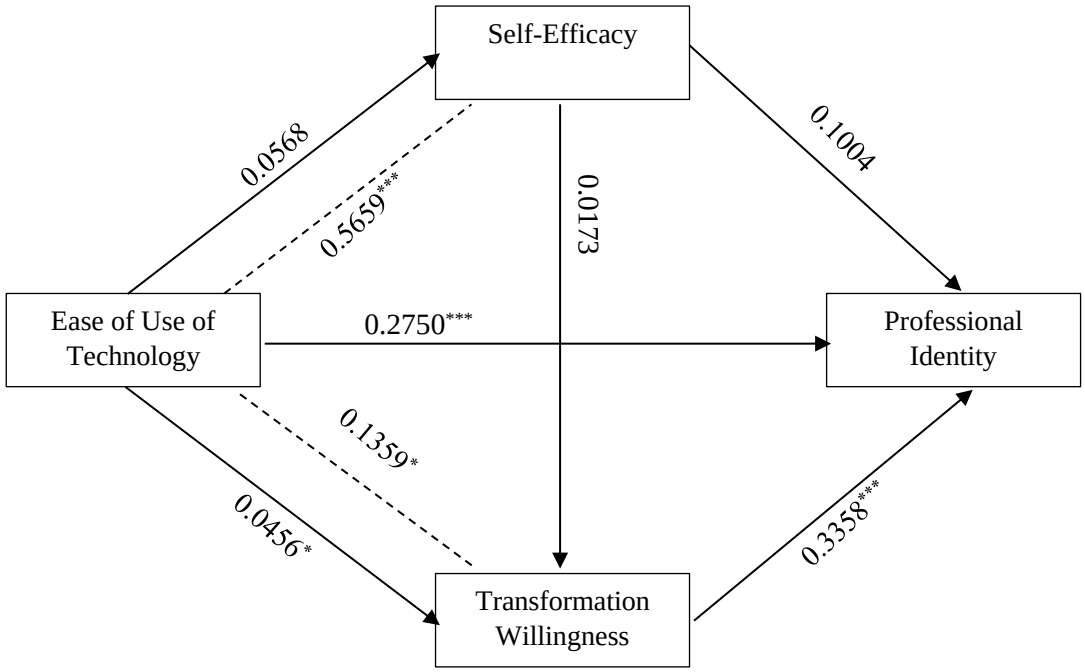
The specific analysis results of the mediating effects of self-efficacy and professional identity between the ease of use of technology and transformation willingness are shown in **Table 6-2**, and the model path diagram is shown in **Figure 2-2**:

Table 6-2. Results of the mediating effects of self-efficacy and professional identity between the ease of use of technology and transformation willingness

path	*β*	*SE*	*t*	*p*	95% CI (LLCI, ULCI)
1.B→M1	0.5659***	0.0426	13.2815	0.0000***	（0.4821，0..6496）
2.B→M2	0.1359*	0.0653	2.0810	0.0381*	（0.0075，0.2643）
3.M1→F	0.1004	0.0540	1.8592	0.0637	（-0.0058，0..2066）
4.M2→F	0.3358***	0.0423	7.9447	0.0000***	（0.2527，0..4189）
5.B→F （Direct Effect）	0.2750***	0.0553	4.9720	0.0000***	（0.1662，0..3837）
6.B→M1→F （Indirect Effect）	0.0568	0.0317	-	-	（-0.0046，0.1201）
7.B→M2→F （Indirect Effect）	0.0456*	0.0239	-	-	（0.0009，0 .0953）
8.B→M1→M2→F (Chain Mediation）	0.0173	0.0122	-	-	（-0.0060，0.0426）
Total Effect	0.3947***	0.0495	7.9751	0.0000***	（0.2974，0.4920）

*p<0.05 ** p<0.01** p<0.001*

Type of Bootstrap: Percentile Bootstrap Method



represent 1.B→M1 and 2.B→M2

Figure 2-2. Path diagram of the mediating effect of self efficacy and professional identity on ease of use of technology and transition willingness.

According to the regression analysis results in **Table 6-2**, the direct effect of the ease of use of technology on transformation willingness (B→F) is 0.2750 ($p < 0.001$). In the verification of the mediating path, the regression coefficient of the ease of use of technology on self-efficacy (B→M1) is 0.5659 ($p < 0.001$), and the regression coefficient on professional identity (B→M2) is 0.1359 ($p < 0.05$), both reaching a significant level. The regression coefficient of self-efficacy on transformation willingness (M1→F) is 0.1004 ($p = 0.0637$, not significant), while the regression coefficient of professional identity on transformation willingness (M2→F) is 0.3358 ($p < 0.001$), indicating that professional identity plays a significant mediating role between the ease of use of technology and transformation willingness, while the mediating role of self-

efficacy is not significant. In terms of the indirect effects, B→M1→F (indirect effect) is 0.0568 ($p > 0.05$, not significant), while B→M2→F (indirect effect) is 0.0456 ($p < 0.05$, significant). In addition, the regression coefficient of the chain mediating path B→M1→M2→F is 0.0173 ($p > 0.05$, not significant), further indicating that self-efficacy will not indirectly enhance transformation willingness by influencing professional identity.

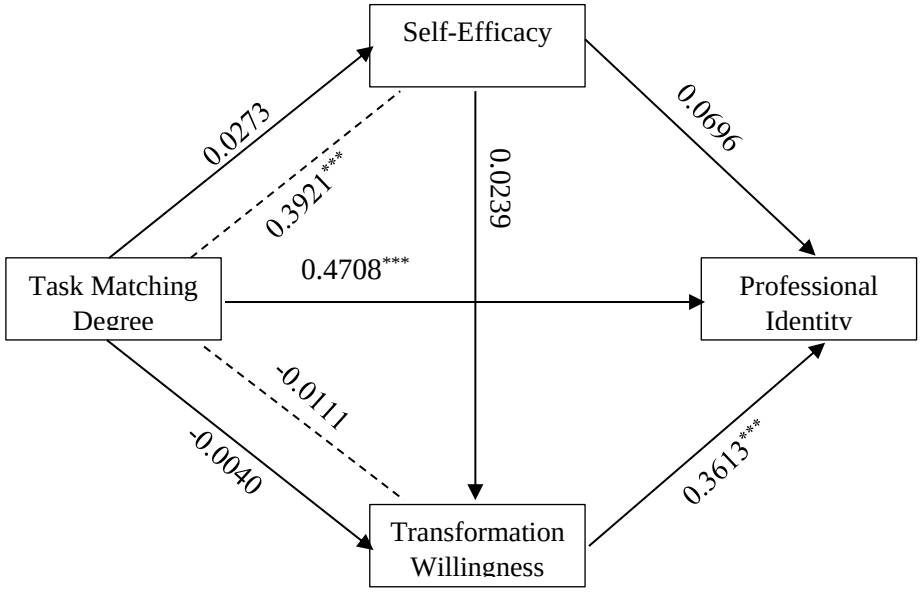
The specific analysis results of the mediating effects of self-efficacy and professional identity between task matching degree and transformation willingness are shown in **Table 6-3**, and the model path diagram is shown in **Figure 2-3**:

Table 6-3. Results of the mediating effects of self-efficacy and professional identity between the ease of use of technology and transformation willingness.

path	*β*	*SE*	*t*	*p*	95% CI (LLCI, ULCI)
1.C→M1	0.3921***	0.0475	8.2628	0.0000***	（0.2988，0.4854)
2.C→M2	-0.0111	0.0594	-0.1862	0.8524	（-0.1278，0.1057)
3.M1→F	0.0696	0.0448	1.5515	0.1216	（-0.0186，0.1577）
4.M2→F	0.3613***	0.0384	9.4004	0.0000***	（0.2858，0.4369）
5.C→F （Direct Effect）	0.4708***	0.0455	10.3552	0.0000***	（0.3814，0.5602）
6.C→M1→F （Indirect Effect）	0.0273	0.0192			（-0.0104，.0658）
7.C→M2→F （Indirect Effect）	-0.0040	0.0223			（-0.0492，0.0382）
8.C→M1→M2→F （Chain Mediation）	0.0239	0.0098			（0.0075，0.0458）
Total Effect	0.5180***	0.0468	11.0803	0.0000***	（0.4261，0.6099）

p<0.05 ** p<0.01 p<0.001*

Type of Bootstrap: Percentile Bootstrap Method



represent 1.C→M1 and 2.C→M2

Figure 2-3. Path diagram of the mediating effects of self-efficacy and professional identity between the task matching degree and transformation willingness.

According to the regression analysis results in **Table 6-3**, the direct effect of task matching degree on transformation willingness (C→F) is 0.4708 ($p < 0.001$), indicating that when accounting personnel believe that AI technology can better fit their work tasks, their transformation willingness will significantly increase. In the influence path of the mediating variables, the regression coefficient of task matching degree on self-efficacy (C→M1) is 0.3921 ($p < 0.001$), but the regression coefficient on professional identity (C→M2) is -0.0111 ($p = 0.8524$, not significant). This shows that when AI technology can better match the work tasks of accounting personnel, their self-efficacy will significantly increase, that is, their confidence in adapting to the new technological environment will improve. However, the impact of task matching degree on professional identity is not significant, indicating that the matching degree between AI technology and work tasks will not directly affect the sense of professional identity of accounting personnel. The regression coefficient of self-efficacy on transformation willingness (M1→F) is 0.0696 ($p = 0.1216$, not significant), while the regression coefficient of professional identity on transformation willingness (M2→F) is 0.3613 ($p < 0.001$), indicating that professional identity plays a significant mediating role between task matching degree and transformation willingness, while the mediating role of self-efficacy is not significant. In terms of indirect effects, C→M1→F (indirect effect) is 0.0273 ($p > 0.05$, not significant), and C→M2→F (indirect effect) is -0.0040 ($p > 0.05$, not significant), indicating that task matching degree will neither indirectly affect transformation willingness through self-efficacy nor professional identity. However, the regression coefficient of the chain mediating path C→M1→M2→F is 0.0239 ($p < 0.05$, significant), which shows that task matching degree can indirectly affect professional identity through self-efficacy and further influence transformation willingness.

In conclusion, Hypothesis H5 (the mediating role of self-efficacy) of this study is partially valid. It holds under the path of technical usefulness, does not hold under the path of the ease of use of technology, and only indirectly affects transformation willingness through the chain mediating effect under the path of task matching degree. Hypothesis H6 (the mediating role of professional identity) is also partially valid. It holds under the paths of technical usefulness and the ease of use of technology, but does not hold under the path of task matching degree.

5. Discussion

5.1. The mechanism of the impact of ai enablement on the transformation willingness of accounting personnel

This study has verified that technical usefulness, ease of use of technology, and task matching degree all have a significant positive impact on the transformation willingness of accounting personnel. Among them, the task matching degree has the most significant impact on the transformation willingness ($\beta = 0.402$, $p < 0.001$), followed by technical usefulness ($\beta = 0.211$, $p < 0.001$), while the impact of the ease of use of technology is relatively small ($\beta = 0.114$, $p < 0.05$). The degree of individuals' acceptance of new technology is affected not only by their perceived usefulness and ease of use but also by the matching degree between the technology and task requirements.

In the context of the widespread application of AI technology, accounting personnel pay more attention to whether AI technology can truly meet their work needs, rather than just the convenience of the technology itself. The actual value of technology application has a greater impact on user acceptance than the complexity of the technology itself. This finding further indicates that when promoting the career transformation of accounting personnel, it is not enough to merely emphasize the convenience of technology. Enterprises and training institutions should pay more attention to how AI can be effectively integrated with the work tasks of accounting personnel, to reduce the resistance to transformation.

5.2. The mediating roles of self-efficacy and professional identity

This study has found that self-efficacy and professional identity play mediating roles to varying degrees between AI enablement and transformation willingness. Under the path of technical usefulness, both self-efficacy ($\beta = 0.0658$, $p < 0.05$) and professional identity ($\beta = 0.0862$, $p < 0.05$) have played significant mediating roles. This indicates that when accounting personnel believe that AI technology can improve their work performance, both their self-efficacy and professional identity will be enhanced, thus promoting their transformation willingness. An individual's belief in their abilities will affect their acceptance of new technology and their behavioural choices.

Under the path of the ease of use of technology, only professional identity ($\beta = 0.0456$, $p < 0.05$) has played a significant mediating role, while the role of self-efficacy is not significant. This shows that even if accounting personnel consider AI technology to be easy to use, this perception will not directly affect their self-efficacy. Instead, it promotes their transformation willingness by enhancing their sense of identity in the accounting profession. This result may be related to the characteristics of the accounting industry, that is, the occupational stability of accounting personnel is relatively high. If the ease of use of AI technology fails to significantly enhance their professional capabilities, their self-efficacy will not increase accordingly. This study indicates that the role of professional identity in technological change is often more crucial than an individual's perception of their abilities.

Under the path of task matching degree, the study found that its impact on professional identity is not significant ($\beta = -0.0111$, $p > 0.05$), but it can indirectly affect the transformation willingness through the chain mediating effect (C→M1→M2→F) ($\beta = 0.0239$, $p < 0.05$). This means that when accounting personnel believe that AI technology can effectively match their work needs, their self-efficacy will be enhanced, and the enhanced self-efficacy will further affect their professional identity, thereby increasing their transformation willingness. The technology fit degree will affect an individual's confidence, and the improvement of confidence may ultimately change their professional identity.

5.3. Challenges and implications of the transformation of accounting personnel in the context of AI enablement

This study further verified the significant positive impact of transformation willingness on transformation behavior ($\beta = 0.231$, $p < 0.001$), indicating that when accounting personnel develop a strong willingness to transform, they are more likely to take practical actions, such as learning AI-related skills and adjusting their work methods. However, the impact effect is relatively small ($R^2 = 0.060$), which suggests that there is still a certain gap between transformation willingness and actual transformation behavior, and it may be restricted by other factors, such as corporate culture, organizational support, and policy incentives.

In addition, the mediating role of self-efficacy under the paths of the ease of use of technology and task matching degree was not fully significant, indicating that merely improving accounting personnel's perception of the ease of use of AI or their awareness of task matching degree is not sufficient to directly enhance their self-efficacy. This may reflect that the enhancement of accounting personnel's confidence requires long-term technical training, the accumulation of practical application experience, and feedback of industry recognition, rather than relying solely on the understanding of technology. In the process of promoting AI enablement, enterprises need to provide more practical opportunities, such as organizing AI skills training and establishing a mentoring system, to boost accounting personnel's confidence in their abilities.

From the perspective of professional identity, the study found that both technical usefulness and ease of use of technology can promote transformation willingness through professional identity, indicating that in

the context of AI technology enablement, accounting personnel still care about their professional roles and their social value. Therefore, when promoting AI transformation, enterprises and industry associations need to strengthen the redefinition of the value of the accounting profession [50,51], emphasizing that AI technology is an auxiliary tool for accounting work rather than a substitute, to reduce the occupational anxiety of accounting personnel and enhance their sense of professional belonging.

5.4. Research contributions and theoretical significance

The main contributions of this study are reflected in the following aspects:

(1) Expanding the application boundaries of the TAM and TTF theories: This study not only verifies the impacts of technical usefulness, the ease of use of technology, and task matching degree on the willingness to transform but also further introduces the mediating mechanisms of self-efficacy and professional identity, thus enriching the application of the TAM and TTF theories in the research on the transformation of the accounting industry.

(2) Revealing the psychological mechanism of the career transformation of accounting personnel: The study finds that self-efficacy and professional identity play different roles in the process of technology acceptance, providing a new perspective for understanding the psychological adjustment process of accounting personnel in the AI environment.

6. Conclusion

Although this study has achieved certain results, there are still limitations in terms of sample representativeness, variable selection, data collection methods, etc. Future research can be extended to different countries and industries, introduce external factors such as organizational support and policy incentives, and adopt longitudinal research or experimental methods to further deepen the understanding of the career transformation of accounting personnel.

This study focuses on the impact of AI enablement on the career transformation of accounting personnel. Based on the Technology Acceptance Model (TAM) and the Task-Technology Fit (TTF) theory, a research framework is constructed, which includes three core independent variables of technical usefulness, ease of use of technology, and task matching degree, two mediating variables of self-efficacy and professional identity, as well as dependent variables of transformation willingness and transformation behavior. Through empirical analysis, the study finds that: (1) The three dimensions of AI enablement all have a significant positive impact on the transformation willingness of accounting personnel. Among them, the task matching degree has the greatest impact, followed by technical usefulness, while the impact of the ease of use of technology is relatively small; (2) Both self-efficacy and professional identity play significant mediating roles between technical usefulness and transformation willingness. However, under the path of the ease of use of technology, only the mediating role of professional identity is significant, and self-efficacy does not show a significant impact; (3) The direct impact of the task matching degree on professional identity is not significant, but it can play an indirect role through the chain mediating path (task matching degree → self-efficacy → professional identity → transformation willingness); (4) Although the impact of transformation willingness on transformation behavior is significant, the effect is relatively small, indicating that the transformation from willingness to actual action is still restricted by external environmental factors.When promoting the application of AI technology, enterprises and organizations should pay attention to the matching between the technology and the actual work of accounting personnel, provide targeted training to enhance self-efficacy, and shape a positive professional identity to strengthen the transformation willingness. In addition, policymakers and industry associations can alleviate the occupational anxiety brought about by

AI technology and promote the smooth transformation of the accounting industry by optimizing the career development path and clarifying the value orientation of accountants in the intelligent era.

Acknowledgements

We thank all the participants in this questionnaire and all the scholars for providing research results.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

1. Shuyao Guo et al. "On the influence of AI technology on accounting industry and its Countermeasures." 2021 International Conference on Artificial Intelligence and Electromechanical Automation (AIEA) (2021): 214-218. https://doi.org/10.1109/AIEA53260.2021.00053.
2. Yixuan Peng et al. "Riding the Waves of Artificial Intelligence in Advancing Accounting and Its Implications for Sustainable Development Goals." Sustainability (2023). https://doi.org/10.3390/su151914165.
3. Odonkor B, Kaggwa S, Uwaoma P U, et al. The impact of AI on accounting practices: A review: Exploring how artificial intelligence is transforming traditional accounting methods and financial reporting[J]. World Journal of Advanced Research and Reviews, 2024, 21(1): 172-188.
4. Yaxin Liang et al. "Integrating AI with Financial Accounting Processes: Innovations and Challenges." International Journal of Computer Science and Information Technology (2024). https://doi.org/10.62051/ijcsit.v3n3.01.
5. Susanne Leitner-Hanetseder et al. "A profession in transition: actors, tasks and roles in AI-based accounting." Journal of Applied Accounting Research (2021). https://doi.org/10.1108/JAAR-10-2020-0201.
6. Ahmad Yahiya Ahmad Bani Ahmad et al. "Ts." 2024 International Conference on Knowledge Engineering and Communication Systems (ICKECS), 1 (2024): 1-5. https://doi.org/10.1109/ICKECS61492.2024.10617313.
7. L. Tan et al. "Professional skills required of accountants: what do job advertisements tell us?." Accounting Education, 27 (2018): 403 - 432. https://doi.org/10.1080/09639284.2018.1490189.
8. Luhova et al. "Soft Skills of a Modern Successful Accountant." Modern Economics (2023). https://doi.org/10.31521/modecon.v37(2023)-10.
9. I Made Suarta et al. "Employability and digital technology: what skills employers want from accounting workers?." Accounting Education, 33 (2023): 274 - 295. https://doi.org/10.1080/09639284.2023.2196665.
10. Zhang D, Zheng S, Fu W. Research on the prediction model of chinese tax revenue based on gm (1, 1) and lssvm[J]. Information Technology and Control, 2023, 52(4): 811-818.
11. Sumarna, A. (2020). RESHAPING FUTURE SKILLS OF PROFESSIONAL ACCOUNTANTS. Ultimaccounting: Jurnal Ilmu Akuntansi. https://doi.org/10.31937/AKUNTANSI.V12I2.1516.
12. Zheng Shaoxin,Yu Chufen. Impact of “Camp Reform and Increase” on Corporate Tax Burden--Taking Guangzhou YTYU Media Co. as an Example[J]. Modern Economic Information,2016, (11):232-233.
13. Lauren A. Cooper et al. "Robotic Process Automation in Public Accounting." Accounting Horizons (2019). https://doi.org/10.2308/ACCH-52466.
14. Rahila Rahim et al. "Artificial Intelligence Applications in Accounting and Finance." 2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSIS) (2024): 1782-1786. https://doi.org/10.1109/ICETSIS61505.2024.10459526.
15. Temitayo Oluwaseun Jejeniwa, Noluthando Zamanjomane Mhlongo, and Titilola Olaide Jejeniwa. “A COMPREHENSIVE REVIEW OF THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MODERN ACCOUNTING PRACTICES AND FINANCIAL REPORTING”. Computer Science & IT Research Journal, vol. 5, no. 4, Apr. 2024, pp. 1031-47, doi:10.51594/csitrj. v5i4.1086.
16. Wu X. Research on Accounting Risk Based on AI[C]//Journal of Physics: Conference Series. IOP Publishing, 2021, 1915(2): 022052.
17. Das P K. Impact of artificial intelligence on accounting[J]. Sumerianz Journal of Economics and Finance, 2021, 4(1): 17-24.
18. Adelakun B O, Majekodunmi T G, Akintoye O S. AI and ethical accounting: Navigating challenges and opportunities[J]. International Journal of Advanced Economics, 2024, 6(6): 224-241.
19. Adeyelu O O, Ugochukwu C E, Shonibare M A. The impact of artificial intelligence on accounting practices: advancements, challenges, and opportunities[J]. International Journal of Management & Entrepreneurship Research, 2024, 6(4): 1200-1210.

20. Chen Qian, Zheng Shaoxin. Impact of technological innovations on audit transparency, objectivity and assurance in the era of "digital intelligence"[J]. Advances in Social Sciences, 2025, 14: 73. https://doi.org/10.12677/ass.2025.142097.
21. Goel M, Tomar P K, Vinjamuri L P, et al. Using AI for Predictive Analytics in Financial Management[C]//2023 3rd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE). IEEE, 2023: 963-967.
22. Ajiga D I, Adeleye R A, Asuzu O F, et al. Review of AI techniques in financial forecasting: applications in stock market analysis[J]. Finance Account Res J, 2024, 6(2): 125-145.
23. Fatemeh Karimpour et al. "Employing Artificial Intelligence to Enhance the Accuracy of Financial Forecasts." Journal of Technology in Entrepreneurship and Strategic Management (2023). https://doi.org/10.61838/kman.jtesm.2.3.1.
24. Brynjolfsson E, McAfee A. The second machine age: Work, progress, and prosperity in a time of brilliant technologies[M]. WW Norton & company, 2014.
25. Ahmed A. "From Data to Wisdom" Using Machine Learning Capabilities in Accounting and Finance Professionals[J]. Talent Development & Excellence, 2020, 12.
26. Yusuf M F M, Sari I M, Hamid A, et al. Integrasi teknologi artificial intelligence dalam sistem akuntansi modern[J]. Journal of Trends Economics and Accounting Research, 2023, 4(1): 230-234.
27. Kou G, Chao X, Peng Y, et al. Machine learning methods for systemic risk analysis in financial sectors[J]. 2019.
28. Goretzki L, Messner M. Backstage and frontstage interactions in management accountants' identity work[J]. Accounting, Organizations and Society, 2019, 74: 1-20.
29. Brands C, Mayer C H, Oosthuizen R M. Chartered Accountants' perception of the Fourth Industrial Revolution[J]. Frontiers in psychology, 2024, 15: 1419766.
30. Bévort F, Suddaby R. Scripting professional identities: How individuals make sense of contradictory institutional logics[J]. Journal of professions and organization, 2016, 3(1): 17-38.
31. Volokhin Y, Mukhametzyanova F, Khairutdinov R. Lifelong Learning of an Accountants (Digital Information Processing Masters) in the Context of Digital Economy[C]//IV International Scientific and Practical Conference. 2021: 1-7.
32. Davenport T H, Ronanki R. Artificial intelligence for the real world[J]. Harvard business review, 2018, 96(1): 108-116.
33. Compeau D R, Higgins C A. Computer self-efficacy: Development of a measure and initial test[J]. MIS quarterly, 1995: 189-211.
34. Davis F D. Perceived usefulness, perceived ease of use, and user acceptance of information technology[J]. MIS quarterly, 1989: 319-340.
35. Badmus O, Rajput S A, Arogundade J B, et al. AI-driven business analytics and decision making[J]. World Journal of Advanced Research and Reviews, 2024, 24(1): 616-633.
36. Venkatesh V, Morris M G, Davis G B, et al. User acceptance of information technology: Toward a unified view[J]. MIS quarterly, 2003: 425-478.
37. Goodhue D L, Thompson R L. Task-technology fit and individual performance[J]. MIS quarterly, 1995: 213-236.
38. Dishaw M T, Strong D M. Extending the technology acceptance model with task–technology fit constructs[J]. Information & management, 1999, 36(1): 9-21.
39. Locke E A. Self-efficacy: The exercise of control[J]. Personnel psychology, 1997, 50(3): 801.
40. Ibarra H. Provisional selves: Experimenting with image and identity in professional adaptation[J]. Administrative science quarterly, 1999, 44(4): 764-791.
41. Ott C. The professional identity of accountants–an empirical analysis of job advertisements[J]. Accounting, Auditing & Accountability Journal, 2023, 36(3): 965-1001.
42. Wolf T, Kuttner M, Feldbauer-Durstmüller B, et al. What we know about management accountants' changing identities and roles–a systematic literature review[J]. Journal of Accounting & Organizational Change, 2020, 16(3): 311-347.
43. Guo K H. The odyssey of becoming: Professional identity and insecurity in the Canadian accounting field[J]. Critical Perspectives on Accounting, 2018, 56: 20-45.
44. Ng T W H. Transformational leadership and performance outcomes: Analyses of multiple mediation pathways[J]. The leadership quarterly, 2017, 28(3): 385-417.
45. Alamin A A, Wilkin C L, Yeoh W, et al. The impact of self-efficacy on accountants' behavioral intention to adopt and use accounting information systems[J]. Journal of information systems, 2020, 34(3): 31-46.
46. Ng T W H, Lucianetti L. Within-individual increases in innovative behavior and creative, persuasion, and change self-efficacy over time: A social–cognitive theory perspective[J]. Journal of applied psychology, 2016, 101(1): 14.
47. Brown R, Condor S, Mathews A, et al. Explaining intergroup differentiation in an industrial organization[J]. Journal of Occupational psychology, 1986, 59(4): 273-286.

48. Ajzen I. The theory of planned behavior[J]. Organizational behavior and human decision processes, 1991, 50(2): 179-211.
49. Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. Multivariate Data Analysis (8th ed.)[M].2019. England: Pearson Prentice.
50. Zheng S, Song M, Han M. Research on the Multidimensional Value and Communication Practice of Adolescent Sex Education in China[J]. Journal of Modern Social Sciences, 2024, 1(2): 456-463.
51. Zheng S, Han M. Exploring the Significance of Adolescent Sex Education Based on Social Media[J]. Journal of Educational Theory and Practice, 2025, 2(1).