



The Mediating Role of Algorithmic Trust in the Relationship between AI Service Personalization and User Continuance Intention

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ABSTRACT

In digital service platforms, user experiences and sustained engagement can no longer be achieved without personalization, a strategy driven by the use of artificial intelligence. The online banking industry is the focus of the present study, and the study intends to examine online banking's unique characteristics, particularly in terms of algorithmic trust (AT) as a mediating variable between AI service personalization (ASP) and user continuance intention (UCI). A purposive sampling approach has been used to collect data from Jordan digital banking users. Measures of ASP, AT and UCI were adapted from existing literature for the research protocol. The data used were analyzed using SPSS 24 software and the method of structural equation modeling (SEM). The results show that there was a positive relationship between ASP and AT and between ASP and UCI. Additionally, AT was found to be positively associated with UCI. The regression analysis also showed that, for all digital banking users, AT is significantly predicted by ASP, while for digital banking users, AT is also significantly predicted by UCI. It was also determined that AT was a significant mediator between ASP and UCI. The results indicate that users' trust in AI-powered banking systems increases with the use of AI personalization mechanisms, leading to a greater willingness to engage with digital banking services. The findings underscore the need for user-friendly and trustworthy AI systems that foster long-term customer interactions and trust on intelligent digital platforms.

Keywords: AI Service Personalization, Algorithmic Trust, User Continuance Intention, Digital Banking, Intelligent Systems, Jordan

JEL Classification: L82

1. INTRODUCTION

AI technologies have revolutionized the digital banking industry, making customer experiences more personalized and intelligent than ever before. AI tools are also being used more and more in financial services to better understand customer needs and preferences, anticipate customer behavior, and provide personalized services, thus improving customer engagement and operational efficiency (Salih et al., 2025; Jiwasiddi, 2026). In 2024, the global AI in banking market surpassed USD 20 billion, and is expected to expand significantly as digital transactions and intelligent financial ecosystems continue to increase (Wu et al., 2024). Digital banking has progressed at a rapid pace

in Jordan, driven by a growing smartphone penetration rate, fintech innovation and government efforts to drive digital transformation (Hassan et al., 2025). Despite the large sums of money invested in digital banking systems, customers still have doubts about algorithmic decisions, privacy protection, and automated personalization mechanisms, posing difficulties for maintaining long-term intentions to use them (Sun et al., 2022; Lee et al., 2021). Thus, the study of the effect of ASP on UCI via AT has emerged as a key research issue in the field of digital systems literature. Intelligent systems' ability to offer personalized recommendations, adaptive services, and personalized interactions based on user information and behavioural analytics is what is known as ASP (Lee et al., 2023). The variable was chosen as it is

widely recognized that personalization is an essential element in the arsenal of digital banking firms seeking to remain competitive, given that customer retention is closely tied to the relevance of service offerings and the manner in which they are delivered – by being intelligent and responsive (Ahmed and Aziz, 2025). While previous research has established the benefits of personalized AI services on user convenience and digital experiences, there is also a risk of creating uncertainty and resistance among users at the same time with excessive automation (Chen et al., 2026; Jia et al., 2025). Participants' trust in the reliability, transparency, and fairness of AI-based systems, (AT) is chosen as a mediating variable because trust is the cornerstone of the adoption of technology and continuity of digital relationships (Irmawan et al., 2025).

In recent research, it was also mentioned that consumers have doubts about algorithmic recommendations because of the issues of bias, lack of transparency, and the vulnerabilities of intelligent systems (Kumar, 2026; Chakraborty, 2025). Sustaining long-term engagement is a key strategic goal for digital banking providers in a highly competitive fintech markets, which is why UCI was selected as the dependent variable (Pang et al., 2025). Existing evidence has shown that it is far more cost-effective to keep digital users than to acquire new ones, making continuance intention an important key element of the sustainability of digital platforms (Hussain, 2025).

The context of this study is the digital banking sector in Jordan, where banks are increasingly implementing AI Chatbots, recommendation systems, and automated financial advice tools to deliver better customer experiences and meet the growing competition from fintech companies (Khan et al., 2024). However, it is reported that many users still do not fully trust smart banking systems due to their lack of trust in algorithms and transparency in the operations of these systems (Hussain et al., 2022). Previous studies primarily focused on the factors influencing the adoption of technology and perceived usefulness, but did not adequately investigate the mediation effect of AT between AI personalization and UCI. Existing studies have mainly investigated the factors that affect technology adoption and perceived usefulness without exploring the mediation effect of AT between AI personalization and UCI in digital banking contexts (Lee et al., 2021). While several studies focused on AI personalisation in e-commerce (Chen et al., 2026), in healthcare systems (Hussain, 2025), in smart retailing (Irmawan et al., 2025) and in mobile applications (Chen et al., 2026), limited empirical research was devoted to intelligent banking ecosystems in the Middle Eastern economies. Moreover, previous research tended to use trust as the direct predictor instead of as a psychological process that helps explain the effect of personalization on sustained platform usage (Hassan et al., 2025; Hussain et al., 2022). However, other academics pointed out the disconnect on whether AI-driven personalization builds or undermines consumer trust given the increasing concerns over privacy issues and opaque algorithms (Chen et al., 2026; Sun et al., 2022).

As these conceptual and contextual constraints show, there are significant gaps of research to consider in greater detail. Consequently, this study seeks to explore the relationship between

ASP and UCI, and to analyze the role of AT as a mediator in the digital banking industry in Jordan. The study makes a theoretical contribution to digital system research by embedding AI personalization and trust-based behavioral views. On a practical level, it offers guidance for banking managers and policymakers aiming to enhance their sustainable customer interactions by implementing clear and trustworthy AI systems. The novelty of the study is in exploring the practice of algorithmic trust as an explanatory mechanism in an emerging economy of high-speed fintech growth and shifting consumer digital habits. Finally, this research expands the literature on digital systems by providing a theoretical understanding of how AI-driven personalization strategies can lead to sustainable user relationships and competitive digital innovation outcomes.

2. THEORETICAL BACKGROUND

The theoretical basis of this research is based on the technology acceptance model (TAM) and trust theory, as both theories have a comprehensive explanation on the influence of intelligent digital systems on users' behavioral continuance in AI-based banking system. Users' acceptance and continued use of technological systems is largely based on their perceptions of usefulness, efficiency, and ease of interaction (Davis, 1989). The present study is highly relevant to this theory because the customization of recommendations, interfaces, and financial support systems are all essential components of digital banking that are enhanced by ASP (Hussain et al., 2022; Ahmed and Aziz, 2025). Personalized AI systems make financial tasks easier, less cognitively demanding, and more efficient, reinforce users' intentions to continue using digital banking services (Jiwasiddi, 2026). Existing research validated that AI personalization significantly impacts customer experiences, digital engagement and continuance actions for technology-based customer touchpoints (Khan et al., 2024). In a similar vein, Jia et al. (2025) discovered that AI-driven personalized services positively impact users' behavioural intentions, as consumers believe they create a greater sense of convenience and responsiveness of the system. Hassan et al. (2025) also contended that the personalized digital interactions draw users closer to the platform and the emotions they evoke, especially in the context of digital financial ecosystems. Thus, it is very important to note that there is a direct link between ASP and UCI in this study and therefore TAM strongly supports this linkage. While TAM provides valuable insights, the adoption and continued use of AI technologies are not entirely predictable by technology acceptance, as these technologies can raise concerns about privacy, fairness, and automated decision-making processes (Ahmed and Aziz, 2025). To explain the psychological mechanism that connects AI personalization with continuance intention, the concept of Trust Theory was introduced. Therefore, the concept of trust theory was added to address the psychological mechanism of the relationship between AI personalization and continuance intention. According to trust theory, users build enduring relationships with digital systems when they can be trusted, made transparent, and reliable (Wu et al., 2024). In the banking sector, AI systems can make precise recommendations and ensure the security of financial transactions without bias or manipulation, which enhances users' trust in AI systems (Hassan et al., 2025).

This theory was chosen because trust is one of the most important factors affecting technology continuance behavior, particularly in high-risk situations like digital financial transactions where users provide sensitive personal and transactional data (Kumar, 2026). In previous studies, algorithmic trust heavily influences consumers' trust in AI-powered systems and their willingness to engage with digital media in the long term (Khan et al., 2024; Wu et al., 2024). Jia et al. (2025) suggested that an increase in trust in algorithmic processes would be achieved by transparent and explainable AI systems, which would lead to a higher intention to use it over time. Similarly, Hussain (2025) found that there is a mediational relationship between intelligent service quality towards digital platforms and behavioral continuance. Salih et al. (2025) also showed that personalization features are more likely to be trusted and valued by users, which leads to higher retention rates for AI systems.

The incorporation of TAM and trust theory gives more theoretical backing to the research model proposed in the study, as the use of digital banking might not be sustainable if the users do not trust in the algorithmic proceedings and artificial suggestions (Chakraborty, 2025). Previous research usually dealt with technology acceptance and trust individually and led to a conceptual disintegration in the field of AI systems (Sun et al., 2022; Chen et al., 2026). The current study integrates TAM and trust theory to analyze the technological and psychological factors that affect the continuance intention of users in an AI-enabled banking system. The personalization-trust-continuance relationship is consistent across a range of empirical studies in the fintech, e-commerce, mobile banking and smart services contexts (Lee et al., 2023). Hence, these theories offer a strong base for the understanding of how personalization with AI can improve AT and in turn, support the UCI towards an intelligent platform in the banking sector.

2.1. AI Service Personalization, Algorithmic Trust and User Continuance Intention

In the context of digital banking, ASP has emerged as a pivotal element to facilitate context-aware banking recommendations and adaptive interactions, enriching digital banking experiences for users (Khan et al., 2024). This personalization increases the perceived usefulness and system relevance, which are essential factors for technology adoption and continued use (Wu et al., 2022). But algorithmic processes also raise questions of transparency and fairness, making trust a key psychological factor in an AI-based service (Ahmed and Aziz, 2025). AT conveys users' trust in system reliability and accuracy in decision making, influencing the persistence of their interaction with digital platforms (Pang et al., 2025). For digital banking, trust-based perceptions are crucial and they help significantly lower risk perceptions and increase long-term behavioral intentions (Khan et al., 2024). Previous research validates the positive effects of personalization on building the trust within AI systems, which in turn increases continuance intention (Kumar, 2026). Furthermore, in fintech settings, trust serves as a key mediator between technological characteristics and user behavioral outcomes (Irmawan et al., 2025). However, empirical evidence also indicates a positive relationship between the positive outcomes of engagement and strong algorithmic trust structures when combined with AI personalization (Salih

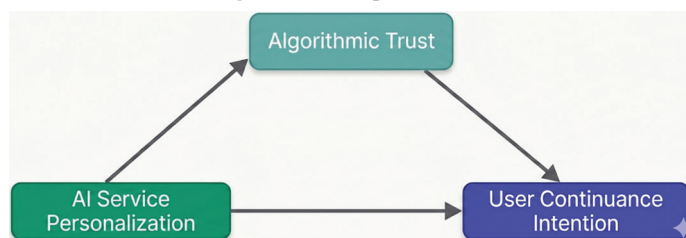
et al., 2025). Personalization and trust are therefore considered as an important lens for explaining the behavior of users in digital banking context (Pang et al., 2025). In total, while AI personalization is improving user experience, AT is fostering reliability, with both elements reinforcing continued engagement intentions in digital banking systems, and emphasising the need for psychological and technological integration in the success of digital ecosystems adoption.

- H_1 : ASP is expected to positively correlate with AT and UCI.

From an digital system standpoint, the use of ASP can amplify the user experience by providing personalized recommendations and adaptive interactions which can boost perceived usefulness and ease of use (Sun et al., 2022). This technological sophistication helps build perceived value and engagement in digital banking, where efficiency and relevance are key drivers of adoption (Pang et al., 2025). However, there are algorithmic system concerns of transparency and uncertainty, that can have a negative impact on sustained engagement (Hussain, 2025). AT minimizes user risk and boosts AI service confidence, which fosters better user relationships (Khan et al., 2024). Previous studies have demonstrated the critical role of trust in the relationship between the capability of technology and continued use by bridging the cognition and intention gap (Hassan et al., 2025; Jiwasiddi, 2026). In digital banking ecosystems, trust-based perceptions play a vital role in fostering long-term usage of AI systems, where perceptions of reliability and fairness serve as psychological assurances that drive users' engagement and continuing use of digital banking (Salih et al., 2025). This pathway provides an explanation of the process of sustained engagement in AI enabled finance services environments on digital platforms in the context of the global adoption processes.

- H_2 : AI service personalization and algorithmic trust are likely to predict user continuance intention.

In the realm of intelligent digital systems, AT is pivotal in influencing long-term behavioral outcomes, decreasing uncertainty, and enhancing user trust in AI-driven decisions (Chakraborty, 2025). Users constantly assess system reliability, transparency and perceived fairness before engaging in continued usage behaviors in digital banking systems, as stated by Khan et al. (2024). Users' trust in AI-based services is strengthened when AT is high, leading to greater long-term use of these platforms (Hussain et al., 2022). Existing studies suggest that trust plays a pivotal role in continuance in technology-mediated contexts, especially when it comes to the sharing of financial and personal information (Ahmed and Aziz, 2025; Kumar, 2026). Furthermore, AT serves as a cognitive assurance system that transforms system quality and personalization attributes into enduring engagement results (Sun et al., 2022). The importance of trust in improving users' attitude towards digital services and decreasing perceived risk has also been confirmed by studies in fintech and digital service ecosystems, which shows that trust is a key driver for increasing the long-term commitment of users. AT, in this context, becomes an important indicator of ongoing usage in AI-powered banking systems, fostering confidence in the system's outputs and enhancing user retention and loyalty to digital financial services (Jia et al., 2025). The conceptual model of the study is presented in Figure 1.

Figure 1: Conceptual model

- H_3 : AT is likely to mediate the relationship between ASP and UCI.

3. METHODS

3.1. Research Design

The correlation research design was used to understand the connection between predictor and outcome variables in the context of intelligent digital banking.

3.2. Participants

The study was carried out in eight major banks in Amman and Zarqa, Jordan that provide digital services, both private and public. The study used G*Power software (version 3.1.9.2) to calculate the necessary sample size for a study to achieve sufficient power. The active digital banking users ($n = 242$) were chosen to assess their experiences with UCI, AT, and ASP during the last 2 years (2022–2024). Participants were highly educated and able to comprehend and answer in English; hence, the English version of all the scales was utilized in the study.

3.3. Inclusion Criteria

The study recruited regular users of digital banking who have been using at least 2 years before the study, from various public and private banks of Amman and Zarqa, Jordan, such as salaried professionals, business owners, those who are self-employed, and managerial employees with at least 2 years of experience in using AI-based banking applications and intelligent financial services.

3.4. Exclusion Criteria

Those who had only had traditional banking services, without interacting with AI-based digital banking platforms, or who had minimal interactions with intelligent financial apps were not included in the study.

3.5. Written Informed Consent

The purpose and type of the study were explained to the participants before obtaining their consent. They could leave the study at any time, their answers were confidential and their private information was carefully guarded.

3.6. Measurement Scales

3.6.1. AI service personalization scale

It is a self-report scale which was adapted from some of the digital personalization studies conducted earlier (Sun et al., 2022; Ahmed and Aziz, 2025). It includes 45 items on experiences users feel in digital banking when using personalized AI-based financial services. It is a 5-point Likert Scale from “strongly disagree” to “strongly

agree.” Its internal reliability was measured by the Cronbach alpha and was 0.93. The higher a score, the higher the perceived AI service personalization. In the current study, as participants (digital banking users) were educated enough to understand the English language easily, therefore the scale was used in English through the back-translation approach suggested by Brislin (1980), and its Cronbach’s alpha was 0.85 in the sample of $n = 242$.

3.6.2. Algorithmic trust scale

AT was assessed following on established frameworks on trust-based AI measurement (Chen et al., 2026; Kumar, 2026). This scale measures consumers’ confidence in AI-based financial decision-making tools and their satisfaction with how reliable, transparent, and fair they perceive the algorithms are. The English version of the scale was used in the study. It employs a 6-point Likert-type scale (strongly disagree to strongly agree). The higher the scores, the higher the level of AT. Normally, the internal consistency (Cronbach’s alpha) in digital system studies ranges from 0.82 to 0.91.

3.6.3. User continuance intention scale

Adaptation of the continuance intention scales from IS literature (Khan et al., 2024) is used to measure users’ intent to continue using AI-based digital banking systems. This measure is composed of 5 items rated on a 5-point Likert scale (1 – Strongly disagree; 5 – Strongly agree). The Cronbach’s alpha is 0.79, suggesting that the scale has strong internal consistency, with high scores reflecting high levels of continuance intention with regard to AI-enabled banking services.

3.7. Ethical Approval and Considerations

The present research got approval from the Ethical Committee and Board of Studies of the Department of Applied Psychology at a recognized university in Jordan. The study’s procedures involving human participants were conducted in accordance with the ethical guidelines of the institution, the national research guidelines and approval identification number Reg/PSY/JU/4821 Amman, Jordan. The researcher adhered to the ethical guidelines of APA Ethics Code to ensure the welfare and rights of research participants. The aim and nature of the research was explained to the participants prior to them deciding to participate in the research. Participants’ responses were not made public during the study and their personal data has been securely destroyed should they withdraw from the study.

3.8. Procedure

The researcher used a structured distribution process with the banking institutions’ administrative authorities for permission before administering the questionnaire. The researcher gave each participant the research protocol and was on hand to clarify or explain words, phrases, and questions if needed for clarification or if the wording/phrases/parts of the question were not understood. The questionnaire was divided into three parts; the first part was the consent form that shows the title of the research and the aim of the research with general information about respondents’ willingness to be involved in the study. Demographic characteristics of the respondents were collected in Section B. Following this, in Section C (ASP Scale), Section D (AT Scale), and Section E (UCI Scale), items were asked concerning each of the constructs.

Firstly, the purpose of the study was explained and participants were directed to carefully mark the responses. All the digital banking users who were interested were informed about the study procedure and then they were asked to fill out an informed consent form and then the remaining forms were filled step by step. The participants were given an opportunity to have any questions regarding the questionnaire before they completed it. Participants filled out the surveys and then returned them to the researcher. The approximate time for filling out the questionnaire was about 15-20 min. A researcher collected (n = 242) participants. The questionnaires were collected and data analyzed statistically. This research project was finished approximately in 2 months, from March 26th 2026 to May 26th, 2026.

3.9. Statistical Analysis

The statistical package for social science SPSS 24 was used in assessing the hypotheses in the study. Demographic variables were analyzed for their frequencies, mean and standard deviation values using descriptive statistics. Correlation analysis was used to find the relationship among study variables. A simple linear regression was performed to calculate AT's predictive effect on UCI and ASP. A mediation analysis was conducted on SPSS and PROCESS macro (Version 4.1) (Hayes, 2019) between ASP and AT and between ASP and UCI. The demographic characteristics of the respondents are presented in Table 1.

3.10. Demographic Data Form

The percentage distribution shows a relatively even representation of the digital banking users by socioeconomic and professional groups in Jordan. Digital financial service usage was used relatively inclusively, with the majority of participants being male (57%) and females making up a significant share of the participants (43%). As for age, the largest segment was people aged 26-35, a demographic that is more likely to embrace digital innovation and intelligent banking solutions, as they tend to be more open to technology. Most respondents (44.6%) had a master's degree, while another 39.7% had received a bachelor's degree, indicating that the digitally engaged banking users are highly educated and can better assess the recommendations of algorithms and engage with AI-powered financial platforms. Regarding occupational distribution, 'salaried employees' (46.3%) are the largest, followed by business owners (30.6%) and self-employed (23.1%) showing that the adoption of digital banking is mainly among the economically active professionals who need efficient and uninterrupted financial services. As for digital banking experience, most respondents (42.1%) indicated they have been using digital banking platforms for 4-6 years, indicating adequate exposure to be able to assess AI service personalization, algorithmic trust and continuance intention. Summarizing, the results align with the fact that the sample has been found to be highly representative in terms of examining intelligent digital banking behavior in the Jordanian context, as it is a sample of the people who are experienced, educated, and active in the use of AI systems in the banking industry.

4. RESULTS

Table 2 shows descriptive statistics and correlation analysis between ASP, AT and UCI. The mean scores reflect moderate

to relatively high levels of all constructs, indicating that respondents feel there are noticeable personalization features of AI and moderate levels of trust and continuance intentions of digital banking systems. The correlation results show that ASP is significant. As the perceived complexity of personalization increased, users' beliefs in algorithmic decision-making processes decreased ($r = .62, P < 0.001$), suggesting that perceived complexity of personalization could further diminish users' trust in algorithmic decision-making processes. Likewise, ASP is also associated with UCI ($r = 0.67, P < 0.001$) which means excessive/less transparent personalization can reduce users' willingness to use digital banking services. Meanwhile, AT shows a strong positive correlation with UCI ($r = 0.48, P < 0.001$), meaning that a higher degree of trust in AI systems increases users' continued engagement with digital banking platforms. The findings indicate that AT is an important factor influencing continuance behaviour, and that trust formation is necessary to sustain user engagement when using only ASP.

The results of regression analysis to look at the predictability of the influence of ASP and AT on UCI are shown in Table 3. The model is statistically significant, R^2 is 0.47, which means that 47% of the variation in UCI is accounted for by the predictor variables.

Table 1: Demographic characteristics of respondents (n=242)

Variable	Category	Frequency (n)	Percentage
Gender	Male	138	57.0
	Female	104	43.0
Age	18-25 years	62	25.6
	26-35 years	98	40.5
	36-45 years	54	22.3
	Above 45 years	28	11.6
Education	Bachelor	96	39.7
	Master	108	44.6
	PhD	38	15.7
Occupation	Salaried Employees	112	46.3
	Business Owners	74	30.6
	Self-employed	56	23.1
Digital Banking Experience	2-3 years	88	36.4
	4-6 years	102	42.1
	Above 6 years	52	21.5

Table 2: Descriptive statistics and correlation of ai service personalization with algorithmic trust and user continuance intention (n=242)

Variables	Mean	SD	1	2	3
ASP	3.62	0.71	1		
AT	3.48	0.68	0.62***	1	
UCI	3.71	0.74	0.67**	0.48***	1

*P<0.05, **P<0.01, ***P<0.001

Table 3: Regression coefficient of AI service personalization and algorithmic trust on user continuance intention (n=242)

Variables	B	β	SE	t	P
Constant	21.85	—	2.78	7.86	0.000***
ASP	0.34	0.31	0.05	6.52	0.000***
AT	0.46	0.42	0.04	8.73	0.000***
$R^2=0.47$					
$F(2, 239)=68.90, P<0.001$					

*P<0.05, **P<0.01, ***P<0.001

The overall model fit is supported by the values of $F(2, 239) = 68.90$ with $P < 0.001$ indicating good explanatory power in the context of digital banking users in Jordan. Results indicate that UCI is positively and significantly predicted by ASP ($\beta = 0.31$, $P < 0.001$), suggesting that personalized AI banking services increase users' willingness to continue using digital banking services. Likewise, AT exhibits a positive and significant relationship with UCI ($\beta = 0.42$, $P < 0.001$), which means that increased trust in AI systems positively influence continued usage behavior. The results indicate that in general, both ASP and AT are important factors that can drive long-term customer engagement in digital banking, with AT having the greatest predictive power.

Table 4 and Figure 2 show the direct effects experienced by ASP, AT and UCI. The results show that the ASP has a significant positive association with AT, with a coefficient value of 0.42 and $P < 0.001$, indicating that AI personalization positively influences the trust of users in AI-powered financial services. Moreover, ASP also suggests a positive direct impact on UCI (Coeff = 0.36, $P < 0.001$), indicating a positive direct effect on the users' intent to remain on digital banking platforms. Further, AT showed a strong and significant positive correlation with UCI (Coeff = 0.48, $P < 0.001$) indicating that users who have high levels of AT systems are more likely to continue using their digital banking services. The model's explanatory power is also good, as the R^2 values for AT and UCI are $R^2 = 0.39$ and $R^2 = 0.46$, respectively, accounting for a good amount of variance in the outcome variables. Overall, the results support the contribution of ASP and AT to the UCI, which is relevant and significant for intelligent digital banking.

5. DISCUSSION

The results of this study shed light on the extent of the role of ASP and AT in shaping UCI in digital banking in Jordan. The overall results showed that both AT and ASP have significant positive effects on UCI and AT has a significant mediating role in reinforcing the relationship between the two. The results support the underlying premise of TAM that the continual use of technology depends on the perceived usefulness and system quality

(Davis, 1989). These findings align with previous studies that intelligent systems can improve engagement and loyalty in digital platforms by personalizing services based on individual financial behaviours, preferences and transaction patterns (Chen et al., 2026), and the positive impact of ASP on UCI demonstrates this. The study has taken a broader and more integrated perspective than the traditional adoption frameworks, however, by incorporating AT as a key psychological mechanism. Based on the results, it can be concluded that AT is a strong predictor of continuance intention, aligning with the trust theory that posits that users' continued involvement with digital systems is influenced by their perception of reliability, transparency, and fairness (Wu et al., 2024).

Trust in AI systems is crucial for sustained user engagement in financial technology, aligning with the insights of Salih et al. (2025) and Ahmed and Aziz (2025). Likewise, Hussain (2025) and Khan et al. (2024) validated the positive effect of trust on behavioral loyalty in an AI-mediated service context. For this study, AT proves to be the most influencing factor in intention to continue, suggesting that reliability of AI decisions is more important to users than personalization features. Additionally, mediation analysis also shows that the effect of ASP on UCI is significantly mediated by AT. The result is consistent with (Lee et al., 2023) who suggested that the outcomes of AI adoption are determined by technological sophistication, in addition to users' cognitive assurance mechanisms. Furthermore, it aligns with Hussain (2025), who concluded that personalization is effective on user behavior only if the trust is built. The importance of the relationship between system capabilities and user trust has also been highlighted by Chakraborty (2025). This mediation effect, which has been registered in this study, thus proves that personalization is not enough if it does not create algorithmic credibility. Interestingly, the findings reveal that the relationship between ASP and UCI is also strong and direct, in line with the findings of Hussain (2025) and Pang et al. (2025) which show that personalized AI systems enhance fintech user engagement. This result, however, partly contradicts the viewpoint of Sun et al. (2022), which suggested that the excessive personalization can also trigger privacy issues and decrease user acceptance. The slight contradiction could be attributed to differences in context, as users in the digital banking segment in Jordan might view personalization as a benefit for making the service easier to use, even though it is a privacy concern, seeing as they are more familiar with fintech products (Jia et al., 2025).

The high influence of AT aligns with Irmawan et al. (2025) and Khan et al. (2024) who stated that trust is one of the important factors influencing the use of electronic services. In addition, AI systems need to be transparent to preserve user trust, a factor that

Figure 2: Mediation analysis

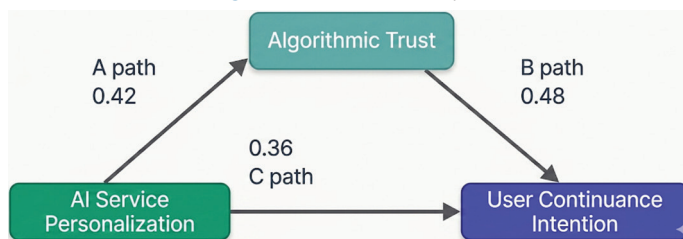


Table 4: Direct effects of AI service personalization, algorithmic trust, and user continuance intention (n=242)

Antecedent	AT (Coeff)	SE	P	UCI (Coeff)	SE	P
ASP	0.42	0.06	<0.000***	0.36	0.05	<0.000***
AT	---	---	---	0.48	0.04	<0.000***
R^2 (T)=0.39	R^2 (UCI)=0.46					
$F(1,240)=126.8$, $P<0.000$	$F(2,239)=67.54$, $P<0.000$					

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

aligns with the current results, as emphasized by Wu et al. (2024) and Jia et al. (2025). However, a few studies like Hassan et al. (2025) suggested that the opacity of algorithms can reduce the formation of trust, thereby contradicting the current study which implies that trust is a key stabilizing factor in AI environments. In general, the results affirm the concept of user experience improvement through ASP, while AT is the psychological connection that makes user experience into behavioral intention. This integrated relationship aligns with the previous empirical models of digital banking and fintech ecosystems (Kumar, 2026; Sun et al., 2022). The study thus helps develop the understanding of digital systems in a more nuanced way, demonstrating that continuance intention is not solely linked to technology, but to the trust that users have in algorithmic decision-making processes.

5.1. Theoretical Contributions

This study greatly broadens the explanatory power of the TAM and the trust theory in the context of intelligent digital banking systems. This research adds the construct of ASP as a key technological driver that affects UCI in the traditional model of the TAM, which consists of perceived usefulness and ease of use. It shows that personalization increases perceived system value and that this value has an indirect effect on behavioral intention via psychological mechanisms. Additionally, Trust Theory is reinforced by seeing AT as a key mediating variable that bridges AI-driven experiences and user engagement. The study adds to the literature because it empirically demonstrates that trust in algorithmic decision-making is not just a result but an important cognitive link between the system capabilities and user behaviors. Furthermore, the study integrates both theories to provide a more comprehensive framework that includes both technological features and psychological reactions of humans when dealing with adoption and trust, which previously were not explored together in other studies. It also contributes to the development of the field of fintech by situating TAM and Trust Theory in the context of AI-driven banking in an emerging economy. The study offers a more dynamic and integrated theoretical model of continuance behavior in intelligent digital ecosystems in general.

5.2. Practical Implications

The findings from this study have important implications for digital banking practitioners, fintech developers, and policymakers seeking to improve customer retention in AI-powered financial services. The results suggest that ASP should be designed with a high level of consideration to improve the user experience without sacrificing transparency and over-automating the user. Banks should prioritize creating financial AI systems that are user-focused, providing relevant financial recommendations, and keeping the algorithmic decision-making process transparent. Furthermore, to boost customer trust and engagement in the future, financial institutions need to adopt explainable AI, clear data policies, and robust cybersecurity measures. This can also be achieved through training initiatives and awareness campaigns that help users understand how AI systems work, minimizing uncertainty and building trust. These insights can be used by policymakers to develop guidelines and regulations that encourage ethical adoption of AI in financial services, fostering fairness and accountability in the use of algorithms. Furthermore, fintech

businesses need to strike a balance between personalization and privacy, ensuring that users continue to trust the platform. In conclusion, the research not only highlights the importance of technological innovation but also underscores the need for creating psychological trust between users and AI systems, thereby paving the way for a successful digital banking transformation.

6. CONCLUSION

The findings from this study indicate that ASP and AT are important factors influencing UCI in digital banking. The results validate that AI personalization contributes to an improved user experience by making the financial services more personalized, and that this personalisation can largely depend on the degree of trust AT users have in AI systems. AT emerges as a key psychological mechanism, which can change the technological attributes into a prolonged behavior. The research also finds that customers are more likely to stick with digital banking platforms if they see the AI systems as reliable, transparent and fair. The research uses TAM and Trust Theory to present a holistic framework for explaining continuance behaviour in intelligent digital ecosystems. Moreover, the study indicates that the effectiveness of AI-driven financial services goes beyond just technological progress and involves cultivating trust-based relationships with users. The study as a whole is an important addition to the knowledge regarding the role of digital systems for achieving long-term user engagement by adopting technological innovation in tandem with psychological assurance mechanisms for the growing digital banking domain.

This study has some drawbacks that should be noted, as a cross-sectional research design does not allow for making causal inferences between ASP, AT and UCI. Longitudinal studies are recommended to explore changes in user behaviour over time. This study is geographically focused on Jordan, which may limit the generalizability of the findings to other cultural and/or economic contexts. There need for further research based on the model in other countries for further external validity. The study is based on self-reported data, which can potentially lead to response bias and interpretation of AI experiences. Behavioral or system generated usage data could be used in the future to obtain more objective assessment. Further, other mediating or moderating factors like perceived risk, digital literacy, or emotional bonding with AI systems could be studied in future research. Additionally, exploring various AI technologies like chatbots, robo-advisors, and predictive analytics individually help uncover their distinct impact on user behavior. Theoretical enhancements could be further strengthened by the expansion of the model to other digital sectors, like the health and e-commerce domain.

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