

FINTECH AND CUSTOMER SATISFACTION: THE ROLES OF ATTITUDE AND FINANCIAL LITERACY

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DOI: <http://doi.org/10.5281/zenodo.20050819>

Received
11 March 2026

Accepted
21 April 2026

Published
06 May 2026

ABSTRACT

This study aims to assess the determinants of customer satisfaction in FinTech by integrating service-related factors, the mediating role of attitude, and the moderating role of financial literacy. Based on the TAM and the UTAUT, the research investigates the level of customer satisfaction regarding perceived value, ease of use, responsiveness, security, speed, and innovativeness. This study used a quantitative research design based on survey data from 351 FinTech users. The data analysis was conducted using reliability, correlation, and regression analyses to examine direct, mediating, and moderating relationships. The findings indicate that the attitude towards FinTech is the best predictor of customer satisfaction. For all service-related factors, the direct effects of speed and innovativeness are significant, whereas those of ease of use, perceived value, responsiveness, and security are not. Attitude mediates the relationship between the most important service attributes and customer satisfaction. Moreover, financial literacy has a moderate negative interaction effect on the attitude-satisfaction correlation, which means that more financially literate users are more critical of their FinTech services. This study contributes to the literature by demonstrating a shift from traditional service quality dimensions to experience-based assessment in FinTech. It also provides practical information that FinTech providers can use to increase customer satisfaction by designing their products to focus on user experience, innovation, and a customised approach tailored to each customer's financial capacity.

Keywords: FinTech, customer satisfaction, attitude, financial literacy, innovation, technology adoption

1. INTRODUCTION

Financial technology (FinTech) is transforming the provision of financial services at a rapid pace by bringing digital innovation to the traditional banking systems. FinTech has enabled faster transactions, greater accessibility, and a better user experience through mobile payments, online banking, and other online financial services over the past decade. It has been particularly so in the case of emerging economies, where FinTech

continues to play a central role in achieving financial inclusion and enhancing access to financial services for underserved populations (Demirgüç-Kunt et al., 2020). Recent studies also underscore that FinTech ecosystems are never static, redefining customer expectations and increasing competition in the financial sector (Al-Falasi et al., 2025; Lee & Shin, 2018).

As FinTech expands, customer satisfaction has emerged as a key measure of success. In contrast to

the traditional banking setting, where interaction and service environment shape customer perceptions, FinTech services are mostly dependent on the digital interface, system performance, and user experience (Daoud et al., 2026; Yousef et al., 2026). According to previous studies, factors such as service quality, perceived usefulness, and trust play a significant role in customer satisfaction in digital financial contexts (Daoud et al., 2026; Mainardes et al., 2023; Tam & Oliveira, 2017). The mechanisms by which these factors are then converted into satisfaction, however, are not fully studied, especially in emerging economies, where there may be differences in how these factors are converted into satisfaction.

To explain user behaviour in digital contexts, the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been widely applied. TAM highlights perceived usefulness and ease of use as important determinants of user acceptance (Davis, 1989). In contrast, UTAUT extends this model by adding performance expectancy, effort expectancy, and facilitating conditions (Venkatesh et al., 2003). Despite their effectiveness in explaining technology use, the models tend to focus on initial adoption and often omit post-adoption outcomes such as customer satisfaction.

As users constantly interact with digital services and FinTech platforms, satisfaction is influenced not only by functional attributes but also by their overall experience. Perception of FinTech indicates this judgment and is a critical process by which service features affect satisfaction. Although previous researchers recognise the role of attitude in FinTech satisfaction models (Alalwan et al., 2018), the mediating role of attitude in these models has not been thoroughly explored.

Moreover, personal factors, especially financial literacy, have a significant influence on user behaviour in online financial services. Financial literacy is the ability to interpret and apply financial principles effectively, enabling users to assess risks and benefits more efficiently (Ajouz et al., 2025; Lusardi & Mitchell, 2014). According to recent research, financially literate users are more likely to appraise digital financial services, which

can influence how attitudes affect satisfaction outcomes (Lusardi & Mitchell, 2014). Moreover, the mediating effect of financial literacy in the FinTech satisfaction model has been sparsely empirically studied.

The research question is as follows: How do the following key attributes of FinTech services (i.e., perceived value, ease of use, responsiveness, security, speed, and innovativeness) affect customer satisfaction? The attitude is the mediating variable, and financial literacy is the moderating variable. The combination of these mechanisms will add to existing models of technology adoption and provide a more detailed insight into customer satisfaction with FinTech services.

This research has contributed to the literature in three aspects. First, it extends TAM and UTAUT by incorporating attitude as a moderating variable, demonstrating how service attributes affect satisfaction. Second, it introduces a moderating factor of financial literacy, which highlights the conditionality of the formation of satisfaction in an online financial environment. Third, it offers empirical evidence from an emerging economy to gain insights into the implementation and use of FinTech across settings with different levels of technological and financial capabilities.

2. Literature Review

The advent of digital innovation and traditional banking systems, FinTech has transformed the way financial services are offered. This has improved the efficiency, availability and user experience of mobile payment services, online banking, and other online financial services. Recent studies reveal that the ecosystems of FinTech rapidly evolve and change customer expectations and competitive environment within the financial sector (Alafeef et al., 2024; Lee & Shin, 2018). Customer satisfaction has thus been a major indicator of the success of FinTech services.

Digital financial services customer satisfaction is associated with technological and behavioural factors. In the context of FinTech, modern literature emphasises the relevance of system quality, trust, and perceived usefulness as determinants of satisfaction (Mainardes et al.,

2023; Tam & Oliveira, 2017), whereas in traditional banking, physical interaction is a factor. Speed, usability, and innovation are highly appreciated in FinTech.

The TAM, as well as the UTAUT, offer a potent theoretical framework that can be used to understand user behaviour in the digital realm. TAM considers ease of use and perceived usefulness as predictors of user acceptance (Erjavec & Manfreda, 2022; Venkatesh et al., 2003). Comparatively, UTAUT is based on this framework in addition to the performance expectancy, effort expectancy, and facilitating conditions (Davis, 1989; Venkatesh et al., 2003). Recent extensions of those models indicate that they can be expanded in terms of their explanatory power by adding contextual and behavioural variables relevant to the context of FinTech settings (Cao et al., 2021; Dwivedi et al., 2019).

2.1 Determinants of Customer Satisfaction in FinTech

In FinTech, customer satisfaction is influenced by various service-related attributes:

Perceived Value: The trade-off between the benefits and costs to users. An increase in perceived value leads to greater satisfaction by increasing efficiency and convenience (Zeithaml, 1988). Recent research supports the idea that perceived value is one of the main factors of satisfaction with digital financial services (Mainardes et al., 2023).

Ease of Use: Ease of use is the simplicity of using FinTech platforms. Although it is a crucial adoption driver, its direct influence on satisfaction may decrease as users get used to digital systems (Davis, 1989; Tam & Oliveira, 2017).

Responsiveness: The capacity of service providers to provide timely service and solve users' problems. Immediate service in the online world improves user satisfaction and trust, which increases satisfaction (Jun & Palacios, 2016).

Security: Security is one of the key issues in FinTech because of the risks related to data privacy and financial transactions. Appropriate security practices foster trust and positively influence user satisfaction (Flavián & Guinaliú, 2006; Singh & Srivastava, 2020).

Speed: The performance metric that determines the effectiveness of transactions and service delivery. Quickness and good service are essential in the FinTech arena, where customers desire prompt service. The empirical data indicate that speed is a key factor in customer satisfaction within the digital banking setting (Tam & Oliveira, 2017).

Innovativeness: Adding new features and technologies to enhance the user experience. Although innovation has the potential to enhance satisfaction, the excessive complexity may have unfavourable impacts on usability, leading to conflicting conclusions in the literature (Gomber et al., 2017).

2.2 Role of Attitude

Perception of FinTech is a general assessment of users' experiences with digital financial services and is a key determinant of post-adoption outcomes. The TAM suggests that attitude is an intermediate process in which perceived usefulness and ease of use mediate between attitude and behaviour (Davis, 1989). Attitude, in the context of FinTech, refers to users' cognitive and emotional reactions to the system's efficiency, reliability, and overall experience.

Recent research indicates that attitude is specifically significant in online environments where users continuously review their experiences and do not make once-off adoption decisions (Alalwan et al., 2018; Dwivedi et al., 2019). A positive attitude towards FinTech services increases user satisfaction by shaping how users perceive service attributes such as speed, security, and innovativeness. On the other hand, negative perceptions can undermine satisfaction even in the presence of sufficient functional features.

Although in theory the role of attitude as a mediator between other factors in models of FinTech satisfaction is theoretically significant, it has not been sufficiently investigated, particularly in emerging markets. This paper thus establishes attitude as one of the important mechanisms that interconnect service attributes and customer satisfaction.

2.3 Financial Literacy as a Moderator

Financial literacy is the capacity of an individual to comprehend financial terms, examine products and make sound financial judgments. Financial literacy, particularly in the FinTech industry, makes users vulnerable to the sophisticated, user-friendly digital applications that demand both financial and technological literacy.

Recent research highlights that users with higher financial literacy can better assess risks, compare services, and use more advanced features (Aidarus & Abu, 2025; Verma & Ghosal, 2026). In turn, financial literacy is not just about adoption but also about how users assess their experiences with FinTech services.

Moreover, the moderating variable can be financial literacy. The more financially literate a user is, the more critical and analytical he or she is in his or her evaluations, which can either strengthen or weaken the relationship between attitude and customer satisfaction, depending on his or her expectations. Conversely, less literate users might be more inclined to rely on general perceptions or attitudes when making satisfaction judgments. However, the introduction of financial literacy as a moderator offers a more detailed picture of user behaviour in online financial contexts.

2.4 Research Gap

Although previous studies identified major factors contributing to customer satisfaction in FinTech, several key gaps remain. Most studies focus on direct relationships between service attributes and satisfaction, with little concern for the underlying mechanisms that explain how these relationships occur. Specifically, the moderating impact of attitude has not been adequately studied in FinTech settings. Second, although financial literacy has been identified as a significant factor in financial decision-making, its role as a moderating variable in FinTech satisfaction models remains understudied. The current literature tends to view financial literacy as a direct predictor rather than examining its conditional effects on user behaviour. Third, most of the current literature is geographically localised in developed markets, and there is little empirical

evidence on the use of FinTech in emerging markets, where its use is rapidly growing but may vary across differing levels of technological preparedness and financial literacy.

The study fills these gaps by incorporating attitude as a mediator and financial literacy as a moderator into a single framework, thereby providing a more comprehensive understanding of customer satisfaction in FinTech services.

3. Theoretical Framework and Hypothesis Development

3.1 Theoretical Framework

The present research is based on the UTAUT and the TAM, which explain user behaviour in the digital environment. TAM assumes perceived usefulness and perceived ease of use influence users' attitudes and behavioural outcomes (Davis, 1989), and UTAUT extends this by adding performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

Moreover, these models are mostly adoption-based and do not provide much information about post-adoption outcomes, such as customer satisfaction. In the context of FinTech, where users are already engaged with online services, satisfaction is not just about adoption but also about how users assess their experiences. This drawback requires further outreach from current frameworks to better reflect the results of experience.

In response to this, the current study considers key attributes of FinTech services for users, including perceived value, responsiveness, security, speed, and innovativeness, which reflect direct user interactions with digital financial services. Although the previous studies confirm their role as the determinants of user satisfaction (Jun & Palacios, 2016; Gomber et al., 2018), their impact on satisfaction is not necessarily direct.

In this regard, this paper proposes an attitude towards FinTech as a mediating variable. Attitude is the overall assessment users make of a technology and is a crucial bridge between the perceptions and the results (Davis, 1989; Alalwan et al., 2017). When customers have positive perceptions of FinTech services as valuable, secure

and efficient, they form positive attitudes, which consequently increases customer satisfaction. Additionally, the research uses financial literacy as a moderating factor. Financial literacy is the capability to understand and wisely use financial information (Lusardi & Mitchell, 2014). Financially illiterate users have a lower capacity to assess the benefits and risks of services in FinTech settings, thereby strengthening the relationship

between attitude and satisfaction (Servon & Kaestner, 2008).

This work proposes an elaborate model to explain customer satisfaction that is not based on conventional adoption models. This strategy will not be based on technology acceptance but on user experience and assessment, which will provide a more holistic view of FinTech use.

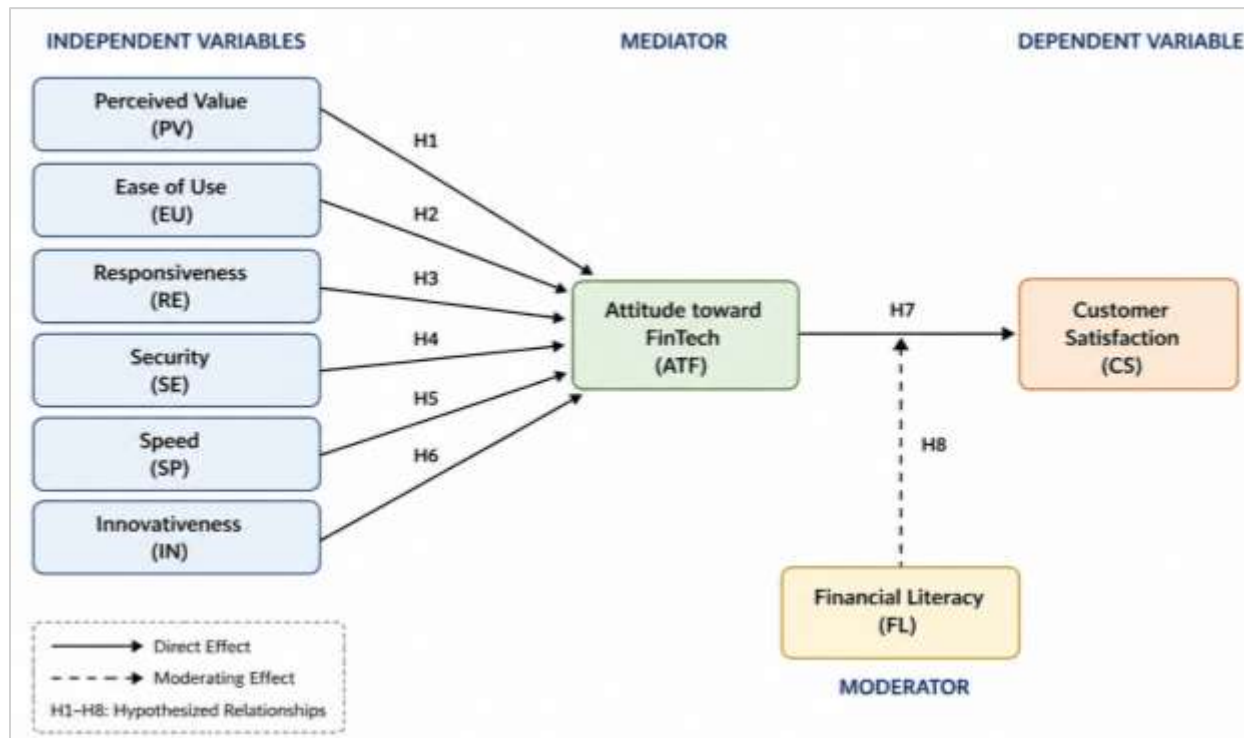


Figure 1: Theoretical Framework

The conceptual framework demonstrates the connections between the attributes of FinTech services and customer satisfaction. In particular, perceived value, ease of use, responsiveness, security, speed and innovativeness are hypothesized to have both direct and indirect effects on customer satisfaction. Attitude towards FinTech is an intermediate variable that explains how perceptions of FinTech users regarding these service attributes are translated into satisfaction outcomes. Moreover, financial literacy is proposed as a mediating factor that strengthens the association between attitude and customer satisfaction. This implies that more financially

literate individuals are better positioned to assess and derive financial benefits from FinTech services, resulting in higher levels of satisfaction.

3.2. Hypothesis Development

FinTech customer satisfaction is determined by service attributes that shape users' perceptions and experiences. Based on TAM and UTAUT, the perceived value, ease of use, responsiveness, security, speed and innovativeness are likely to have a direct effect on customer satisfaction. Perceived value enhances satisfaction through perceived benefits and efficiency (Chen & Lin, 2018; Parasuraman et al., 1988). Ease of use

enhances user interaction and experience (Davis, 1989), and responsiveness builds trust through timely support (Jun & Palacios, 2016). Security minimizes perceived risk and increases confidence (Flavián & Guinaliu, 2006), and speed enhances efficiency and convenience. Innovativeness can also lead to an improved user experience, but its impact can be different depending on usability.

Accordingly:

H1a: The perceived value has a positive impact on customer satisfaction.

H1b: Ease of use has a positive influence on customer satisfaction.

H1c: Responsiveness has a positive impact on customer satisfaction.

H1d: The security has a positive influence on customer satisfaction.

H1e: Speed has a positive impact on customer satisfaction.

H1f: Customer satisfaction is positively related to innovativeness.

Moreover, the attributes of FinTech services shape users' attitudes towards FinTech. TAM assumes that when perceptions of a system are positive, attitudes will be positive (Alalwan et al., 2018; Davis, 1989).

H2a: Perceived value has a positive impact on attitude towards FinTech.

H2b: Ease of use has a positive impact on attitude towards FinTech.

H2c: Responsiveness positively influences attitude towards FinTech.

H2d: Security has a positive impact on attitudes toward FinTech.

H2e: Speed has a positive impact on attitude towards FinTech.

H2f: Innovativeness positively influences attitude towards FinTech.

The attitude towards FinTech is a major factor that determines the results of the satisfaction:

H3: There is a positive relationship between the attitude toward FinTech and customer satisfaction. Moreover, the connection between the attributes of FinTech services and customer satisfaction is mediated by attitude:

H4a-H4f: The relationship between the attributes of FinTech services (perceived value, ease of use, responsiveness, security, speed, and

innovativeness) and customer satisfaction is mediated by attitude toward FinTech services.

Lastly, the combination of financial literacy is predicted to enhance the association between attitude and satisfaction:

H5: Attitude towards FinTech has a positive relationship with customer satisfaction, which is mediated by financial literacy.

4 Method and Material

In this study, a quantitative, cross-sectional research design was adopted to analyze the relationships among the attributes of FinTech services, attitudes towards FinTech, financial literacy, and customer satisfaction. The data were gathered through a structured questionnaire administered to users of FinTech services offered by major commercial banks in Pakistan, including HBL, NBP, UBL, ABL, and MCB.

The convenience sampling method was used because it is more convenient and because a large number of respondents use digital financial services. A pilot test was conducted before the main survey to assess the clarity and reliability of the instrument. A total of 357 valid responses were screened and retained for analysis.

4.1 Measurement of Variables

Measurement of all constructs was based on existing scales, adapted from previous research to ensure validity. It used a five-point Likert scale (between 1 (strongly disagree) and 5 (strongly agree)).

The concepts of perceived value and ease of use were appropriated from Zeithaml (1988) and Davis (1989), respectively. Responsiveness was measured according to Parasuraman et al. (1988), and security was measured according to Flavián and Guinali (2006). The aspects of speed and innovativeness were drawn from the existing literature on FinTech and innovation. The attitude towards FinTech was measured using established technology acceptance scales, financial literacy customer satisfaction (Lusardi & Mitchell, 2014). Internal consistency was acceptable in all constructs, and the reliability scores were above the recommended levels.

4.2 Data Analysis

A variance-based structural modelling method, widely recommended for examining complex models with mediation and moderation relationships between two dependent and independent variables, was used to analyze the data (Hair et al., 2019). The analysis was conducted in a two-step process: measurement model evaluation and structural model evaluation. During the first phase, the measurement model was tested to determine reliability and validity, including indicator loadings, composite reliability, convergent validity, and discriminant validity. This measure will ensure that construct measurements are accurate and consistent (Hair, J. F. et al., 2019). The second stage involved testing the hypothesized relationships using bootstrapping procedures, which provide robust estimates of the significance of path relationships and confidence intervals (Preacher & Hayes, 2008).

4.3 Mediation, Moderation, and Bias Assessment

The indirect effect analysis with bootstrapping, an acceptable method for testing mediation effects in behavioural studies (Preacher & Hayes, 2008), was used to test the mediating role of attitude towards FinTech. The level of financial literacy was included as a moderator of the attitude by adding an interaction term between the attitude and financial literacy, as per the usual procedures for moderation analysis (Aiken et al., 1991).

To address potential common-method bias, the Harman single-factor test and collinearity diagnostics were used. The findings suggest that common method variance is not a crucial issue and align with the suggested methodological practices (Podsakoff et al., 2003).

5. Results

Internal consistency reliability, convergent and discriminant validities were the areas in which the measurement model was assessed. As shown in Table 1, all constructs exhibit satisfactory reliability, with Cronbach's alpha and composite reliability (CR) exceeding the recommended 0.70. Convergent validity is established, with the average variance extracted (AVE) for all constructs exceeding 0.50, indicating that the constructs explain a significant amount of variance in their respective indicators.

Table 1. Measurement Model Assessment

Construct	Items	Cronbach's α	CR	AVE
Ease of Use (EOU)	5	0.885	0.91	0.66
Perceived Value (PV)	5	0.916	0.93	0.72
Responsiveness (RES)	5	0.918	0.93	0.73
Security (SEC)	5	0.931	0.94	0.76
Speed (SPD)	5	0.895	0.92	0.70
Innovativeness (INV)	5	0.893	0.91	0.69
Attitude (ATF)	5	0.894	0.91	0.68
Customer Satisfaction (CS)	5	0.913	0.93	0.72
Financial Literacy (FL)	5	0.827	0.88	0.60

The quality of discriminant validity was determined with the help of the HTMT criterion, as indicated in Table 2. All the HTMT values are

below the recommended value of 0.90, indicating that the constructs are empirically distinct. Overall, these results indicate that the measurement model

is reliable and valid. The CR values are also above the recommended level of 0.70, further supporting internal consistency.

Table 2. Discriminant Validity (HTMT)

Construct	EOU	PV	RES	SEC	SPD	INV	ATF	CS
PV	0.78							
RES	0.81	0.84						
SEC	0.82	0.85	0.88					
SPD	0.80	0.83	0.86	0.85				
INV	0.75	0.80	0.83	0.82	0.85			
ATF	0.73	0.81	0.82	0.80	0.81	0.84		
CS	0.72	0.76	0.79	0.78	0.81	0.82	0.85	
FL	0.69	0.71	0.74	0.73	0.75	0.74	0.80	0.82

5.1 Structural Model Assessment

The structural model has an acceptable explanatory power. Path coefficients, t-values, and p-values derived when bootstrapping were used to evaluate the structural model. Table 3 shows the results.

The results show that speed ($\beta = 0.196, p < 0.01$) and innovativeness ($\beta = 0.304, p < 0.001$) have significant positive impacts on customer satisfaction, supporting hypothesis H1e and H1f. In contrast, perceived value ($\beta =$

$0.040, p > 0.05$), ease of use ($\beta = 0.084, p > 0.05$), responsiveness ($\beta = 0.088, p > 0.05$), and security ($\beta = 0.077, p > 0.05$) do not have significant effects on customer satisfaction, leading to the rejection of hypotheses H1a-H1d.

Moreover, the positive influence of attitude toward FinTech on customer satisfaction ($\beta = 0.393, p < 0.001$) supports H3. This result shows the pivotal role of attitude in determining satisfaction outcomes.

Table 3. Structural Model Results

Hypothesis	Path	β	t-value	p-value	Result
H1a	PV \rightarrow CS	0.040	0.72	0.474	Not supported
H1b	EOU \rightarrow CS	0.084	1.68	0.093	Not supported
H1c	RES \rightarrow CS	0.088	1.31	0.191	Not supported
H1d	SEC \rightarrow CS	0.077	1.15	0.248	Not supported
H1e	SPD \rightarrow CS	0.196	2.75	0.006	Supported
H1f	INV \rightarrow CS	0.304	4.10	0.000	Supported
H3	ATF \rightarrow CS	0.393	5.92	0.000	Supported

5.2 Mediation Analysis

The attitude towards FinTech was analysed as a mediator by evaluating the indirect effects. As shown in Table 4, the findings indicate that attitude mediates the relationship between the key variables and customer satisfaction.

Innovativeness has a significant indirect influence on customer satisfaction via attitude, whereas the direct influence is also significant, indicating partial mediation. Likewise, customer satisfaction through perceived value is indirectly mediated by attitude, indicating that perceived value has an

indirect-only mediation effect on customer satisfaction.

These results provide evidence for the mediating role of attitude toward FinTech (H4) and its

relevance as a mediating factor in the effect of service attributes on satisfaction.

Table 4. Mediation Results

Path	Indirect Effect	Result
PV → ATF → CS	Significant	Partial mediation
INV → ATF → CS	Significant	Partial mediation

5.3 Moderation Analysis

The moderate value of financial literacy was determined by assessing the relationship between attitude towards FinTech and financial literacy. Table 5 provides the results.

The positive influence of financial literacy on customer satisfaction ($\beta = 0.559, p < 0.001$) and on attitude toward FinTech also remains a strong predictor ($\beta = 0.515, p < 0.001$).

However, the interaction term between attitude and financial literacy is negative and significant ($\beta = -0.066, p < 0.05$), showing that financial literacy undermines the positive relationship between attitude and customer satisfaction. Thus, the hypothesis H5 is accepted, but in the opposite direction from that originally predicted.

Table 5. Moderation Results

Path	β	p-value	Result
ATF → CS	0.515	0.000	Significant
FL → CS	0.559	0.000	Significant
ATF × FL → CS	-0.066	0.020	Significant (Negative moderation)

6. Discussion

This study examines the predictors of customer satisfaction in the FinTech context by combining service-related factors with attitudinal and individual-level processes. The results offer some valuable theoretical and empirical knowledge.

The findings indicate that attitude towards FinTech is the best predictor of customer satisfaction, supporting the overall assumption of the Technology Acceptance Model (TAM) that customer evaluations of technology are strong predictors of behavioural outcomes (Davis, 1989). This aligns with previous research showing that attitudes are a key determinant of satisfaction and future utilization of digital financial services (Alalwan et al., 2018; Ryu, 2018). The high magnitude of the attitude indicates that the consideration of functional features is not the only factor that can lead to satisfaction; it also depends on the overall perception and experience of users. Second, the speed and innovativeness among the service-related factors were found to be significant

predictors of customer satisfaction. The positive effect of speed aligns with previous research demonstrating the importance of efficiency and convenience in digital financial services (Jun & Palacios, 2016). Speed is a vital factor in user satisfaction in FinTech environments, where real-time transactions and fast service delivery are required. Equally, the major impact of innovativeness reinforces the opinion that user experience and perceived value increase with technological advancement and new features (Ghosh & Golder, 2026; Gomber et al., 2017). This observation implies that users do not merely consider efficiency, but also the innovative potential of FinTech platforms.

Surprisingly, ease of use, perceived value, responsiveness and security had no major direct impact on customer satisfaction. This result contradicts most of the available literature, which in most cases identifies these factors as critical determinants of satisfaction (Davis, 1989; Flavián

& Guinaliú, 2006; Zeithaml, 1988). It could be explained by the fact that these features have become the minimum requirements in the FinTech services. That is, users assume ease of use, security, and responsiveness, and these three factors make no difference in satisfaction levels. Recent studies indicate that as the digital services become more mature, the traditional dimensions of service quality can no longer have a direct effect on satisfaction (Ryu, 2018).

Third, the attitude formation analysis shows that perceived value and innovativeness have a significant impact on attitude towards FinTech, and the other factors do not. It implies that the user base forms positive attitudes, largely determined by the perceived value of FinTech services and their innovative capabilities. This observation is partly consistent with TAM and UTAUT, which emphasize perceived usefulness as a key factor in attitude (Venkatesh et al., 2003). However, the fact that ease of use and security have non-significant effects on attitude does not necessarily mean that these factors are no longer the key drivers of attitudinal formation in more mature digital worlds.

Fourth, the mediation analysis supports that attitude towards FinTech mediates the relationship between innovativeness and customer satisfaction. This observation supports the theoretical claim that users' perceptions indirectly affect satisfaction via psychological assessment mechanisms. The indirect impact of perceived value also indicates that certain service attributes may be effective in influencing satisfaction indirectly but not directly.

Lastly, moderation analysis shows that financial literacy negatively moderates the relationship between attitude and customer satisfaction. It is especially important and a new finding. Although previous studies have typically proposed that more financially literate users are more critical when using FinTech services (Lusardi & Mitchell, 2014), the current findings suggest that the more financially literate users are, the more critical they can be when using FinTech services. Consequently, the effect of attitude on satisfaction also becomes less pronounced on these users. This result indicates the importance of financial literacy as a

boundary condition, with the user's expertise influencing the conversion of attitude to satisfaction.

Finally, the results expand current technology acceptance models by showing that attitudinal and experiential factors are more likely to drive customer satisfaction with FinTech than traditional service quality factors. This move towards experiential rather than functional evaluation offers valuable insights into how users behave in digital financial ecosystems, especially in emerging markets.

7. Conclusion

This research examined the determinants of customer satisfaction in FinTech by integrating the service-related variables, the mediating variable of attitude and the mediating variable of financial literacy. The TAM and UTAUT-based study provides a comprehensive framework for how users assess and respond to FinTech services in a new economy.

The findings show that attitude towards FinTech is the most significant factor in customer satisfaction, indicating the applicability of overall customer evaluations of digital financial services. Service-related factors, such as speed and innovativeness, have both positive and significant correlations with satisfaction with efficiency and technological advances, and play significant roles in the determination of the user experience. Conversely, more traditional variables such as ease of use, perceived value, responsiveness and security did not exhibit significant direct effects, suggesting that these variables may have become the norm and not a factor of differentiation in FinTech settings.

Attitude has also been described as a high intervening process, particularly in the translation of innovativeness and perceived value into customer satisfaction. In addition, the relationship between attitude and satisfaction and a negative interaction effect indicates that the higher the financial literacy of the users, the higher the likelihood of a more critical assessment of the FinTech services. This observation shows the need to take into consideration the capabilities and

knowledge of users when examining digital financial behaviour.

7.1 Theory and Practical Implications

The study is pertinent to the literature in that it expands the technology adoption theories to include the post-adoption results, including customer satisfaction. The study provides a more comprehensive depiction of the interaction between technological, psychological, and individual variables in FinTech contexts by including attitude as a mediator and financial literacy as a moderator. The results also indicate the replacement of the conventional dimensions of service quality by the experience in digital financial services.

The results have multiple implications for FinTech providers and financial institutions. To start with, companies need to ensure that they work towards improving user experience and positive attitudes, as opposed to simply improving functional service attributes. Second, an increase in transaction speed and other features can greatly improve customer satisfaction. Third, since age will not have as significant an impact on individuals with higher financial literacy, the service providers will need to adopt user-level interventions, such as making interfaces easier to use by the less financially literate and harder to use by the more financially literate.

7.2 Limitations and Future Research

This study has several limitations. First, the cross-sectional nature restricts the establishment of causal relationships. Second, the convenience sampling technique would limit the applicability of the research results. Third, the study is based on a one-country context, which might not be entirely representative of the differences across the markets.

Longitudinal designs can be employed in future research to study how user behaviour changes over time, and to test how other moderating variables, such as trust, perceived risk, and digital literacy, change over time. It is also possible to obtain insights related to whether contextual factors contribute to the adoption and satisfaction with

FinTech through international comparative studies.

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