

Borrowers' Adoption of FinTech Lending in Indonesia: An Expanded TAM Approach

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Abstract

This study uses an expanded technology acceptance model (TAM) to analyze the drivers of FinTech lending adoption in the Indonesian market, particularly among borrowers. Building on the foundational TAM constructs of perceived usefulness and ease of use, this research integrates additional factors such as trust, perceived risk, government support, financial health, user innovativeness, and brand image to provide a comprehensive framework for understanding adoption behavior. We created a questionnaire, distributed it to active borrowers of FinTech lending, and obtained 425 valid responses. We employed a structural equation model (SEM) to analyze the data and evaluate the hypotheses, encompassing the relationships among all latent variables. This study emphasizes the attitudes and trust role in mediating the relationship between the latent variable. The study found that perceived usefulness, perceived ease of use, trust, brand image, government support, and user innovativeness actively influence positive attitudes and intention to adopt FinTech lending. Also, trust functions as a mediator with brand image, government support, user innovativeness, and adoption attitudes of borrowers. Such findings point to the importance of trust in acceptance intention and actual use of FinTech services by borrowers. Thus, the results support appropriate guidance for FinTech providers and the government in promoting rational and sustainable expansion of FinTech to advance inclusive financial access in Indonesia.

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Keywords: FinTech lending, Borrowers, TAM, Trust, SEM.

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1. Introduction

Financial Technology (FinTech) has rapidly grown and innovatively transformed traditional financial services (Hu et al., 2019). As one segment of this larger phenomenon, FinTech lending uses technology to efficiently automate the processes of applying for, assessing, and disbursing credit, delivering greater efficiency and access to lending services relative to traditional lending (Matsepe & Van Der Lingen, 2022). (Cornelli et al., 2023) studied the period between 2013 and 2018 across 79 countries and found that the volume of lending facilitated by FinTech and big tech companies grew substantially during those years. The research noted that digital lending was predominantly found in countries with higher GDP per capita, less stringent banking-sector regulations, and more developed bond and equity markets.

Over the last few years, the Indonesian FinTech lending sector has expanded greatly, illustrating the growing uptake of digital financial services. A 2019 study (Yudaruddin et al., 2024) documenting the evolution of FinTech in Indonesia particularly focused on the development of P2P lending and payment system services, and noted the rapid growth the country had in commercial banks and P2P payment systems over the 15 years of analysis (2004 to 2018). Despite Indonesia's FinTech industry growth, the 2019 census showed 50.9% of the population was unbanked. This suggests the critical opportunity to leverage Indonesian FinTech lending services and broaden access to unencumbered financial services.

The use of FinTech in banking aims to enhance user experience and operational effectiveness. Most current studies focus on supply-side banking FinTech approaches and their related risks. Zavolokina et al. (2016) studied the concept of collaboration between Indonesian banks and FinTech firms in a peer-to-peer fashion. Chang et al. (2016) investigated how Indonesian banks adjusted their operational methods in reaction to FinTech and contended with FinTech firms. Thus, we need to examine the influence of FinTech service adoption from the borrower's viewpoint. Examining the key elements that drive FinTech adoption among banking customers can enhance service offerings and strengthen the bond between financial organizations and their clients. It can offer creative ideas and a greater insight into the focus on adoption for FinTech services (Hu et al., 2019).

This research employs an extended TAM to look at the factors influencing the adoption of FinTech lending services by integrating several key components. Building on the foundational perspectives of perceived usefulness and simplicity of use, the model will comprise attitude, an overall assessment of FinTech lending, and will account for the mediation effect on perceived usefulness, perceived ease of use, and intention to use FinTech lending services. The need to explore the nexus of these elements further for FinTech lending adoption. Perceived usefulness and social influence determine the intention to use FinTech services (Singh et al., 2020). Trust is built and user adoption positively influenced when FinTech service providers create user-friendly, need-fulfilling, and data-protective services (Al Nawayseh, 2020).

Researching these aspects contributes to understanding borrowers' attitudes toward FinTech lending, especially in terms of digital transformation (Razazila et al., 2024). Additionally, in building upon the prior studies of FinTech adoption and the TAM, the current study adds variables such as trust, perceived risk, government support, financial health, brand equity, and user innovativeness as foundational elements to develop a holistic understanding of the multifaceted nature of FinTech adoption. Understanding these relationships will be critical for deepening user engagement with FinTech, thereby advancing financial inclusion and sectoral innovation (Razazila et al., 2024). The goal is to refine the understanding of behaviors surrounding the adoption of FinTech sufficiently to inform with actionable goals, user acceptance deepening, and financial inclusion. By advancing these efforts, the study intends to enhance the theoretical discourse surrounding FinTech adoption, as well as offer actionable insights to advocates of responsible and sustainable FinTech lending growth.

2. Literature Review and Hypotheses Development

2.1 Perceived Usefulness

Perceived usefulness represents one of the fundamental predictors of the adoption of information technologies within the TAM. As for understanding productivity gains, one concern of the user is how much the new technology will deliver in terms of productivity. Within the scope of this study, Ryu (2018) explains perceived usefulness within the context of FinTech lending and notes that borrowers will decide to use FinTech lending technology when they believe the application of FinTech will yield positive results. As for the essence of perceived usefulness in this context, borrowers believe that adopting FinTech lending technology will result in considerable benefits—for instance, faster access to loans, lower interest rates, and better and expanded access to credit. The protagonist of FinTech lending will be borrowers, and they will adopt the technology primarily for the perceived benefits in attaining their desired financial objectives. For instance, they are likely to adopt a FinTech lending platform that permits access to funds in a quicker and more seamless process when compared to traditional lending institutions. A good number of perceived usefulness empirical research conducted over the last decade confirms a positive influence on borrowers' adoption intentions for information technology (Barakat & Hussainey, 2013; Carlin et al., 2017; Ng & Kwok, 2017).

Chang et al. (2016) analyzed the Chinese banking industry and appreciated the significance of Financial Technology owing to the detailed disaggregation of client information and the development of an intelligence framework. The analysis by Carlin et al. (2017) on millennials' FinTech adoption explains that life expectations and the level of financial literacy considerably influence millennials' intentions. Furthermore, the reputation of the platform, customer support availability, and security perceptions will influence the usefulness of FinTech lending. According to Singh et al. (2020), the most important factors influencing the intention to adopt FinTech services are the perceived usefulness of the services and social pressure to

use them. Hence, to achieve high adoption rates, FinTech services must appreciably serve user needs. Thus, the following hypothesis was derived from the prior studies:

Hypothesis 1(H1): Borrowers' perceived usefulness positively influences their attitudes towards adopting FinTech lending.

2.2 Perceived Ease of Use

The TAM framework encompasses users' perceived ease of use and the necessary physical and mental effort to interact with the recently introduced technological product (Davis, 1989). In this research, perceived ease of use entails how borrowers feel and exert effort during the understanding of the technology used and the services offered under FinTech. FinTech services provided to customers of banks bridge the gap of quality and customer experience deficiencies of banks by addressing the banks' deficits in meeting specific customer needs. User-friendliness is the most important attribute of FinTech (Abbad, 2013; Chau & Ngai, 2010). In FinTech lending, perceived ease of use has a critical impact on borrowers and their adoption of a specific service provided by a platform. The ease of application, user-friendliness of the interface, and streamlined articulation of contract terms translate perceived ease of use of the lending platform to borrowers and clients. The perceived ease of use has been positively correlated to technology adoption and attitude in studies of banking (Akturan & Tezcan, 2012; Szopiński, 2016). Riquelme & Rios (2010) suggested that perceived usefulness significantly influences users' perceptions and likelihood of adopting FinTech while interfacing with complex information systems for mobile financial transactions. Users are more willing to accept FinTech services when they are perceived as easy to use, seamless, and uncomplicated.

The balance of perceived ease of use and perceived usefulness with adoption intentions goes in both directions. A FinTech lending platform can be perceived as very relevant economically and socially, and still be rejected. Potential borrowers can still view a platform as useful, but be perceived as difficult to use. On the other hand, adopting a platform perceived as easy to use but with a minimum advantage will be perceived as a low-value action. Users perceive ease of use in the situation where a FinTech and/or customer service-oriented chatbot requires minimum effort (Huang et al., 2021). Therefore, FinTech lending platforms will optimize the maximum adoption and use of services (Jatimoyo et al., 2021). Adoption and use of FinTech services will become validated at a psychological level as positive impacts of confidence and ease of use in the services will become realized (Al Nawayseh, 2020). Within a computer resource center, Taylor & Todd (1995) explored the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Decomposed Theory of Planned Behavior (DTPB), finding that perceived ease of use directly and positively influenced perceived usefulness. The preceding analysis has led to the following hypotheses:

Hypothesis 2a (H2a): Borrowers' perceived ease of use positively influences their attitudes towards adopting FinTech lending.

Hypothesis 2b (H2b): Borrowers' perceived ease of use positively influences perceived usefulness of adopting FinTech lending.

Hypothesis 2c (H2c): A positive indirect correlation exists between perceived ease of use and FinTech attitude acceptance mediated by perceived usefulness.

2.3 Attitude

An attitude represents a person's position, feelings, and tendencies towards a specific object, while a behavioral intention speaks to the determination of a person to perform a specific action. According to research on the TAM, the intention to adopt new technology is preceded by positive attitudes towards such technology (Gupta & Arora, 2017; Ng & Kwok, 2017). Within the conventional TAM, the attitude of users towards specific technology positively influences their intention to adopt that technology, a claim that has been repeatedly demonstrated by research in the banking sector (Hsu et al., 2011; Shaikh & Karjaluoto, 2015). Hence, we suggest the following hypothesis:

Hypothesis 3 (H3): Attitudes and intentions of borrowers show a positive correlation concerning FinTech lending.

2.4 Trust

User attitudes and adoption behavior are governed by multiple intertwined factors in the case of fintech adoption. Inclusive fintech innovation is advanced by trust in the system (Razazila et al., 2024). In the context of financial services, trust is a determinant of whether users will adopt offered fintech services (Hu et al., 2019). Given the extensive and complex data in the fintech domain, the trust factor is even more pronounced. Therefore, it is necessary to analyze trust as a determining factor in the attitude of prospective borrowers regarding adoption, as well as factors that influence trust. The lack of consensus in the definition of trust has led to its derivation in fields such as sociology, management, organizational behavior, and many more (M. K. O. Lee & Turban, 2001; Lewis & Weigert, 1985; McKnight & Chervany, 2001). Trust is presented in this work as a dimension of borrowers' total evaluated utility of a product. The attribute trust is intrinsic, and Kesharwani & Bisht (2012) would contend that it drives behavior.

FinTech's basic characteristics include particular risks relating to its use, while studies show a close relationship between trust, reputation, and risk. The perceived risk associated with the bank brand and service will preeminently shape a customer's trust in the financial institution. Additionally, several experts agree that service trust is a potential driver of adoption decisions in the FinTech industry. Increased use of the service is expected, and the service-encouraging behaviors are strengthened with

positive trust in the provider (Koksal, 2016; Kumar Basak et al., 2016). The evidence in (Hanafizadeh et al., 2014) shows that trust impacts the adoption of FinTech services indirectly. Therefore, the provision of FinTech services must guarantee ease of access and protection of the user's information to build trust that will drive adoption (Al Nawayseh, 2020). Increased customer awareness of technology underscores the need for research that embraces technology to enhance a customer's financial experience (Razazila et al., 2024). Consequently, the following hypothesis was formulated:

Hypothesis 4 (H4): Borrowers' trust in FinTech lending substantially affects their attitudes about adopting FinTech lending.

2.5 Brand Image

Brand image determines the reputation and perception of a fintech provider and helps build confidence and trust among potential users (Hu et al., 2019). Users' perception that a provider's technology is effective and easy to use is a testament to the provider's technology and quality, reliability. The research states 'brand image (BI) is an intangible economic resource, differentiating from an abstract idea and clearly identifiable impacts from positive borrowers' to demonstrate the expansive benefits of borrowers. The brand influence of FinTech lending companies increases the likelihood of reliable service delivery and increases borrowers' attainment of their service goals (Park et al., 2015). Several FinTech studies state brand impacts users' quality (Nahian Riyadh et al., 2010), value (Shapiro et al., 2019), and satisfaction (Saleem & Rashid, 2011) to a conspicuous extent.

Users' perceptions of FinTech application brands are gleaned as, and expected as, a component of trust, as outlined by (Chandra et al., 2010). Fintech services are layered behind a gated and require the provision of extensive sensitive personal information. While Hu et al. (2019) stated that a trust-creating and risk-mitigating brand image is supportive of strong customer trust and favorable customer beliefs and ultimately results in brand trust. Psychological literature supports the findings of (K. C. Lee & Chung, 2009), with brand image and a more positively oriented image ultimately positively impacting consumer trust. Hence, an image within a brand guarantees positively and strongly tuned, focused products and services, enabling borrowers to clearly discern that the enterprise has a strong service orientation. The borrowers within the transactional service structure to the enterprise clearly have and strongly positively tuned focused products and services trust. The cognitive load of trust by service structure is positively and strongly tuned to focused products and services. Given the outlined literature, we proposed the following hypothesis.

Hypothesis 5a (H5a): The brand image significantly influences borrowers' attitudes toward adopting FinTech lending.

Hypothesis 5b (H5b): Brand image greatly affects borrowers' trust in FinTech lending.

Hypothesis 5c (H5c): A positive indirect association exists between brand image and FinTech attitude adoption mediated by borrowers' trust.

2.6 Perceived Risk

Concerns related to security, privacy, and possible financial losses culminate in perceived risk, which in turn deters users from adopting FinTech solutions. This perceived risk must be properly managed so that users' concerns are not disproportionate. Perceived risk, absence of trust, and other psychological factors associated with technology remain primarily influential and detrimental to its adoption (Kesharwani & Bisht, 2012). This study examines perceived risk with a focus on privacy and financial concerns associated with borrowers when pursuing FinTech options. Financial risk includes concerns borrowers have when assessing potential product return rates and other errors, which can result in losses and ultimately asset dispossession.

On the other hand, during the interaction with online financial services, the risk of privacy concerns entails the possibility of exposing personal, transactional, and other sensitive information. Khedmatgozar & Shahnazi (2018) stated that the most vital factor regarding the acceptance of e-services is the perception of risk. Bansal et al. (2010) described users' concerns regarding FinTech services as focusing mostly on the misuse of personal information, which might have severe repercussions. Given these explanations, the perceived risks of FinTech are likely to have a significant impact on people's willingness to use technology for their buying or consumption.

FinTech lending generally integrates big data, IoT, and cloud computing technologies, which may entail specific risks for users obtaining the service (Zhou et al., 2010). Also, when clients receive technological platform services from banks' financial services, clients are required to provide personal data for a complete services assessment, which erodes users' trust in the offered services (K. Kim & Bipin Prabhakar, 2020). Elaboration on the provided description of gap risk prompted the latter hypothesis.

Hypothesis 6a (H6a): Perceived risk will negatively influence borrowers' attitudes towards adopting FinTech lending.

Hypothesis 6b (H6b): Perceived risk will negatively impact borrowers' trust in FinTech lending.

Hypothesis 6c (H6c): An indirect relationship exists between perceived risk and FinTech attitude adoption mediated by borrowers' trust.

2.7 Government Support

Government support may take the form of regulatory frameworks, incentives, and public awareness campaigns, all of which provide an initial positive environment for FinTech innovation and adoption. Initiatives undertaken by the government provide legitimacy and security, which, coupled with assurances of consumer protection, provide users with confidence in the innovations the government's support provides. The trustworthiness of government-sponsored innovation attracts FinTech adoption. Communication infrastructure investments and highly innovative government-sponsored communication technology increase FinTech adoption amongst users. Users become confident enough to take the technological adoption leap. Kiwanuka (2015) For instance, it showed how government support positively determines technology adoption and the intention for its continued use, which has practical implications for ongoing use strategy formulation. To examine factors influencing the adoption of online banking, Marakarkandy et al. (2017a) extended the applicability of the TAM by adding relevant antecedents and empirically demonstrated that confidence in online banking products hinges on government support. With this literature review in mind, the following hypotheses were developed:

Hypothesis 7a (H7a): Government support significantly influences borrowers' attitudes regarding accepting FinTech lending.

Hypothesis 7b (H7b): Government support significantly influences borrowers' trust in FinTech lending.

Hypothesis 7c (H7c): An indirect association exists between government support and FinTech attitude adoption mediated by borrowers' trust.

2.8 User Innovativeness

User innovativeness refers to the willingness to adopt new technologies and can lead to early adoption and distribution of fintech solutions to wider user audiences. For this study, user innovativeness is defined as the willingness to adopt innovations. Those who are highly innovative may experience varying degrees of uncertainty, become willing to adopt innovations, and tend to take greater risks associated with new technologies (Leicht et al., 2018). In their research on mobile payment user adoption, C. Kim et al. (2010) argue that the relative inexperience of mobile services available to an individual enhances the individual's innovative tendency and intention to adopt the mobile payment service. This prompted the formulation of the following hypotheses:

Hypothesis 8a (H8a): User innovativeness significantly influences borrowers' attitudes toward adopting FinTech lending.

Hypothesis 8b (H8b): User innovativeness significantly influences borrowers' trust in FinTech lending.

Hypothesis 8c (H8c): An indirect association exists between user innovativeness and FinTech attitude adoption mediated by Borrowers' Trust.

2.9 Financial Health

Users' financial health and access will impact the willingness and ability to try out FinTech offerings (Hu et al., 2019). Jünger & Mietzner (2020) recognized financial health, trust, and attitude as key determinants of the adoption of FinTech services. FinTech adoption attitudes and mental willingness to embrace financial innovations are closely associated with one's financial standing. The inclination to embrace transforming technologies seems to extend to individuals with robust financial health as they manage financial risks confidently and adopt changing technologies. A positive self-technology attitude correlates with technological usefulness perception (Mishra et al., 2014). Trust remains of fundamental importance. Even the best financially positioned will withhold FinTech adoption if the unresolved risks expose the platform. Appiah & Agblewornu (2025) studied Sub-Saharan Africa and recorded encomiums of economic perceptions relative to FinTech adoption and legal, security, and privacy concerns deterring prospective users. Trust positively impacts adoption potential as it addresses the impact of untrustworthy perceptions. Thus, the following hypotheses were formed:

Hypothesis 9a (H9a): Financial health significantly influences borrowers' attitudes toward adopting Fintech lending.

Hypothesis 9b (H9b): Financial health significantly influences borrowers' trust in Fintech lending.

Hypothesis 9c (H9c): There is an indirect relationship between financial health and FinTech attitude adoption mediated by borrowers' trust.

2.10 Conceptual Framework

Perceived ease of use denotes the extent to which a person considers an innovation to be understandable, learnable, and usable (Dhingra, 2019). Most researchers use the TAM for its robustness, validity, and reliability across a wide range of contexts and applications (Alshammari & Rosli, 2020). TAM is an extension of the TRA but includes the core belief constructs of perceived usefulness and perceived ease of use, and, as such, is a more comprehensive model. Moreover, its flexibility allows for the inclusion of additional constructs, enhancing the model's ability to explain varying uses and cultural contexts. In identifying the current adoption situation and the influence factors around customers' adoption choices, the focus is on the dynamic elements of the enhanced model and the objectives of the study. In this

case, the employed enhanced TAM framework is composed of six elements: Trust, Brand Image, Perceived Risk, Government Support, Financial Health, and User Innovativeness, as discussed in Figure 1.

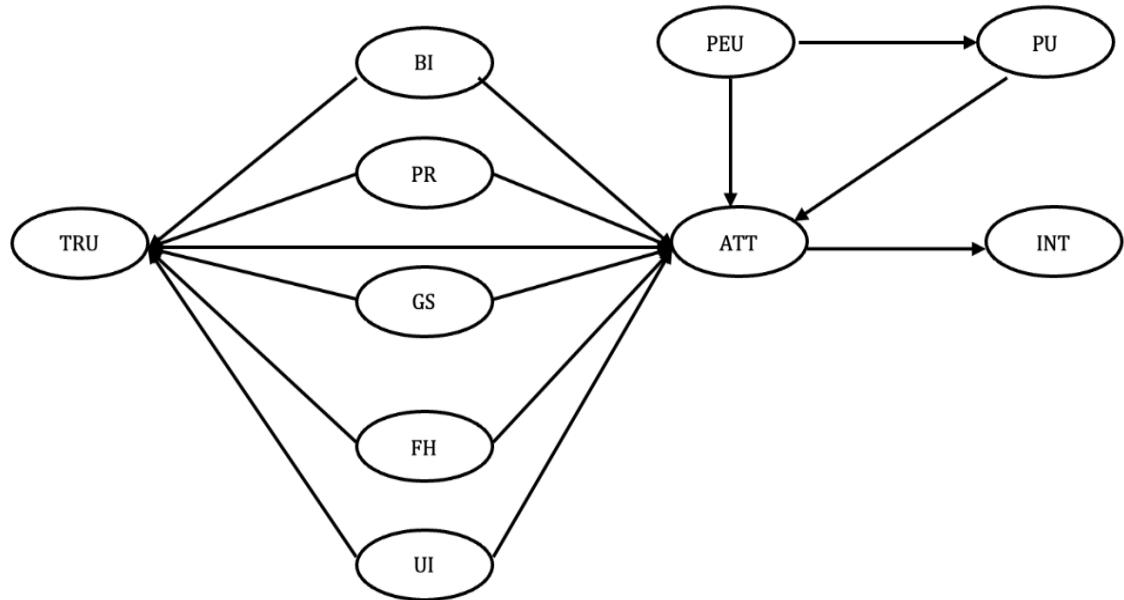


Figure 1: Research Framework

Note: PU: Perceived Usefulness; PEU: Perceived Ease of Use; BI: Brand Image; PR: Perceived Risk; GS: Government Support; FH: Financial Health; UI: User Innovativeness; TRU: Trust; ATT: Attitude; INT: Intention

3. Methods

3.1 Data Collection

This study investigates the primary factors influencing the acceptance of FinTech lending through empirical studies and the evaluation of users' behavioral intention. In this regard, borrowers of FinTech Lending services were selected as the target population for the survey. For the survey, the participants were selected randomly from the bank's lending FinTech services. Google Forms was utilized for the survey. Thirty-one questions were divided into two sections and measured via a five-point Likert scale. The linkage of the first section with the subsequent section that analyzes FinTech lending services was purposeful. The survey garnered a total of 437 responses. After the first review, flawed surveys were removed from the data set due to short completion times and random patterns, leaving 425 complete responses and an effective response rate of 97.25%.

3.2 Instrument Development

Concerns highlighted by national and international scholars on related topics were instrumental in forming this paper's questionnaire design. Appropriate modifications and extensions that correspond to the characteristics of the FinTech services under investigation were made, as illustrated in Table 2. For the constructs of Perceived Usefulness, (Huh et al., 2009; Lockett & Littler, 1997) were the main references; For Perceived Ease of Use, we relied on (Cheng et al., 2006; Wang et al., 2003); Trust was adapted from (Chong et al., 2010; Sánchez-Torres et al., 2018); Brand Image was drawn from (Ha, 2004; Ruparelia et al., 2010); For Perceived Risk, the constructs of Government Support, User Innovativeness, Financial Health, and the Attitude and Intention were drawn from (Marakarkandy et al., 2017b; Patel & Patel, 2018; Setiawan et al., 2021; Zhang et al., 2018). There were nine external latent variables in the framework, and each contained two to six observable variables.

Every measured variable was based on a five-point Likert scale. Participants were asked to rate their indicators in accordance with their real importance. The options were: 1. 'strongly disagree', 2. 'disagree', 3. 'uncertain', 4. 'agree', and 5. 'strongly agree'. This study applied Structural Equation Modelling Partial Least Squares (SEM-PLS) for data analysis and data processing. The parameter estimation for SEM-PLS was performed using WarpPLS 7.

4. Result

4.1 Respondent Characteristics

Results for the descriptive statistics of 425 survey participants are presented in Table 1. These surveys examined the respondent characteristics, including gender, age, education, net disposable income, and whether the participant engages with FinTech lending services or products. The age-specific descriptive statistics in Table 1 suggest that younger adults, especially those under 35, are the dominant constituent of FinTech lending consumers in Indonesia. In the specified age range, 26–35 years, the proportion is considerably high at 72.23% and generally, these borrowers are the early adopters of innovative technologies and novel living patterns, thus justifying the sampling. 65.64% of users constitute regular service access, confirming strong recent service uptake. Consequently, investigating the factors' driving acceptance is essential for implementing FinTech integration within banking frameworks.

Table 2: Validity and Reliability Test

Variable and Indicators	Loading	CA (α)	CR	AVE
Perceived Usefulness (PU)		0.791	0.749	0.519
Utilizing Fintech can fulfill my service requirements (PU1).	0.755			
Fintech can help save time (PU2).	0.754			
Fintech can enhance efficiency (PU3).	0.771			
In general, Fintech are beneficial to me (PU4).	0.705			
Perceived Ease of Use (PEU)		0.847	0.727	0.649
Utilizing Fintech services is straightforward (PEU1).	0.848			
The operational interface of Fintech is user-friendly and comprehensible (PEU2).	0.846			
Accessing Fintech services is facilitated by readily available mobile phones, applications, and Wi-Fi (PEU3).	0.716			
Brand Image (BI)		0.872	0.779	0.694
This bank offers excellent services and goods. (BI1).	0.830			
I favor utilizing services offered by well-known brands (BI2).	0.842			
The bank possesses a commendable reputation (BI3).	0.826			
Perceived Risk (PR)		0.797	0.718	0.569
This bank offers excellent services and goods. (BI1).	0.772			
Personal privacy will likely be compromised by the utilization of Fintech services (PR2).	0.821			
In general, I perceive Fintech services as hazardous (PR3).	0.662			
Government Support (GS)		0.826	0.784	0.614
The ministry support and promotes using Fintech services (GS1).	0.822			
I believe that the authority has passed favorable legislation and rules for Fintech services (GS2).	0.787			
I assert that the regime is establishing various types of infrastructure, including telecommunications networks, which positively influence the advancement of Fintech services (GS3).	0.739			
Financial Health (FH)		0.866	0.794	0.619
My income has diminished, and my funds have been depleted due to the national economic conditions (FH1).	0.724			
Impulsive credit card usage is occurring (FH2).	0.784			
There is an increase in the prices of necessary commodities (FH3).	0.819			
Exhibit an increased frequency of cash withdrawals currently (FH4).	0.817			
User Innovativeness (UI)		0.884	0.739	0.793
Upon learning about a new product, I seek opportunities to test it (UI1).	0.780			
I am typically the first among my friends to experiment with a new product (UI2).	0.890			
Trust (TRU)		0.782	0.765	0.642
I am certain that Fintech services safeguard my personal information (TRU1).	0.802			
In general, Fintech services are reliable (TRU2).	0.712			
Attitude (ATT)		0.815	0.766	0.595
I contend that utilizing Fintech is advantageous. (ATT1).	0.786			
Utilizing Fintech is an enjoyable adventure (ATT2).	0.794			
I am curious in Fintech (ATT3).	0.734			
Intention (INT)		0.793	0.706	0.563
If I have utilized Fintech, I will persist in utilizing them (INT1).	0.638			
I intend to utilize Fintech shortly (INT2).	0.825			
I will endorse Fintech to my acquaintances (INT3).	0.775			

Chin (1995) suggests that to show discriminant validity among latent components, the squared correlation between the constructs must be less than the AVEs of each construct, and the cross-loadings must be greater than 0.5, as seen in Table 3. This criterion was fulfilled in all instances involving the construct variable measures, demonstrating discriminant validity.

Table 3: Correlation among latent variables

	PU	PEU	BI	PR	GS	UI	TRU	ATT	INT	FH
PU	0.799	0.539	0.59	0.509	0.407	0.321	0.348	0.285	0.539	0.531
PEU	0.539	0.806	0.326	0.364	0.379	0.199	0.212	0.261	0.487	0.551
BI	0.590	0.326	0.833	0.621	0.371	0.376	0.389	0.256	0.348	0.359
PR	0.509	0.364	0.621	0.755	0.494	0.420	0.446	0.381	0.375	0.419
GS	0.407	0.379	0.371	0.494	0.783	0.459	0.511	0.546	0.390	0.348
UI	0.321	0.199	0.376	0.420	0.459	0.891	0.605	0.474	0.237	0.272
TRU	0.348	0.212	0.389	0.446	0.511	0.605	0.802	0.498	0.276	0.275
ATT	0.285	0.261	0.256	0.381	0.546	0.474	0.498	0.772	0.353	0.424
INT	0.539	0.487	0.348	0.375	0.39	0.237	0.276	0.353	0.750	0.658
FH	0.531	0.551	0.359	0.419	0.348	0.272	0.275	0.424	0.658	0.787

Note: Square roots of average variances extracted (AVEs) are shown on the diagonal.

PU: Perceived Usefulness; PEU: Perceived Ease of Use; BI: Brand Image; PR: Perceived Risk; GS: Government Support; FH: Financial Health; UI: User Innovativeness; TRU: Trust; ATT: Attitude; INT: Intention

4.3 Hypotheses Testing Results

To determine whether exogenous variables have a significant influence on endogenous variables, an analysis will be performed during the hypothesis testing phase. This involves reviewing path coefficients, which present both the parameter values and their statistical significance. The importance of these estimated parameters can provide insights into the relationships among the study's variables. Based on this analysis, the proposed hypothesis may either be accepted or rejected at a 1%, 5%, or 10% significance level. The results of the hypothesis tests are depicted in Figure 2 below.

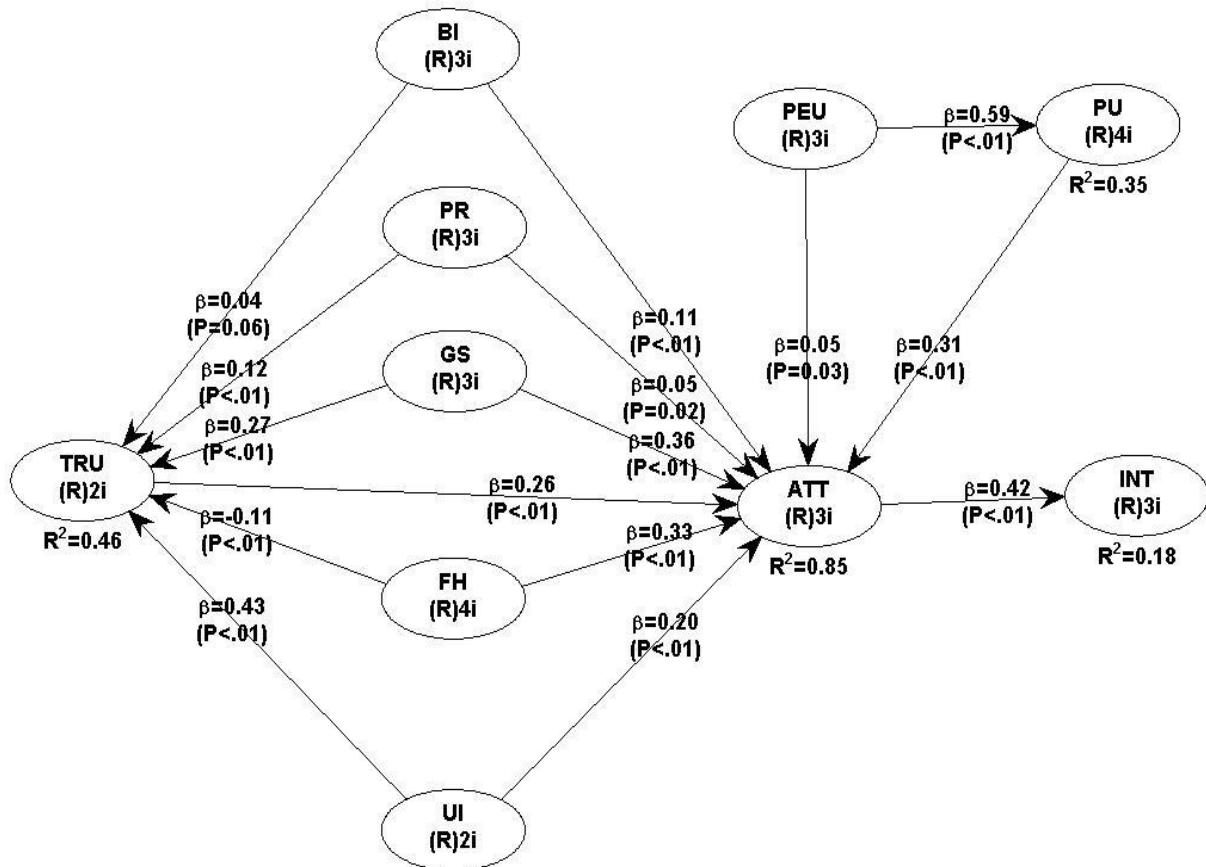


Figure 2: Inner Model

Note: PU: Perceived Usefulness; PEU: Perceived Ease of Use; BI: Brand Image; PR: Perceived Risk; GS: Government Support; FH: Financial Health; UI: User Innovativeness; TRU: Trust; ATT: Attitude; INT: Intention

4.4 Discussion

Based on the result presented in Table 4, it can be explained as follows. First, the perceived usefulness strongly and significantly positively predicted the attitude. This conclusion is drawn from the path coefficient result, which shows a statistical p-value of <0.001 , less than the critical value of 1.96; thus, the hypothesis is accepted. Second, PEU has a weaker but significant attitude predictor. This conclusion is based on the path coefficient result, where the statistical p-value is 0.03, which is below the critical threshold of 1.96; therefore, the hypothesis is accepted. This study also found that Perceived Ease of Use is related to Perceived Usefulness. The results show that the indirect effect of perceived ease of use on the adoption of attitude toward FinTech is significant. This determination relies on the results of the path coefficient analysis, which show that the statistical p-value is less than 0.001, falling below the critical threshold of 1.96; therefore, the hypothesis is validated.

Third, attitude has a strong, direct positive effect on intention, supporting the core TAM proposition that positive attitudes drive adoption intentions. This finding is supported by the path coefficient analysis, indicating that the statistical p-value is below 0.001, which is under the critical cutoff of 1.96; consequently, the hypothesis is supported. Fourth, this study reveals that trust significantly predicts attitude toward technology adoption. This result is confirmed by the path coefficient analysis, which shows the statistical p-value is less than 0.001—below the critical value of 1.96—thus, the hypothesis is confirmed.

Fifth, aspects of brand image remain a substantial determinant of the trust and attitudes of borrowers towards the adoption of FinTech lending. In addition, brand image positively indirectly affects the adoption of attitude towards FinTech by mediation of the trust of borrowers. This finding is backed by the path coefficient analysis, showing that the statistical p-value is less than 0.001—lower than the critical threshold of 1.96—therefore, the hypothesis is accepted.

Table 4: Hypothesis Testing

Path	Path Coefficient (β)	p-value	Hypothesis Remark
Perceived Usefulness → Attitude	0.313***	<0.001	H1 Supported
Perceived Ease of Use → Attitude	0.046**	0.03	H2a Supported
Perceived Ease of Use → Perceived Usefulness	0.593***	<0.001	H2b Supported
Perceived Ease of Use → Perceived Usefulness → Attitude	0.185***	<0.001	H2c Supported
Attitude → Intention	0.424***	<0.001	H3 Supported
Trust → Attitude	0.262***	<0.001	H4 Supported
Brand Image → Attitude	0.111***	<0.001	H5a Supported
Brand Image → Trust	0.038*	0.058	H5b Supported
Brand Image → Trust → Attitude	0.009***	<0.001	H5c Supported
Perceived Risk → Attitude	0.055**	0.02	H6a Not Supported
Perceived Risk → Trust	0.122***	<0.001	H6b Not Supported
Perceived Risk → Trust → Attitude	0.031***	<0.001	H6c Not Supported
Government Support → Attitude	0.358***	<0.001	H7a Supported
Government → Trust	0.358***	<0.001	H7b Supported
Government → Trust → Attitude	0.094***	<0.001	H7c Supported
Financial Health → Attitude	0.328***	<0.001	H8a Supported
Financial Health → Trust	-0.107***	<0.001	H8b Not Supported
Financial Health → Trust → Attitude	-0.028***	<0.001	H8c Not Supported
User Innovativeness → Attitude	0.203***	<0.001	H9a Supported
User Innovativeness → Trust	0.203***	<0.001	H9b Supported
User Innovativeness → Trust → Attitude	0.053***	<0.001	H9c Supported

Note: *** $p<0.001$; ** $p<0.05$; * $p<0.1$

Sixth, perceived risk significantly boosts positive attitudes and trust. This is a non-standard and empirically surprising result, as typically, perceived risk is expected to have a negative effect, meaning higher risk would reduce trust and negatively influence attitude. Thus, the hypotheses 6a and 6b are not supported. Perceived risk similarly has an indirect, significant positive attitude effect through the trust of borrowers. The positive path coefficient is unusual and contradicts the previous research, thereby not supporting the hypothesis. Seventh, the findings suggest that government support positively impacts attitude and trust. In addition, brand image positively indirectly affects the adoption of attitude towards FinTech by mediation of the trust of borrowers. This finding is supported by the analysis of the path coefficients, which indicates the statistical p-value is under 0.001—below the critical threshold of 1.96—and therefore confirms the hypothesis.

Eight, this study also finds that financial health positively impacts attitude and negatively impacts trust. In addition, financial health indirectly negatively impacts the adoption of FinTech via trust held by the borrower as a mediating variable. However, the effect of financial health on trust is negative, thereby not supporting the hypothesis. Ninth, the user's innovativeness has a strong correlation with attitude and trust. The current research also shows that user innovativeness

positively influences attitude indirectly and significantly through borrowers' trust. This result is affirmed by the path coefficient analysis, which indicates that the statistical p-value is below 0.001, remaining under the critical limit of 1.96, thus supporting the hypothesis.

4.4.1 The Effect of Perceived Usefulness on Attitude

Research findings indicate that when individuals view fintech lending as beneficial, their inclination toward adopting the technology becomes much more favorable. In other words, enhancing users' perceptions of usefulness translates directly to increased acceptance and favorable attitudes. The TAM's assertions are supported, as the perceived usefulness of the technology becomes an attitude's primary determinant. This corresponds to most of the literature on the TAM in FinTech, as usefulness is consistently acknowledged as a strong and significant predictor of attitude and intention (Akturan & Tezcan, 2012; Huh et al., 2009; Lockett & Littler, 1997; Singh et al., 2020; Szopiński, 2016).

4.4.2 The Effect of Perceived Ease of Use on Perceived Usefulness and Attitude

Fintech lending platforms' relative simplicity encourages users to adopt them. The positive impact of an interface's simplicity on user attitude is also a touchpoint for the formation of perceived usefulness, although the simplicity of an interface has a rather limited capacity for direct attitude formation. This aligns with the findings of other works on digital finance, which posit the relative predictive importance of perceived simplicity, as an attribute of a service, on other constructs, though perceived simplicity of the interface as a predictor usually ranks lower in importance compared to perceived usefulness (1,8,21,57,58). This means that borrowers appreciative of FinTech platforms likely find them uncomplicated and easy to navigate. The association has been well established in the literature, especially concerning mobile payments and other FinTech products (Cheng et al., 2006; Hu et al., 2019; Wang et al., 2003).

Indirect influence concerning the adoption attitude toward FinTech shows a statistically significant effect. When users find fintech lending platforms easy to navigate, they perceive them as useful and subsequently develop a favorable attitude toward adoption. This two-step relationship significantly underscores the importance of user experience design. Enhancements in usability not only increase the perception of utility but also improve attitude and, ultimately, the behavioral intention to use fintech lending. The cumulative effect through this indirect pathway is substantial, to the extent that the influence of perceived ease of use on adoption as a whole becomes significant, particularly in shaping perceived usefulness and attitude—even when the first-order, direct effect is relatively weak. The extent to which perceived usefulness mediates the relationship between perceived ease of use and attitude/adoption is well documented in the TAM literature.

Numerous studies reveal that a higher perceived usefulness results from systems

that are easier to use, making users more receptive and favorable to adopting fintech lending solutions (70–72). For technology providers, this indirect pathway is essential. Prioritizing ease of use, user interface simplicity, and intuitive user pathways enhances perceived value from higher system benefits, leading to greater user adoption and advocacy of the system.

The explained variance ($R^2=0.35$) concerning perceived usefulness indicates that, along with other variables, perceived ease of use remains one of the dominant drivers in shaping the usefulness of a fintech platform. As for attitude ($R^2=0.85$), the aggregation of perceived ease of use and perceived usefulness alone accounts for most of the variance, thus consolidating a core foundational construct of the TAM.

4.4.3 The Effect of Attitude on Intention

Positive attitudes correspondingly translate to increased usability intentions through the fundamental TAM proposition. Meaning, the behavioral intention to use any lending service increases the more positive the attitude is. The more positive users' attitudes are toward fintech lending, the more users are willing to explore, recommend, or even transact. This finding confirms the expectations established within previous TAM studies. Attitudes act as primary antecedents to behavioral intentions in various technology adoption studies, including mobile payments, digital wallets, and online lending within the FinTech domain. This study further confirms attitude as the key predictor in the adoption process, since it accounted for a relevant portion of the variance in intention ($R^2=0.18$). This direct effect highlights the need for clear communication and education, as well as the demonstration of practical benefits in the success of fintech platforms.

4.4.4 The Effect of Trust on Attitude

According to the findings of this research, trust impacts one's attitude towards technology adoption. The findings suggest that when trust is high, one's attitude becomes more favorable, leading to a greater intent to adopt and utilize FinTech lending services. Increased trust in the convenience, transparency, and safety of a FinTech lending product helps a user adopt a more favorable attitude towards the service, which stems from the perception of lower risk and greater confidence in the technology. This resonates with prior research, which positions trust as one of the most important factors in accepting technology, particularly in situations that involve FinTech services where trust and risks are intertwined (Okat et al., 2022; Zhao et al., 2024). Risk trust deficits encourage the development of more protective and siloed services. FinTech companies should work towards trust building and sustained trust through risk management, communicative transparency, clearly stated trust policies, and protective systems. Trust policies that show management of consumer data, safe transaction completion, and overall organizational integrity will favorably alter user attitude and thus, adoption rates.

4.4.5 The Effect of Brand Image on Trust and Attitude

Trust hinges on brand image. This holds in numerous recent studies in FinTech, as well as studies where trust-building is regarding the regulatory environment (Chong et al., 2010; Sánchez-Torres et al., 2018). Brand image aspects continue to constitute a considerable FinTech lending adoption attitudes for borrowers. Increased trust brings about positive brand image disposition, which in turn affects attitude consistency on literature regarding brand image as a primary component of user trust in digital financial services (Chandra et al., 2010; K. C. Lee & Chung, 2009; Park et al., 2015; Zhang et al., 2018).

Furthermore, brand image demonstrates an indirect influence on attitude toward the adoption of fintech, mediated specifically by trust. This construct implies that trust extended by consumers toward fintech lending platforms increases with the strength or positivity of the brand image. This trust-building mediation explains how the adoption of leveraging trust-building brand attributes of consistency, clarity, positive associations, and constructiveness toward brand collaboration might improve adoption outcomes. It highlights the importance of reputation and subjective quality in the context of adoption, particularly in competitive surrendering of branded fintech and trust-accepting situations. Brand image, albeit weak in direct influence, significantly contributes from an indirect perspective. This is reversed from brand-constructed and communication-constructed image, and trust, toward user attitudes and overall adoption, suggesting sustained branding parallel with risk-optimising and quality of service in the fintech context.

4.4.6 The Effect of Perceived Risk on Trust and Attitude

The positive correlation between perceived risk and attitude has been observed and documented in literature, although it stands in contradiction to other studies and is under-researched and examined in literature. Given the literature, it may rationalize the perceived risk attitude in survey literature to focus on the risk-averse from the survey population. Given this, there are also studies showing that positive attitude and higher perceived risk are contradictory to much of the literature. Per the research and findings of this survey, it is plausible that the respondents and the survey population in this study over-identified and over-assessed the perceived risk, and the respondents viewed the fintech technology as being sophisticated; thus, it is plausible that respondents hold the perspective of higher risk awareness, as for higher trust. Users of the system may be inclined to hold the belief that, in observing potential risks and addressing them, the system is secure and protective, and their potential risks are openly managed.

Perceived risk also has an indirect and apparently optimistic effect via the trust of borrowers. This suggests that the sample is largely made up of risk-tolerant borrowers. This is quite the opposite of the more traditional views, which hold risk as a considerable barrier. This indirect effect is notable as it suggests the positive consequences that perceived risk has on overall attitude are not solely a direct effect, but also an indirect effect through trust. This suggests that trust rebuilding efforts

will mitigate the perceived risk's positive attitude consequences, which will outweigh the perceived risk's direct positive impact on attitude. For user attitude and adoption, fintech services need to address perceived risk and communicate strong safety measures to defend the bare minimum risk and trust. Risk, trust, and mitigation perceived will improve attitude on adoption as a main facilitator.

4.4.7 The Effect of Government Support on Trust and Attitude

There is evidence that positive attitudes are an effect of supportive government action. This is evident in the extent to which supportive government action helps build trust in users of fintech lending platforms. This is also true to the extent that the created attitudes are positive. These suggest that positive government action is able to eliminate negative attitudes towards the adoption of fintech lending. This corresponds to the recently documented confidence in government regulation in emerging markets fintech lending. After the COVID-19 pandemic government frictional public loans and direct living subsidies to be able to lessen the burden on people and business owners, were pre-pandemic. This is in line with the findings of user confidence in self-regulation of government in emerging fintech lending. This shows the government is an enabler in the adoption of automated lending solutions.

In addition, indirect influences on attitude adoption become positive and supportive of FinTech due to the trust borrowers have. This mediation suggests that trust will improve with the efforts of endorsing government policies, strengthening safeguards, and adopting supportive government frameworks. Hence, the attitude and adoption of FinTech will have a positive impact. Efforts on constructive government frameworks will have both indirect and direct facilitative impacts on the adoption of FinTech. Trust will improve by endorsing frameworks that are focused on regulations, safeguards, and public outreach. This will have a multiplicative effect on attitude and adoption of FinTech.

4.4.8 The Effect of Financial Health on Trust and Attitude

The impact of financial health on attitudes is positive. Empirical evidence is scant, yet, as financially literate and stable individuals adopt innovative financial services faster, the interplay of financial stability and 'adopting' attitude is compelling (Appiah & Agblewornu, 2025; Jünger & Mietzner, 2020; C. Kim et al., 2010). This study indicates the paradoxical finding of financial health negatively impacting trust. It suggests that more financial health is related to less trust in fintech lending platforms. This is counterintuitive because financial security is presumed to foster confidence in the willingness to adopt innovative options. Fin Schaffert's assertions regarding possible negative trust explain the indirect impact of financial health on attitude through trust. Financial health improves the confidence the user has in themselves financially, lending less to the arguable convenience of borrowing through Fintech lending. Closed paradigms of perception regarding trust in Fintech might be due to legislated lending alternatives. Those more financially stable might

be less trusting of more flexible lending (fintech) due to perceptions of less financial integration regarding lending. They might be seeing the platforms as riskier compared to mainstream financial intermediaries. Residual risk perception on Fintech platforms might be eroding the trust and thus negatively impacting the attitude of lending.

Results may show distinct perspectives emerging from the sample, such as business owners depending on conventional finance because they are solvent. This is interesting because it indicates that there are certain segments within the optimally served audience, that is, users who are financially healthy and may require customized approaches when it comes to their engagement and reassurance in the use of fintech platforms, as they may be indifferent or skeptical toward fintech lending solutions.

4.4.9 The Effect of User Innovativeness on Trust and Attitude

User innovativeness derives positive sentiments considering the propensity of individuals adopting new technologies and suggests that early adopters are of tremendous importance for the diffusion of FinTech (Jünger & Mietzner, 2020; C. Kim et al., 2010). User innovativeness positively influences trust since more technologically experienced individuals are more likely to trust fintech lending platforms.

This study indicates that user innovativeness positively impacts attitude, which occurs indirectly and significantly through borrowers' trust. In other words, more innovative individuals cultivate greater trust, which, in turn, enhances their positive attitude towards fintech lending. The existence of this pathway reinforces the influence of user innovativeness in two ways: user innovativeness acts directly to stimulate positive attitudes and indirectly influences them through the trust pathway. Fintech providers should target innovative individuals as advocates and early adopters since trust and positive attitudes are foundational for establishing initial trust and market attitudes. Texts that target curiosity and the desire for early adoption, along with enthusiasm around new technology, are likely to engage the innovative user and facilitate their trust and positive attitude towards fintech.

5. Conclusion

This research examines various variables—such as perceived usefulness, perceived ease of use, trust, government support, brand image, financial health, perceived risk, innovativeness as a user, and more—and how they shape attitude and intention toward the adoption of fintech lending. When it comes to the structural model, perceived usefulness remains the strongest direct predictor of attitude toward fintech alongside trust, government support, and user innovativeness. Some findings were more unique, such as the positive effect perceived risk had on trust and the negative effect financial health had on trust. These findings point to unique contextual factors within the population studied. All in all, attitude is the primary mediator, as it is strongly linked to the intention to adopt fintech lending.

Considering the previous findings, it is paramount to address some limitations this research is subject to. To begin, the research was designed to be cross-sectional, and self-reports were used, which may lead to bias and weak causal inference. In addition, constructs such as perceived risk and financial health may be influenced by culture and context, as well as by the specific sample, possibly undermining the conclusions. The last limitation is that the research was done in only one specific geographic or demographic context. This inevitably limits the generalizability of the findings to broader populations or other contexts.

While recognizing the stated limitations, this study adds to the theoretical and practical value of the study of the adoption of fintech. Building on the TAM, the study adds to the literature of adoption of fintech by validating the direct and indirect influence of perceived usefulness, ease of use, trust, and attitudes, and emphasizing the role of government support, financial health, and user innovativeness as criteria for future adoption. In light of the negative influence of financial health on trust and attitudes toward fintech lending, the study opens new direct theoretical and empirical lines of investigation. The positive relationship between perceived risk and trust is unexpected and contrary to other technology adoption studies, indicating the need to pay attention to contextual issues in technology adoption.

In practice, fintech service providers need to focus on the user's design approach and the strategy of communication to enhance perceptions of usefulness and ease of use. Building trust, through a risk-transparent and supportive government, branding, and strong positive attitudes, will facilitate adoption. Engagement strategies will need to focus on financially healthy users, in addition to user innovators, to address the adoption and use of snap changes in financially innovative users. Regulators, for their part, need to enhance consumer trust by visibly supporting secure platforms and ensuring protections, and by supporting risk-clear endorsed regulated frameworks.

Future studies will benefit greatly from longitudinal and qualitative approaches to investigate the developments of these relationships and the unexpected results on financial health and risk. Generalizability will be strengthened from the extension of studies to new countries, industries, and user demographic cohorts. Scholars are invited to enhance and expand the frameworks for measurement, the identification of new mediating or moderating variables, and the possible new dimensions of digital literacy, socio-cultural contexts, and ecosystem reliability to understand the complexities associated with the adoption of fintech more robustly.

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