



(RESEARCH ARTICLE)



Assessing the impact of social influence, perceived risk, and trust and security on fintech application usage through the mediating role of behavioral intention: Evidence from GoPay Users in Surabaya

Maria SINAGA* and Andi WIJAYANTO

Department of Business Administration, Faculty of Social and Political Sciences, Universitas Diponegoro, Semarang, Indonesia.

World Journal of Advanced Research and Reviews, 2025, 26(03), 2315-2326

Publication history: Received on 14 May 2025; revised on 21 June 2025; accepted on 23 June 2025

Article DOI: <https://doi.org/10.30574/wjarr.2025.26.3.2432>

Abstract

This study investigates the influence of social influence, perceived risk, and trust and security on the usage of fintech applications, with behavioral intention serving as a mediator. A quantitative approach was adopted, grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT). Data were collected from 150 GoPay users in Surabaya via an online questionnaire, and the hypotheses were tested using Structural Equation Modeling with Partial Least Squares (SEM-PLS). The analysis reveals that behavioral intention significantly predicts actual usage, while social influence exerts positive effects on both behavioral intention and usage. Perceived risk demonstrates a significantly negative relationship with behavioral intention but does not directly impact actual usage, suggesting that its effect is fully mediated. Trust and security do not show significant effects on either behavioral intention or actual usage. Overall, the findings confirm the mediating role of behavioral intention in linking external determinants and fintech application adoption. This study contributes to the fintech literature by integrating multiple factors in a localized context of GoPay users in Surabaya. Practically, it suggests that fintech providers should focus on enhancing social influence and mitigating perceived risk to foster user intention and increase sustained app usage.

Keywords: Social Influence; Perceived Risk; Trust; Security; Behavioral Intention; Fintech

1. Introduction

Financial technology (fintech) has emerged as one of the most transformative innovations in the global financial ecosystem. Defined broadly as the integration of technology and financial services, fintech enables the creation of new business models, products, and processes that enhance the efficiency, accessibility, and user experience of financial transactions [1]. This transformation is particularly evident in services such as digital wallets, mobile banking, peer-to-peer lending, and online investment platforms. Fintech continues to reshape consumer behavior, disrupt traditional banking systems, and promote financial inclusion on a global scale [2].

Over the past decade, the rapid adoption of fintech solutions has become a focal point of academic and industry research. Scholars have sought to understand the psychological and social drivers behind fintech usage by applying established technology adoption models. Among the most widely used theoretical frameworks are the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT/UTAUT2), and the Theory of Planned Behavior (TPB) [3], [4]. These models explain user behavior in relation to constructs such as perceived ease of use, social influence, perceived risk, trust, and behavioral intention [5].

* Corresponding author: Maria SINAGA.

Recent studies emphasize that behavioral intention plays a critical mediating role between user perceptions and actual system usage. According to UTAUT2, behavioral intention is shaped by performance expectancy, effort expectancy, social influence, and facilitating conditions [4]. Research by [6][7] has shown that factors like trust in system security, perceived risks (financial, privacy, and performance risks), and peer influence significantly influence intention and, ultimately, behavior. However, empirical studies that simultaneously examine all these variables in a unified model, especially in emerging economies, remain limited [8].

In Indonesia, the fintech sector has grown significantly, supported by government policies, increased smartphone penetration, and digital literacy [9]. One of the most prominent fintech applications is GoPay, an e-wallet integrated into the Gojek platform. GoPay provides services that range from daily payments to digital transfers and utility bills, and it has become an essential tool for financial transactions in both online and offline environments. The convenience, accessibility, and integration with other services make GoPay a popular choice among users, particularly in urban areas such as Surabaya [10].

Despite this popularity, users' decisions to adopt and continue using GoPay are influenced by various interrelated factors. In collectivist societies like Indonesia, social influence such as peer recommendations or social media exposure can significantly affect adoption decisions [11]. At the same time, users may experience perceived risks, including concerns about financial fraud, data privacy, and system reliability [6],[12]. Trust in the application's security measures is thus essential to reduce anxiety and foster continued usage [13]. These dimensions—social influence, perceived risk, and trust and security do not act in isolation; instead, they interact and shape users' behavioral intentions, which ultimately drive actual usage behavior [4],[7].

Although several studies have examined individual factors affecting fintech adoption, few have explored them comprehensively and simultaneously within a single empirical model particularly in localized Indonesian contexts [8], [13]. Existing studies often focus on metropolitan areas like Jakarta, while other urban centers such as Surabaya are underrepresented [10],[14]. Furthermore, many prior studies either do not account for the mediating role of behavioral intention or analyze only bivariate relationships. This creates a gap in understanding the holistic interaction between socio-psychological constructs and actual usage behavior [15].

This study seeks to fill that gap by investigating the influence of social influence, perceived risk, and trust and security on the usage of fintech applications, with behavioral intention as a mediating variable, using GoPay users in Surabaya as the target population. The research adopts a quantitative approach based on UTAUT2 theory and employs Structural Equation Modeling using Partial Least Squares (SEM-PLS) for data analysis [4],[16]. By addressing an underexplored context and integrating multiple predictors into a single model, the study contributes to a deeper theoretical understanding and offers practical insights for fintech developers, marketers, and policymakers aiming to enhance user adoption and retention.

2. Theoretical Framework and Hypotheses Development

2.1. Theory of Planned Behavior (TPB)

Theory of Planned Behavior (TPB) is an extension of the Theory of Reasoned Action (TRA) proposed by [5], designed to explain behaviors that are not entirely under individual control, including in the context of financial technology (fintech) adoption. TPB posits that behavioral intention is influenced by three key components: attitude toward the behavior, subjective norms, and perceived behavioral control. These factors play a crucial role in shaping users' decisions to adopt fintech services. A positive attitude toward the ease and benefits of fintech, social support from peers or family, and the perception that users have the ability and resources to operate the application increase their intention to engage in digital transactions [17], [18], [19]. TPB has proven to be a relevant model for predicting both intention and actual behavior and can be integrated with other variables such as trust and perceived risk to provide a more comprehensive understanding of fintech adoption behavior [20].

2.2. Unified Theory of Acceptance and Use of Technology

Unified Theory of Acceptance and Use of Technology (UTAUT), developed by [21], integrates several prior models to explain individual acceptance and actual usage of technology. It identifies four core constructs performance expectancy, effort expectancy, social influence, and facilitating conditions that influence behavioral intention and use behavior. Each construct is moderated by factors such as age, gender, experience, and voluntariness. In the fintech context, effort expectancy reflects the perceived ease of use, making intuitive and user-friendly apps essential. Social influence is particularly strong in collectivist societies like Indonesia, where peer support significantly impacts adoption.

Facilitating conditions, such as access to devices, internet connectivity, and digital literacy, also directly affect actual usage. While UTAUT provides a robust framework, it can be expanded with trust and perceived risk to better explain fintech user behavior in sensitive financial environments [4], [7], [22].

2.3. Financial Technology (Fintech)

Fintech (Financial Technology) is an innovation in financial services that integrates digital technologies such as mobile computing, blockchain, and big data to enhance efficiency, accessibility, and financial inclusion [23], [24]. Rather than a single theory, fintech represents an interdisciplinary framework combining economics, technology, consumer behavior, and regulation [1]. It encompasses various business models including digital payments, online lending, crowdfunding, and digital wealth management [24]. By reducing traditional intermediaries, fintech enables faster and more affordable access to financial services [25]. Its adoption is often analyzed through frameworks like TAM and UTAUT, focusing on perceived ease of use, benefits, trust, and social influence [3], [4]. The key to its success lies in balancing technological innovation, consumer protection, and financial system stability [1], [23].

2.4. Social influence

Social influence refers to how the opinions of significant others, such as family and friends, affect an individual's decision to adopt new technologies, including fintech. In the UTAUT model, social influence is a key predictor of behavioral intention, particularly among women, novice users, and within collectivist cultures [21]. It operates through three mechanisms: compliance, internalization, and identification, shaping individuals' responses to social norms [21].

In the fintech context, social influence fosters trust and reduces user uncertainty about digital service risks [26]. Prior studies have consistently demonstrated a significant positive relationship between social influence and behavioral intention in technology contexts, including mobile banking and fintech applications [7], [22], [27], [28]. These findings suggest that social norms and peer recommendations play a critical role in motivating users to adopt digital financial services.

- **H1** Social influence has a positive effect on behavioral intention to use fintech applications.
- **H5** Social influence has a positive direct effect on actual usage of fintech applications.

2.5. Perceived Risk

Perceived Risk refers to an individual's perception of uncertainty and potential losses that may arise when using a service or product. Originally introduced by [29] and emphasized by [12], it is considered a major barrier to technology adoption, especially in digital services. It includes concerns about financial loss, privacy, data security, and performance failure. Consumers evaluate risk subjectively, not based on actual risk [30]. High perceived risk can hinder adoption intentions, while lower perceived risk can accelerate decision-making. Thus, understanding and managing Perceived Risk is crucial for building trust and encouraging fintech adoption. Empirical evidence shows that perceived risk negatively affects behavioral intention, with users more likely to avoid adopting fintech platforms when they perceive high levels of risk [7], [27], [31], [32], [33]. These concerns can inhibit trust and reduce willingness to engage in fintech transactions.

- **H2** Perceived risk has a negative effect on behavioral intention to use fintech applications.
- **H6** Perceived risk has a negative direct effect on actual usage of fintech applications.

2.6. Trust and Security

Trust and security are two fundamental pillars in the adoption of fintech services. Trust reflects users' belief in the service provider's competence, integrity, and goodwill to protect their interests and fulfill service commitments [34], [35]. Meanwhile, security involves protecting systems and data from threats such as data breaches and transaction misuse, directly shaping users' sense of safety [36], [37]. Trust cannot be established without robust security, as technical security forms the psychological foundation that reduces perceived risk. Studies show that poor security increases perceived risk, hinders adoption intention, and reduces user loyalty [38].

Therefore, fintech providers must combine technological security innovations with user education to strengthen trust and accelerate service adoption. Several studies confirm that trust and perceived system security have a significant positive influence on users' behavioral intentions [28], [31], [32], [37], [39]. A high level of perceived trustworthiness not only reduces user hesitation but also enhances adoption willingness, particularly in high-risk environments such as fintech platforms.

- **H3** Trust and security have a positive effect on behavioral intention to use fintech applications.
- **H7** Trust and security have a positive direct effect on actual usage of fintech applications.

2.7. Behavioral intention

Behavioral intention refers to an individual's intention or willingness to use a technology-based service in the future, serving as a strong predictor of actual usage behavior. In the context of fintech, it reflects consumers' psychological readiness to adopt digital financial services such as e-wallets, online loans, or digital investments [5], [22]. This intention is shaped by perceptions of ease of use, perceived benefits, and trust in the system [7]. Behavioral intention is not just interest but a cognitive commitment to act. Therefore, understanding the determinants of this intention is crucial for fintech providers in designing effective adoption strategies. A strong intention often leads to more consistent and sustained actual usage behavior. Empirical research has shown that behavioral intention is a key predictor of usage behavior and often acts as a bridge that translates users' attitudes and perceptions into action [7], [27], [31], [39]. Thus, understanding the mediating role of behavioral intention is essential for explaining how users transition from intention to actual technology use.

- **H4** Behavioral intention has a positive effect on actual usage of fintech applications.
- **H8** Behavioral intention mediates the relationship between social influence and actual usage.
- **H9** Behavioral intention mediates the relationship between perceived risk and actual usage.
- **H10** Behavioral intention mediates the relationship between trust and security and actual usage.

2.8. Actual Usage

Actual Usage refers to users' actual behavior in utilizing technology, particularly in fintech services, reflecting the realization of behavioral intention [40]. It includes the frequency of transactions, types of services used, and duration of use [41]. Actual Usage is a crucial indicator of successful technology adoption as it demonstrates direct and sustained user engagement [8]. In the fintech context, high actual usage correlates with deeper technology acceptance and increased financial inclusion [8]. Consistent usage indicates that the system effectively meets user expectations in everyday practice. Therefore, measuring Actual Usage helps assess the effectiveness of implementation and the real impact of digital financial services [4].

3. Research Methods

This study employed an explanatory quantitative approach to examine causal relationships between variables using inferential statistical analysis. This approach was chosen because it aligns with the study's objective of testing both direct and mediated effects among theoretically defined and quantitatively measured constructs [42]. The research design applies Structural Equation Modeling using Partial Least Squares (SEM-PLS) due to its capacity to analyze complex relationships among latent variables [16]. SEM-PLS is suitable for exploratory studies with relatively small sample sizes and non-normal data distributions [43]. The model includes three exogenous variables (social influence, perceived risk, and trust & security), one mediating variable (behavioral intention), and one endogenous variable (actual fintech usage).

The primary data collection techniques were structured surveys and documentation studies. The survey was distributed online via Google Forms to qualified respondents and included standardized statements based on the theoretical constructs. Each question used a five-point Likert scale to measure respondents' agreement levels [43]. Additionally, the documentation technique was used to collect secondary data from scholarly journals, official websites, books, and statistical reports relevant to the study's theoretical foundation and contextual analysis [44]. This approach enhanced external validity and enriched theoretical understanding.

The target population of this study comprises active GoPay users residing in Surabaya. Surabaya was chosen as the research locus because it is a major digital economy hub in Indonesia, with high technology adoption and digital infrastructure [45]. The city's demographic diversity makes it an ideal setting to explore the behavioral dynamics of fintech usage. Thus, Surabaya offers a strategic context to examine the determinants of digital financial service adoption.

The sample size of this study consisted of 150 respondents, determined based on statistical guidelines for SEM. According to [46], the minimum recommended sample for SEM-PLS is 100 or at least 5–10 times the number of indicators used in the model [46]. A sample size of 150 was deemed sufficient to test a moderately complex model and ensure accurate and valid parameter estimation. The sampling technique used was non-probability sampling,

particularly purposive sampling, as it involved specific respondent criteria, including being Surabaya residents and active GoPay users.

4. Result

The demographic characteristics of the respondents indicate a relatively balanced gender distribution, with males accounting for 51.33% and females 48.67% of the total sample. The majority of participants are within the 26–35 age group (46.00%), followed by those aged 36–45 (24.00%) and 18–25 (20.00%), while only a small portion are under 18 (6.67%) or over 45 (3.33%). In terms of educational attainment, most respondents hold a second degree (66.00%), with 22.00% holding a third (postgraduate) degree. Additionally, 10.67% have completed high school, and 1.33% possess a diploma or first degree.

Regarding employment status, civil servants represent the largest group (39.33%), followed by self-employed individuals (23.33%), private sector employees (20.67%), students (12.00%), and homemakers (4.67%). These findings suggest that the sample is predominantly composed of well-educated, working-age individuals, with a strong representation from the public sector.

Table 1 Responders' Demographic Profile

Demographic variable	Categorization	Frequency	Percentage
Gender	Male	77	51.33
	Female	73	48.67
Age Group	<18	10	6.67
	18–25	30	20.00
	26–35	69	46.00
	36–45	36	24.00
	>45	5	3.33
Education	High School	16	10.67
	Diploma/First Degree	2	1.33
	Second Degree	99	66.00
	Third Degree	33	22.00
Employment status	Student	18	12.00
	Private Sector Employee	31	20.67
	Civil Servant	59	39.33
	Self Employed	35	23.33
	Homemaker	7	4.67

4.1. Evaluation of the Measurement Model

Table 2 Convergent Validity and Reliability

Variable	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Social Influence	0.898	0.922	0.664
Perceived Risk	0.948	0.954	0.723
Trust and Security	0.936	0.947	0.692
Behavioral Intention	0.832	0.899	0.749
Actual Usage	0.831	0.887	0.662

Based on the results of the reliability and convergent validity assessments, all constructs in the research model meet the criteria for high measurement quality. The Cronbach's Alpha values for all variables exceed 0.80, indicating strong internal consistency. In particular, Social Influence, Perceived Risk, and Trust and Security demonstrate alpha values above 0.90, reflecting excellent inter-item reliability.

Moreover, the Composite Reliability (CR) values for all constructs are above 0.88, confirming that the items consistently represent the intended latent constructs. The Average Variance Extracted (AVE) values also surpass the recommended threshold of 0.50, providing evidence of adequate convergent validity. These results collectively confirm that all constructs are both valid and reliable, thus suitable for further structural equation modeling.

Table 3 Discriminant Validity

Variable	Actual Usage	Behavioral Intention	Perceived Risk	Social Influence	Trust and Security
Actual Usage	0.813				
Behavioral Intention	0.518	0.865			
Perceived Risk	-0.031	-0.263	0.85		
Social Influence	0.647	0.572	-0.104	0.815	
Trust and Security	0.468	0.425	-0.026	0.525	0.832

Furthermore, discriminant validity is confirmed through the Fornell-Larcker criterion, as the square root of each construct's AVE exceeds its correlations with other constructs. For example, the square root of AVE for Actual Usage (0.813) is higher than its correlations with Behavioral Intention (0.518) and Social Influence (0.647). Similar results are observed for Behavioral Intention (0.865), Perceived Risk (0.850), Social Influence (0.815), and Trust and Security (0.832). These findings indicate that each construct is empirically distinct, thus meeting the requirements for discriminant validity in the model.

4.2. Evaluation of the Structural Model

Table 4 Coefficient of Determination R²

Variable	R-square	R-square adjusted
Actual Usage	0.471	0.457
Behavioral Intention	0.393	0.381

R-square value for Actual Usage is 0.471, with an adjusted R-square of 0.457, indicating that the model explains 47.1% of the variance in actual usage behavior. Likewise, the R-square value for Behavioral Intention is 0.393, and the adjusted R-square is 0.381, suggesting that 39.3% of the variance in behavioral intention is accounted for by the model. These results reflect a moderate level of explanatory power, demonstrating that the model is sufficiently robust in predicting both intention and usage behavior.

Table 5 Effect Size (F²)

Variable	Actual Usage	Behavioral Intention
Actual Usage		
Behavioral Intention	0.055	
Perceived Risk	0.011	0.073
Social Influence	0.229	0.245
Trust and Security	0.024	0.039

Effect size results indicate that Social Influence is the strongest predictor, showing a medium effect on both Actual Usage and Behavioral Intention. In contrast, Behavioral Intention, Trust and Security, and Perceived Risk exhibit only small or minimal effects.

Table 6 Predictive Relevance (Q^2)

Variable	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Actual Usage	600	428.597	0.286
Behavioral Intention	450	328.501	0.27
Perceived Risk	1200	1200	0.00
Social Influence	900	900	0.00
Trust and Security	1200	1200	0.00

The Q^2 values show that the model has moderate predictive relevance for Actual Usage (0.286) and Behavioral Intention (0.27). Meanwhile, Perceived Risk, Social Influence, and Trust and Security show no predictive relevance ($Q^2 = 0.00$).

Table 7 Path Coefficients

Variable	Path Koefisien	T statistics	P values
Social Influence → Behavioral Intention	0.456	3.393	0.001
Perceived Risk → Behavioral Intention	-0.211	3.057	0.002
Trust and Security → Behavioral Intention	0.180	1.588	0.112
Social Influence → Actual Usage	0.459	3.538	0.000
Perceived Risk → Actual Usage	0.078	0.985	0.324
Trust and Security → Actual Usage	0.136	1.406	0.160
Behavioral Intention → Actual Usage	0.218	2.084	0.037
Social Influence → Behavioral Intention → Actual Usage	0.099	1.741	0.082
Perceived Risk → Behavioral Intention → Actual Usage	-0.046	2.222	0.026
Trust and Security → Behavioral Intention → Actual Usage	0.039	1.049	0.294

The research findings indicate that behavioral intention has a significant effect on actual usage, with a p-value of 0.037 (< 0.05), supporting UTAUT theories which state that behavioral intention is a key predictor of actual technology usage [3], [21]. This finding is also supported by [7], who emphasized that consumers' intention to use mobile banking often translates into real usage behavior.

Furthermore, perceived risk does not significantly affect actual usage, as indicated by a p-value of 0.324 (> 0.05), but it has a significant effect on behavioral intention ($p = 0.002 < 0.05$). This means that although perceived risk may not directly influence actual behavior, it does affect users' intention, which in turn impacts actual usage. This result is consistent with [12], [47], who argued that uncertainty and security concerns can inhibit technology adoption intention.

Additionally, social influence significantly affects both behavioral intention and actual usage ($p = 0.001$ and $p = 0.000$, respectively). These findings align with UTAUT and TPB, which assert that social norms and pressure from significant others can enhance both the intention and the actual use of technology [5], [21]. Studies by [8], [48] also confirm that social influence plays an important role in the adoption of fintech services. However, the mediation effect of social influence through behavioral intention on actual usage was found to be non-significant ($p = 0.082$), suggesting that while social norms can shape intention, they do not always result in actual usage behavior.

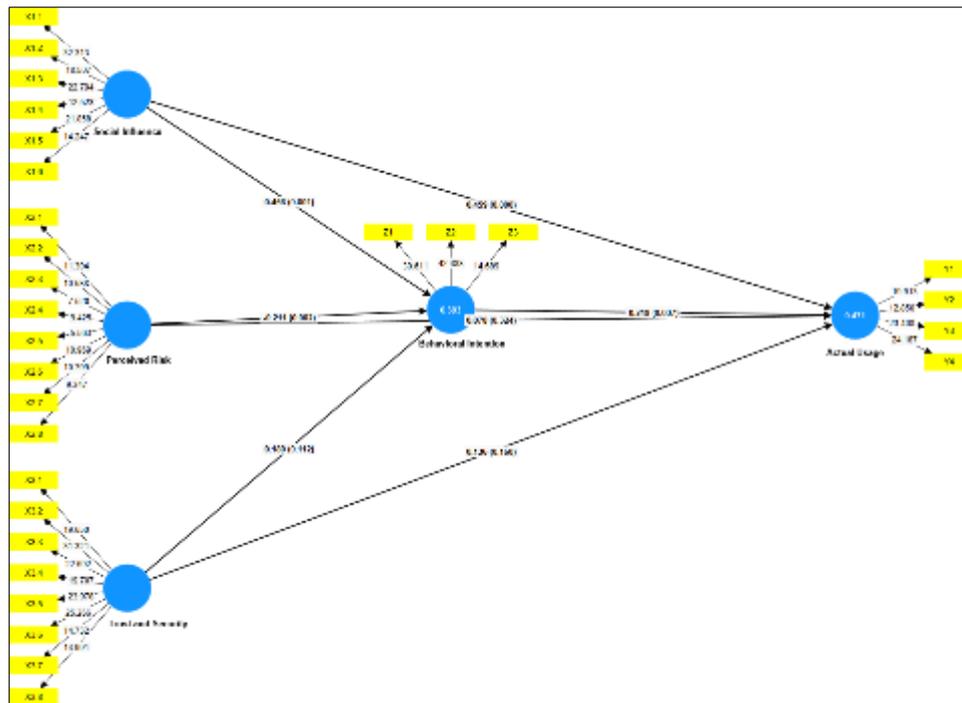


Figure 1 Moderation result from SmartPLS

Meanwhile, trust and security do not have a significant effect on either behavioral intention or actual usage, with p-values of 0.112 and 0.160, respectively (> 0.05). This implies that in the context of GoPay users in Surabaya, trust and security are not the primary determinants of technology use. These findings contrast with studies by [26], [35], which showed that trust and security were crucial in enhancing adoption. However, they are consistent with the argument by [4] that factors such as performance expectancy and effort expectancy may be more dominant.

Finally, perceived risk has a significant negative mediation effect on actual usage through behavioral intention ($p = 0.026$), reaffirming that increased perceived risk lowers behavioral intention, thereby reducing actual usage. In contrast, trust and security do not exhibit a significant mediating effect, and thus the related hypothesis is rejected ($p = 0.294$). In conclusion, the key factors influencing the adoption of fintech applications in this study are social influence, perceived risk (through intention), and behavioral intention, offering practical implications for marketing strategies and risk reduction in fintech services.

5. Discussions

The results of this study demonstrate that social influence significantly affects actual usage of fintech applications, aligning with the Unified Theory of Acceptance and Use of Technology (UTAUT) as proposed by [21]. According to UTAUT, social influence plays a critical role in shaping individual decisions to adopt and continue using a technology, especially within collectivist cultures. The strong impact of social norms and peer recommendations reinforces user behavior toward digital platforms. This finding supports prior research by [7], [26], which found similar results in the context of mobile banking and digital wallets. Therefore, social endorsement remains a central mechanism in driving fintech adoption.

The study further confirms that perceived risk has a significant negative impact on behavioral intention and actual usage, consistent with findings from [12]. Risk perception especially regarding data security, privacy, and financial loss can deter users from engaging with digital financial services. These concerns are particularly relevant in financial transactions that lack physical interaction. Supporting this, [47] found that high perceived risk weakens users' trust and willingness to use fintech platforms. This implies that mitigating perceived risk through improved transparency and security features is essential to increase consumer adoption.

Interestingly, trust and security were found not to significantly influence actual usage directly. Although these factors are theoretically essential, especially in early stages of adoption, their influence may be mediated by other variables such as ease of use and perceived usefulness. Previous studies by [38][36] show that while trust and security affect

initial intention, other practical factors often play a more prominent role in actual usage. This suggests that trust and security are necessary but not sufficient conditions for sustained fintech use.

The relationship between behavioral intention and actual usage is strongly supported, aligning with both UTAUT [21]. Higher behavioral intention directly translates to increased use of fintech services. Factors such as perceived ease of use, usefulness, and social influence contribute to building strong behavioral intentions. Studies by [6], [49] confirm that trust enhances behavioral intention, which subsequently leads to greater actual usage, particularly in technology-mediated financial services.

The study also confirms the mediating role of behavioral intention in the relationship between perceived risk and actual usage. This finding supports theories such as TPB and UTAUT, which position behavioral intention as a proximal predictor of technology use. When users perceive higher risk, their behavioral intention declines, thereby reducing actual usage. Reference [8], [47] emphasize that reducing perceived risk is crucial for enhancing intention, which in turn fosters usage behavior. This validates the importance of addressing user concerns early in the adoption cycle.

However, the mediating effect of behavioral intention between trust and security and actual usage was found to be insignificant. This could suggest that in certain contexts, trust and security do not substantially influence usage unless paired with other motivational factors. As emphasized by [35], user decisions in digital environments are often driven more by performance and convenience than by perceived trust alone. Therefore, strategies to promote fintech adoption should not only focus on trust-building but also enhance perceived value and usability to ensure actual engagement with the platform.

6. Conclusion

This study investigated the influence of social influence, perceived risk, and trust, and security on the use of fintech applications, with behavioral intention acting as a mediating variable. The results confirm that social influence significantly impacts fintech usage, particularly among GoPay users in Surabaya. This supports UTAUT theory, which highlights the role of social norms in technology adoption, peer recommendations and societal pressures contribute meaningfully to shaping behavioral patterns in digital finance.

Perceived risk also plays a substantial role, with findings showing it negatively affects both behavioral intention and actual usage. Consistent with studies by Featherman that risk perceptions related to data security, privacy, and financial safety deter users from engaging with fintech services. Addressing these concerns is essential for increasing adoption, especially in regions where digital literacy and trust remain critical barriers.

In contrast, trust and security did not significantly affect actual usage in this study. Although important in theory, these factors may exert more influence in the early stages of adoption or in more complex fintech platforms. As shown by previous research, users may prioritize practical benefits such as convenience and efficiency over perceived security, especially in daily-use applications like GoPay.

Furthermore, the study highlights the mediating role of behavioral intention in connecting the independent variables to actual usage. Behavioral intention remains a crucial predictor, reinforcing the core of the UTAUT and TAM frameworks. When social influence is strong and risk perception is low, users are more likely to form a strong intention, which leads to consistent technology usage.

Ultimately, the findings emphasize that while trust, security, and social factors are important, they must be strategically integrated with usability enhancements to effectively drive fintech adoption. Future research could explore contextual factors such as user experience and cultural variables to further clarify how fintech behaviors evolve across diverse user segments.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] D. Arner, J. Barberis, R. Buckley, U. Law, D. W. Arner, and R. P. Buckley, "The Evolution of Fintech: A New Post-Crisis Paradigm?" University of Hong Kong Faculty of Law, Australia, 2015.
- [2] I. Lee and Y. J. Shin, "Fintech: Ecosystem, business models, investment decisions, and challenges," *Bus Horiz*, 61(1), 35–46, Jan. 2018.
- [3] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information," 1989.
- [4] V. Venkatesh, S. M. Walton, J. Y. L. Thong, and X. Xu, "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology," 2012.
- [5] I. Ajzen, "The theory of planned behavior: Frequently asked questions," *Hum Behav Emerg Technol*, 2(4), 314–324, Oct. 2020.
- [6] C. Kim, M. Mirusmonov, and I. Lee, "An empirical examination of factors influencing the intention to use mobile payment," *Comput Human Behav*, 26(3), 310–322, May 2010.
- [7] A. A. Alalwan, Y. K. Dwivedi, and N. P. Rana, "Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust," *Int J Inf Manage*, 37(3), 99–110, Jun. 2017.
- [8] G. Baptista and T. Oliveira, "Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators," *Computers in Human Behavior*, Sep. 2015.
- [9] Otoritas Jasa Keuangan, "Laporan Tahunan OJK 2023," 2023.
- [10] CNBC Indonesia, "Riset Insight Asia: e-Wallet GoPay Paling Banyak Digunakan," CNBC Indonesia.2022. Available: <https://www.cnbcindonesia.com/tech/20221129173430-37-392232/riset-insightasia-e-wallet-gopay-paling-banyak-digunakan>
- [11] D. H. Shin, "Towards an understanding of the consumer acceptance of mobile wallet," *Comput Human Behav*, vol. 25(6)1343–1354, Nov. 2009.
- [12] M. S. Featherman and P. A. Pavlou, "Predicting e-services adoption: A perceived risk facets perspective," *International Journal of Human Computer Studies*, 59(4), 451–474, 2003.
- [13] O. Fatimah and Syamsiah, "Pengaruh Perceived Usefulness, Perceived Trust, Perceived Self Efficacy, Perceived Ease of Use, Dan Perceived Security Terhadap Minat Menggunakan Financial Technology," *Jurnal Akuntansi Manajemen Madani*, 2023.
- [14] GoodStats, "5 E-Wallet Paling Sering Dipakai Gen Z & Milenial, Siapa Juaranya?," GoodStats. Accessed: Jun. 06, 2025. Available: https://data.goodstats.id/statistic/5-e-wallet-paling-sering-dipakai-gen-z-milenial-siapa-juaranya-CJtq6#google_vignette
- [15] V. Andini and A. Himawan, "Pengaruh Perceived Ease of Use, Perceived Security, Perceived Risk dan Trust Terhadap Minat Penggunaan Aplikasi Pospay," *SEIKO: Journal of Management & Business*, 2023.
- [16] J. F. Hair, M. Sarstedt, and C. M. Ringle, "Partial least squares structural equation modeling," in *Handbook of market research*, Springer, 2021, pp. 587–632.
- [17] Ach. Lubi and S. Sanaji, "Testing the Theory of Planned Behavior and Perceived Risk to Predict Intention to Use of Pay Later Services," *Journal of Business and Management Review*, Sep. 2023.
- [18] R. K. Jena, "Factors Influencing the Adoption of FinTech for the Enhancement of Financial Inclusion in Rural India Using a Mixed Methods Approach," *Journal of Risk and Financial Management*, Mar. 2025.
- [19] A. Priyadarshi, D. Prasad, and N. Kesari, "Determining FinTech User Behaviour and Intention in SAARC Countries through Theory of Planned Behaviour Perspective," *Journal of Commerce and Accounting Research*, 2025.
- [20] A. Irimia-Diéguez, F. Velicia-Martín, and M. Aguayo-Camacho, "Predicting Fintech Innovation Adoption: The Mediator Role of Social Norms and Attitudes," *Financial Innovation*, Dec. 2023.
- [21] Venkatesh et al., "Unified Theory of Acceptance and Use of Technology," 2003.
- [22] K. Bajunaied, N. Hussin, and S. Kamarudin, "Behavioral intention to adopt FinTech services: An extension of unified theory of acceptance and use of technology," *Journal of Open Innovation: Technology, Market, and Complexity*, Mar. 2023.

- [23] M. Anshari, M. N. Almunawar, and M. Masri, "Financial technology and disruptive innovation in business: Concept and application," *International Journal of Asian Business and Information Management*, Oct. 2020.
- [24] R. Alt, R. Beck, and M. T. Smits, "FinTech and the transformation of the financial industry," Springer Verlag, Aug. 01, 2018.
- [25] P. Gomber, J.-A. Koch, and M. Siering, "Digital Finance and FinTech: current research and future research directions," *Journal of business economics*, 2017.
- [26] M. S. Hassan, M. A. Islam, A. B. M. Abdullah, and H. Nasir, "End-user perspectives on fintech services adoption in the Bangladesh insurance industry: the moderating role of trust," *Journal of Financial Services Marketing*, Dec. 2024.
- [27] A. Das and D. Das, "Adoption of FinTech services amidst COVID-19 pandemic: empirical evidence from Assam," *Managerial Finance*, 49(6), 1075–1093, May 2023.
- [28] M. G. de B. Sebastian, A. Antonovica, and J. R. Sarmiento Guede, "What are the leading factors for using Spanish peer-to-peer mobile payment platform Bizum? The applied analysis of the UTAUT2 model," *Technol Forecast Soc Change*, Feb. 2023.
- [29] BAUER R., "Consumer Behavior as Risk Taking," *Proceedings of the 43rd National Conference of the American Marketing Association*, June 15, 16, 17, Chicago, Illinois, 1960.
- [30] Mitchell V. W., "Consumer perceived risk: conceptualisations and models," *European Journal of Marketing*, 1999.
- [31] M. A. Almaiah et al., "Factors influencing the adoption of internet banking: An integration of ISSM and UTAUT with price value and perceived risk," *Frontier in Psychology*, 2022.
- [32] S. Kaur and S. Arora, "Role of perceived risk in online banking and its impact on behavioral intention: trust as a moderator," *Journal of Asia Business Studies*, 2021.
- [33] Meyliana, E. Fernando, and Surjandy, "The Influence of Perceived Risk and Trust in Adoption of FinTech Services in Indonesia," *Communication & Information Technolog Journal*, 2019.
- [34] D. H. Mcknight, V. Choudhury, and C. Kacmar, "The impact of initial consumer trust on intentions to transact with a web site: a trust building model," *Journal of Strategic Information Systems*, 2002,
- [35] D. J. Kim, D. L. Ferrin, and H. R. Rao, "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents," *Decis Support Syst*, Jan. 2008.
- [36] W. Zhang, S. Siyal, S. Riaz, R. Ahmad, M. F. Hilmi, and Z. Li, "Data Security, Customer Trust and Intention for Adoption of Fintech Services: An Empirical Analysis from Commercial Bank Users in Pakistan," *Sage Open*, Jul. 2023.
- [37] R. Ali, M. Meraj, and M. S. Mubarik, "In the pursuit of financial innovation-Led financial inclusion: A proposed construct for financial trust," *Borsa Istanbul Review*, Nov. 2023.
- [38] Y. Lafraxo, F. Hadri, H. Amhal, and A. Rossafi, *The Effect of Trust, Perceived Risk and Security on the Adoption of Mobile Banking in Morocco*. 2018.
- [39] P. C. Lai, "Design and Security impact on consumers' intention to use single platform E-payment," *Interdisciplinary Information Sciences*, 22(1), 111–122, 2016.
- [40] Altalbe, "Antecedents of Actual Usage of e-Learning System in High Education during COVID-19 Pandemic: Moderation Effect of Instructor Support," *IEEE*, 2021,
- [41] J. Kim, J. Kim, and I. Lee, "Use contexts for the mobile internet: A longitudinal study monitoring actual use of mobile internet services," *International Journal of Human Computer Interaction*, 2005,
- [42] Weyant E, "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 5th Edition." *Journal of Electronic Resources in Medical Libraries*. 2022.
- [43] R. Likert, "A technique for the measurement of attitudes.," *Archives of psychology*, 1932.
- [44] Sekaran and Bougie, "Research methods for business: A skill building approach." John Wiley & Sons, 2016.
- [45] Surabaya BPS, "Kota Surabaya Dalam Rangka Surabaya Municipality in Figures 2024," 2024.
- [46] Hair Jr JF, Black WC, Babin BJ, Anderson RE. "Multivariate data analysis."2010.

- [47] M. Ali, S. A. Raza, B. Khamis, C. H. Puah, and H. Amin, "How perceived risk, benefit and trust determine user Fintech adoption: a new dimension for Islamic finance," *Foresight*, 2021.
- [48] K. Gupta, A. Wajid, and D. Gaur, "Determinants of continuous intention to use FinTech services: the moderating role of COVID-19," *Journal of Financial Services Marketing*, Jun. 2024.
- [49] D. Gefen, E. Karahanna, and D. W. Straub, "Trust and TAM in Online Shopping: An Integrated Model," *Management Information Systems Research Center*, 2003.