

Reframing Fintech Adoption: The Mediating Role of Attitude Impact of User Perceptions in E-Wallet Usage Among Emerging Markets

Membingkai Ulang *Fintech Adoption*: Peran Mediasi *Attitude* Berdampak Terhadap Persepsi Pengguna Dalam Penggunaan *E-Wallet* di Pasar Berkembang

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ABSTRACT

This study analyzes the factors influencing fintech adoption, particularly e-wallet use, in developing countries, including Indonesia as a representative emerging market country, by emphasizing attitude as a mediator. The research problem lies in the gap between high levels of e-wallet use and low financial literacy in countries. This study uses a quantitative explanatory research method and analyzes the data by using Structural Equation Modeling (PLS-SEM) to examine the causal relationships among proposed constructs. Data were obtained from 413 e-wallet user respondents through questionnaires. The results showed that perceived usefulness ($p = 0.004$), perceived ease of use ($p = 0.000$), and perceived benefit ($p = 0.002$) had a significant positive effect on attitude, also attitude significantly influenced fintech adoption ($p = 0.000$). Attitude has been empirically shown as a mediating variable in the correlation between these three variables on fintech adoption, while perceived risk did not significantly influence attitude ($p = 0.244$), although with attitude mediation, perceived risk was unable to influence fintech adoption. These findings indicate that fintech users prioritize benefits and ease of use over risks when adopting fintech. This research study suggests that fintech firms should enhance the user experience and value proposition to promote positive fintech adoption services, and that institutions should improve public financial literacy to better assess risks in the fintech adoption process.

Keywords: *fintech adoption, perceived benefit, perceived ease of use, perceived risk, perceived usefulness.*

ABSTRAK

Dalam penelitian ini menganalisis faktor-faktor yang mempengaruhi *fintech adoption* terkhususnya pada penggunaan *e-wallet* di negara berkembang salah satunya Indonesia sebagai representasi untuk negara berkembang dengan menekankan variabel *attitude* sebagai mediasi. Permasalahan penelitian terletak pada kesenjangan antara tingginya tingkat penggunaan *e-wallet* di negara yang rendah literasi keuangan masyarakat. Dalam studi ini menerapkan metode penelitian kuantitatif eksplanatori dan menganalisis data menggunakan *Structural Equation Modeling* (PLS-SEM) untuk menguji hubungan kausal antar konstruk yang diusulkan. Data diperoleh dari 413 responden pengguna *e-wallet* melalui penyebaran kuesioner. Hasil penelitian menunjukkan *perceived usefulness* ($p = 0,004$), *perceived ease of use* ($p = 0,000$), *perceived benefit* ($p = 0,002$) terbukti mempengaruhi signifikan positif terhadap *attitude*, serta *attitude* dapat mendorong secara signifikan pada *fintech adoption* ($p = 0,000$). *Attitude* terbukti mampu berperan sebagai mediasi untuk ketiga variabel tersebut terhadap *fintech adoption*, sedangkan *perceived risk* tidak berpengaruh signifikan terhadap *attitude* ($p = 0,244$), meskipun dengan mediasi *attitude* *perceived risk* tidak mampu mempengaruhi *fintech adoption*. Temuan ini mengindikasikan pengguna *fintech* cenderung lebih

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memprioritaskan manfaat yang diperoleh serta kemudahan penggunaan dibandingkan risiko terhadap adopsi *fintech*. Penelitian ini mengimplikasikan bahwa perusahaan *fintech* perlu meningkatkan pengalaman dan nilai manfaat bagi pengguna untuk mendorong sikap positif adopsi layanan *fintech*, serta instansi mampu meningkatkan literasi keuangan masyarakat untuk dapat mengevaluasi risiko dalam proses mengadopsi *fintech*.

Kata kunci: *fintech adoption, perceived benefit, perceived ease of use, perceived risk, perceived usefulness.*

INTRODUCTION

Due in large part to the widespread use of financial technology, which provides more effective, accessible, and reasonably priced financial services, the quick development of digital technology has accelerated the transformation of Indonesia's payment systems (Hurani & Abdel-Haq, 2025). The e-Conomy SEA 2024 report shows that the size of Indonesia's digital economy reached USD 77 billion in 2022 and would grow to USD 130 billion in 2025 (Temasek *et al.*, 2022). Even with this impressive increase, there is still a lack of financial knowledge, Indonesia's financial literacy percentage is only 66.46 percent (OJK, 2025). This means that a sizable section of the populace still lacks the financial knowledge to properly assess digital financial services. This leads to an intriguing paradox despite comparatively low financial literacy, fintech adoption is nevertheless rising. This phenomenon implies that customers' cognitive assessments and psychological reactions to fintech services may have an impact on technology adoption in addition to their financial literacy.

Theoretically, technology adoption behavior can be explained through the framework of Technology Acceptance Model (TAM), which highlights how perception of perceived usefulness and perceived ease of use as cognitive factors shaping behavioral intention (Davis, 1989). Another model, the Net Valence Framework (NVF), highlights the influence of perceived benefit and perceived risk on users' psychological valence. Although TAM and NVF have been extensively employed to explain fintech adoption, previous studies have predominantly examined perceived usefulness, perceived ease of use, perceived benefits, and perceived risks as direct antecedents of adoption behavior which serves as a mediator between cognitive factors and fintech adoption (Jafri *et al.*, 2024). Consequently, limited attention has been given to the indirect psychological mechanism through which these cognitive evaluations are translated into actual adoption via attitude.

One of the most powerful predictors of behavioral intention in the early phases of technology adoption is attitude, which is a person's overall positive or negative assessment of adopting a technology. Prospective users typically have little firsthand experience with fintech services during the initial adoption stage, so their decisions are largely influenced by cognitive assessments of the usefulness, ease of use, awareness, and advantages (Wu & Peng, 2024). Users' opinions toward fintech may be shaped by these cognitive assessments, which in turn may affect their behavioral intents to use the technology (Shahzad *et al.*, 2022). On the other hand, once consumers have gained enough familiarity with the technology and start assessing service dependability and long-term usage continuity, constructs like trust and perceived security become more prominent (Chawla *et al.*, 2023). Because attitude captures the psychological shift from cognitive perception to behavioral decision, it offers a more theoretically sound mediating mechanism for understanding early fintech acceptance (Neves *et al.*, 2023).

There is still conflicting empirical data on fintech acceptance. According to a number of studies, perceived ease of use does not always promote fintech adoption (Setiawan *et al.* 2021). In fact, some studies have found a negative relationship because users' perceptions of security and credibility may be lowered by excessive simplicity (Setiawan *et al.*, 2024). Meanwhile, the findings of the perceived risk test indicate no influence impact on fintech adoption because, according to the NVF theory, this can reduce interest in adoption influenced by external psychological factors, namely environmental conditions (Abdul-Rahim *et al.*, 2022). The differences in these test results may be influenced by the rate of financial literacy, the maturity of the fintech market, and culture, which are the main distinguishing factors in Indonesia. These inconsistent findings suggest that the relationship between perception variables and fintech adoption is context dependent and may be influenced by contextual factors such as financial literacy, market maturity, and cultural characteristics. Before making adoption decisions, people with greater financial literacy typically have better analytical skills to analyze financial data, consider possible hazards, and assess the reliability of digital financial services. On the other hand, people who are less financially literate frequently rely on basic cognitive cues, like perceived utility and simplicity of use, while paying comparatively less attention to possible dangers and service credibility (Ullah *et al.*, 2022). As a result, users' perceptions of perceived risks and rewards may be influenced by their level of financial literacy, which could eventually affect how they feel about adopting fintech. Meanwhile, in the European context with high literacy, research indicates that attitude plays as an important mediating role between cognitive factors and adoption intention because it is more critical in assessing risk (Neves *et al.*, 2023).

In order to understand the paradox between Indonesia's relatively poor financial literacy and the rapid expansion of fintech acceptance, this study blends the Technology Acceptance Model (TAM) and the Net Valence Framework (NVF) by situating attitude as a mediating variable. By elucidating the indirect process by which cognitive views are converted into adoption behavior, the suggested model makes a theoretical contribution. By presenting data from an emerging economy with comparatively low financial literacy, this study empirically expands on earlier studies on fintech uptake. In order to encourage sustainable fintech adoption, the findings provide policymakers and fintech providers with practical insights for developing tactics that enhance positive user attitudes and boost financial literacy. Practically, the results provide a global strategic guideline that is not only determined by technical considerations such as utility and ease of use, but also for the formation of positive attitudes. This integrative model shows that attitude is key in changing cognitive perceptions and actual adoption behavior, making it important for the fintech industry to focus on user experience and emotional value. Therefore, this research aims to integrate the TAM and NVF models with attitude as a mediating variable to explain the adoption literacy paradox in Indonesia.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) refer to a theory formulated by Davis (1989) that positions the TAM model as a fundamental theory and is frequently applied by researchers to examine the adoption of new technologies such as fintech adoption. The user perception and attitude towards acceptance of technology is highly influenced the ease and difficulties they encounter (Alnemer, 2022). The TAM model widely employed to examine studies test research related to technology adoption intentions, including in

the fintech sector (Sultana *et al.*, 2023). The TAM theory is the most frequently chosen because its framework is suitable for examining the relationship between high levels of new technology adoption and users (Firmansyah *et al.*, 2023). The factors often used in the TAM theory are perceived ease of use and perceived usefulness, which directly influence users' attitudes toward adopting fintech. The factor of perception is a form of psychological driver for individuals toward technology that is felt directly, thereby encouraging the acceptance of technology adoption (Hurani & Abdel-Haq, 2025).

The adoption of fintech is closely related to users' attitudes in shaping the intention to initially accept technology in the financial industry. One of the main drivers in shaping such attitudes, according to the TAM theory, is that the ease and perceived benefits by users will encourage the adoption of fintech usage as cognitive and rational factors. In this study, combining the TAM theory with the Net Valence Framework (NVF) theory adds emotional and affective aspects that influence user behavior to adopt this technology. The aim is to assess and provide empirical evidence of testing variables simultaneously with attitude as a mediator for fintech adoption in environments with low levels of financial literacy.

Net Valence Framework (NVF)

Net Valence Framework (NVF) is a theoretical approach that views value as both positive and negative within a network of systems that interact and influence individual behavioral decisions (Peter & Tarpey, 1975). The Net Valence Framework (NVF) combines cognitive and emotional factors that are complexly formed from the interplay of cognition, emotions, and individual perceptions (Abdul-Rahim *et al.*, 2022). The net valence theory is a theoretical framework that explains individual decisions in using new innovations such as technology, formed from valence value, which is the result of adding the positive and subtracting the negative values. The positive value is the perceived benefit, and the negative value is the perceived risk (Peng *et al.*, 2021). This basic concept has been applied in academic research studies concerning the application of digital technologies, including in financial service innovations (fintech).

NVF as the fundamental factor that shapes user value perception and user intention in adopting technology. Another empirical study uses net valence theory as a paradigm for cognitive and rational decision-making with valence values of benefits and risks toward the adoption of iris recognition technology as a financial service innovation (Al-Debei *et al.*, 2024). Cognitive and affective aspects are examined concurrently through behavior as mediation through valence value, which can lead to a favorable or unfavorable attitude toward fintech adoption. This combination makes it possible to comprehend the reasons behind user motivation as well as how they assess potential dangers during the fintech adoption process.

Perceived Usefulness

In the case of digital financial services, perceived usefulness can be considered the degree to which people believe that fintech applications have the potential to enhance efficiency and effectiveness, thereby making it easier for them to adopt a favorable attitude toward fintech applications (Mamun & László, 2025). In previous studies, there was an examination that raised the variable perceived usefulness, testing its direct influence on attitude, in Setiawan *et al.* (2024) it was found that perceived usefulness had a significantly positive effect on the attitude of women in Indonesia during the COVID-19 pandemic. The findings in Setiawan *et al.* (2021) emphasized that perceived usefulness is the most dominant and strongest cognitive factor in forming a positive attitude toward

fintech adoption in Indonesia. According the findings Purwianti *et al.* (2024) it was explained that perceived usefulness can influence attitude because innovation in technology is able to provide utility to users, thereby forming a positive attitude toward technological innovations such as fintech. Consistent with the view, other empirical investigations report statistically significant positive correlation between perceived usefulness and user attitude (Krah *et al.*, 2024; Mailangkay & Juwono, 2023; Neves *et al.*, 2023; Nugroho, 2024). Accordingly, perceived usefulness emerges as a consistently examined determinant in studies of fintech utilization, therefore the hypothesis was developed that perceived usefulness can have a significant positive effect on attitude.

H1: Perceived usefulness has a significantly positive effect on attitude.

Perceived Ease of Use

The use of fintech applications is greatly influenced by the ease of access for users; perceived ease of use is a strong cognitive driver that suggests a person will use technology with easy access (Baba *et al.*, 2023). Ease of access without high technical barriers makes individuals more psychologically open, which will enhance user comfort and positive attitudes (Carranza *et al.*, 2021). And reinforced by the study of Almashhadani *et al.* (2023) which emphasizes that technology that is increasingly easy to use, easy to navigate, and does not require significant effort to learn will enhance a positive attitude toward its use. In a previous study by Hesniati and Limgestu (2023) it was explained that perceived ease of use significantly affects the intention to use fintech, where perceived ease of use can directly or indirectly influence the intention to adopt fintech. Jafri *et al.* (2024) concluded that empirical studies testing TAM consistently prove that perceived ease of use affects attitudes, which become strong indicators in the reviewed model. Studies that found results from testing the variable of perceived ease of use in relation to attitude were identified in the research (Mailangkay & Juwono, 2023; Neves *et al.*, 2023; Nugroho, 2024). With the conclusion that the ease factor can influence positive behavior, the hypothesis was developed that perceived ease of use has a significant positive effect on attitude.

H2: Perceived ease use has a significantly positive effect on attitude.

Perceived Risk

Perceived risk refer to the possibility of negative outcome perceived by individuals that impact losses when adopting fintech (Xie *et al.*, 2021). Perceived risk consists of several aspects such as security, performance, financial, time and opportunity, psychological, and social, which are often found in research on the perceived risk variable (Zhao & Khaliq, 2024). Generally, other studies place the perceived risk variable as a mediator to strengthen the perceived risk factor aspects with a significantly negative result on fintech adoption (Jain & Raman, 2022) and other research produces a test of the perceived risk variable with a significantly negative effect on the intention to use fintech (Gupta *et al.*, 2024). In the Net Valence Framework (NVF), perceived risk plays a role as a negative valence that reduces the perceived value attitude toward fintech adoption (Al-Debei *et al.*, 2024). Therefore, perceived risk is considered a significant negatively factor influencing the behavior to adopt fintech.

H3: Perceived risk use of a significantly negative effect on attitude.

Perceived Benefit

Perceived benefit is an aspect that describes the extent to which users experience advantage influenced by the smoothness of transactions, security, and control (Jain & Raman, 2022). Perceived benefit is also referred to as part of price value, which evaluates

the financial benefits perceived when adopting fintech (Xie *et al.*, 2021). The perceived benefits can also enhance user satisfaction, which in turn encourage greater use of services (Ribeiro *et al.*, 2022). Often, testing the perceived benefit variable results in a positive influence on fintech adoption. Users will prefer to use fintech for transaction when the perceived benefit received are higher than risk (Candy *et al.*, 2022). Another study shows that the perceived benefit significantly positively affects the intention to use fintech (Khuong *et al.*, 2022). The results of other studies also indicate that perceived benefit positively influences fintech adoption behavior, with the NVF theory assuming that a person intends to act if they perceive the positive utility of the perceived benefits from that behavior, namely the use of fintech (Abdul-Rahim *et al.*, 2022). Thus, a hypothesis is formulated that perceived benefit can significantly and positively influence attitude thereby fostering a more positive attitude toward fintech adoption.

H4: Perceived benefit has a significantly positive effect on attitude.

Attitude

Attitude is the disposition to act positively or negatively in a predictable way, within the TAM theory, users' attitudes toward new technology substantially influence their intention to use fintech, indicating that attitude often play significant role as a direct predictor of intention and behavior toward its use (Shahzad *et al.*, 2022). Findings from prior studies demonstrate the attitude variable have a direct influence on fintech adoption with significant results, affirming that the adoption of fintech is greatly influenced by attitude (Gunnool *et al.*, 2023). Further empirical findings suggest that attitude plays significant role affects the intention to use fintech, based on cognitive evaluations, particularly perceptions regarding ease of use and usefulness (Mailangkay & Juwono, 2023). The factors that greatly influence individuals' use of fintech are driven by attitudes that show an impact on adopting fintech (Sultana *et al.*, 2023).

Attitude serve as a crucial intermediary mechanism that connects cognitive factors influenced by perception and to encourage a positive attitude that directs the adoption of fintech services. Perceived usefulness will be felt when individuals are confident in the technology that can enhance the performance and effectiveness of activities (Hurani & Abdel-Haq, 2025). In this study Ullah *et al.* (2022) focusing perceived usefulness have consistently identified a significantly impact on behavioral intentions toward fintech adoption, believing that when individuals perceive fintech as beneficial, it will encourage user behavior to gain advantages from using fintech. Furthermore, perceived usefulness significantly influences as a mediator correlation perceived ease of use and behavioral intentions (Wu & Peng, 2024). Other empirical findings also indicate that the factors of benefit and perceived risk are significant drivers of fintech adoption (Appiah & Agblewornu, 2025). Research by Gupta *et al.* (2024) produced findings likewise indicate that perceived benefit has a statistically significant positive effect on individual's intention to use fintech services. The influence of benefits can encourage the intention to use fintech, and attitude as a mediator plays an important role for users to evaluate the benefits and make psychological decisions, resulting in a tendency toward a positive attitude to adopt fintech services. A positive attitude from users toward the ease and convenience of fintech services allows for an increase in fintech usage due to the ease of receiving transaction information in real-time, efficiently, and flexibly (Karim *et al.*, 2022).

H5: Attitude has a significantly positive influence on adoption fintech

H6: Perceived usefulness has a significant influence on fintech adoption through attitude

H7: Perceived ease of use has a significant influence on fintech adoption through attitude

H8: Perceived risk has a significant influence on fintech adoption through attitude

H9: Perceived benefit has a significant influence on fintech adoption through attitude

Based on the explanation from the literature review, the conceptual framework of the research model is described as follows:

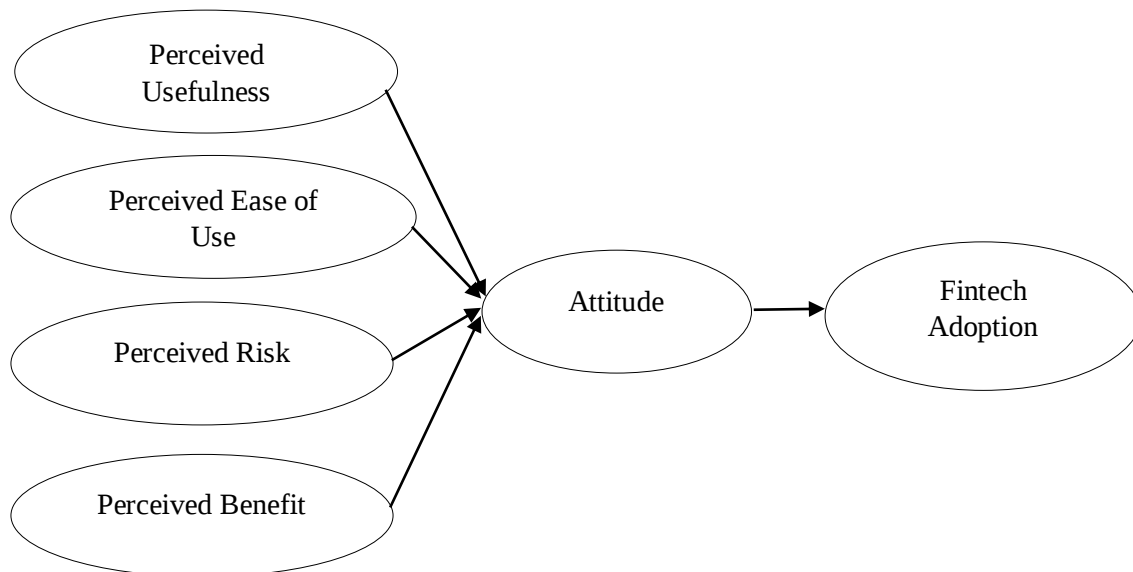


Figure 1. Research Model

RESEARCH METHODS

Research methodology refers to systematic procedures employed to collect required data and information. In general, research methods can be categorized into two approaches, which include qualitative research methods and quantitative research methods. The quantitative approach is characterized by investigation of empirical phenomenon technique through the use of a variable and enabling the examination the relationship between phenomena. On the other side, qualitative research methods are a model of research that does not focus much on numbers, but rather on the formation of categories, types, and understanding of the meaning of phenomena, which usually use a case study based approach (Borgstede & Scholz, 2021).

The research method applied in this study is the quantitative research method using a cross-sectional survey design. Data were gathered from respondents at a single point in time to investigate the structural links among perceived usefulness, perceived ease of use, perceived risk, perceived benefit, attitude, and fintech adoption, a cross-sectional design is acceptable. Which emphasizes the cause and effect correlation between the independent construct and the dependent construct, connected by the mediation variable as a mediator between the two variables. The analysis is conducted by comparing conditions and situations that influence the emerging phenomenon, considering the factors that drive the relationship between the variables. The analysis explores the interconnections among perceived usefulness, perceived ease of use, perceived risk, perceived benefit, and attitude, and how these elements collectively relate to fintech adoption on the public's decision to adopt fintech, particularly e-wallets, in Indonesia.

The target population consists of e-wallet users in Indonesia. Indonesia was chosen because it represents one of the largest emerging markets with high adoption of digital payments and rapid fintech development. Therefore, Indonesian e-wallet users provide an appropriate context for examining fintech adoption within an emerging market

country. Sample collection used the convenience sampling method, which involves data collection from respondents who are easily accessible and can fill out the survey according to the criteria and experiences they possess (Memon *et al.*, 2025). This research approach is widely used to collect information related to user behavior, income levels, and perceptions from e-wallet users. The data collected was through the distribution of questionnaires in Indonesia using e-wallet via social media and personal network.. The determination of the sample size was guided by theory from Hair *et al.* (2021) with a 1:10 model, where each variable question is represented by 10 respondents. With a total of 36 items in the instrument, the minimum number of respondents required for this study is $36 \times 10 = 360$ respondents.

In the research using six variables, namely perceived usefulness, perceived ease of use, perceived risk, perceived benefit, attitude, and fintech adoption, the indicators for each variable can be explained in the following Table 1.

Table 1. Research Indicators

Variable	Indicator	Code	Reference
Perceived Usefulness	I feel that fintech services can help improve my performance in my work.	PU1	(Mamun & László, 2025)
	I feel that using fintech can help save my time.	PU2	
	I feel that using fintech can complete my tasks faster.	PU3	
	I feel that fintech can increase my productivity in managing financial transactions.	PU4	
	I find the fintech system more useful than the traditional banking system for managing my finances.	PU5	
Perceived Ease of Use	I feel that installing and downloading fintech applications is very easy to do.	PEOU1	(Hurani & Abdel-Haq, 2025)
	I feel that fintech services are available at all times with minimal error disruption.	PEOU2	
	I feel that the bank service uses a chat box system and a call center as a help channel to resolve the difficulties I am experiencing.	PEOU3	
	I find fintech services easy to learn and user friendly.	PEOU4	(Setiawan <i>et al.</i> , 2021)
	I find using fintech services very easy to use.	PEOU5	
Perceived Risk	I feel that making purchases through fintech can pose a risk to the product.	PR1	(Bajunaied <i>et al.</i> , 2023)
	I feel that making purchases through fintech can pose financial risks.	PR2	
	In my opinion, transacting online via fintech has high risks.	PR3	

Variable	Indicator	Code	Reference
Perceived Benefit	I feel there is a risk that using fintech is not commensurate with the costs involved.	PR4	(Zhao & Khaliq, 2024)
	In my opinion, using fintech can make me less satisfied because its performance is not good.	PR5	
	In my opinion, the use of fintech is not necessarily as effective as expected.	PR6	
	Using fintech can enable me to save more through discounts, promotions, and coupons.	PB1	(Abdul-Rahim <i>et al.</i> , 2022)
	Using fintech allows me to access financial services at low cost.	PB2	
	Using fintech can provide financial benefits such as cashback, higher interest rates, and discount vouchers.	PB3	
	Using fintech allows me to access financial services at any time.	PB4	
	The use of fintech makes it possible to access financial services anywhere.	PB5	
	Using fintech makes it easier for me to access financial services	PB6	
	Using fintech can make it easier for me in terms of accessing service usage, registration, and others.	PB7	
	Using fintech is more practical than traditional financial services	PB8	
	Using fintech helps me avoid various hassles such as queuing, going to physical branches and so on.	PB9	
	Using fintech can use financial services faster	PB10	
	Using fintech can use financial services more effectively	PB11	
Attitude	Using fintech avoids long transaction processes	PB12	(Mamun & László, 2025)
	I feel that using fintech is a good decision to manage my finances.	AT1	
	I believe that utilizing fintech innovation for transactions is a wise decision.	AT2	
	I find the experience of using fintech very enjoyable.	AT3	
Fintech Adoption	I think adopting fintech is a good step to manage my finances.	AT4	(Hurani & Abdel-Haq, 2025)
	I often use fintech services from banks (such as mobile applications, e-banking, e-wallet)	FA1	
	I often use fintech services from non-banks (such as e-wallets provided by non-banks)	FA2	
	I prefer to transact using fintech rather than coming to a physical bank branch.	FA3	
	I don't mind using fintech services from non-bank companies.	FA4	

The data collection for this research is primary data, where the data is collected through a questionnaire containing instruments with questions to obtain information and data directly from respondents, as a form of assessment of the research phenomenon. The questionnaire was created in the form of a Google Form, which distributed by online via social media, phone contacts, and directly interactions. The use of an online based questionnaire can reach respondents more widely and quickly throughout Indonesia as fintech users. The type of questionnaire used in the research is a closed questionnaire, where the questionnaire consists of choices according to the categories of answer options in the form of a likert scale (Sharma & Ruikar, 2025).

The collected data was analyzed using the SmartPLS version 4 application, which employs the PLS-SEM data analysis approach. This analytical approach makes it possible to assess both the structural model (inner model), which looks at the proposed relationships between the constructs, and the measurement model (outer model), which assesses the validity and reliability of the measurement tools.

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistics is a statistical method involving the collection, processing, and presentation of data according to the required data criteria (Reza *et al.*, 2021). The number of data successfully collected was 465 respondents. During the data collection process, there were 52 questionnaires that were not returned, so the number of respondents' data used for the data processing was 413 respondents. In the table below are the results of the data description that was collected, based on gender, age, education level, employment status, and experience using fintech applications.

Table 2. Profile Respondents

Characteristic	Indicator	Total	Percentage
Gender	Female	266	64,4%
	Male	147	35,6%
Age	15 - 20 years	108	26,1%
	21 -25 years	272	65,9%
	26 - 30 years	23	5,6%
	> 31 years	10	2,4%
Education	SMA/SMK	258	62,5%
	Diploma (D1/D2/D3)	31	7,5%
	Bachelor's / Postgraduate	123	29,8%
	Applied Bachelor's (D4)	1	0,2%
Income	< Rp 5.000.000	217	52,5%
	Rp 5.000.0000 - Rp 10.000.000	159	38,5%
	Rp 10.000.000 - Rp 15.000.000	27	6,6%
	> Rp 15.000.000	10	2,4%
Occupation	Private Employees	194	47,0%
	Civil Servants	34	8,2%
	Entrepreneurs	73	17,7%
	Unemployed	112	27,1%
Fintech Application	M-Banking	63	15,3%
	Gopay	268	64,9%

Characteristic	Indicator	Total	Percentage
	Shopeepay	274	66,3%
	Seabank	118	28,6%
	Ovo	115	27,8%
	Flip	37	9,0%
	Neobank	13	3,1%

The gender collected in the data is divided into female and male, with 266 female respondents and 147 male respondents. Educational status is divided into SMA/SMK with 258 respondents, Diploma (D1/D2/D3) with 31 respondents, Bachelor's/Postgraduate with 123 respondents, and Applied Bachelor's 1 respondent. There is a division based on the age of the respondents, starting from the age of 15 – 20 years with 108 respondents, then the age of 21 – 25 years with 272 respondents, for the age of 26 – 30 years with 23 respondents, and for the age of over 30 years with 10 respondents.

Based on the income criteria that have been collected, the respondents are divided as follows: those with an income of less than Rp5,000,000 consist of 217 respondents, those with an income of Rp5,000,000 – Rp10,000,000 consist of 159 respondents, those with an income of Rp10,000,000 – Rp15,000,000 consist of 27 respondents, and those with an income above Rp15,000,000 consist of 10 respondents. The majority of the respondents work as private employees, consisting of 194 respondents, followed by those with the status of civil servants, consisting of 34 respondents, those who work as entrepreneurs, consisting of 73 respondents, and a portion of the respondents who are unemployed, consisting of 112 respondents.

Common Method Bias (CMB)

In the research, common method bias testing was conducted using a full collinearity assessment with the VIF (Variance Inflation Factor) value. Common method bias testing was carried out to ensure that no bias was found in the use of the same data collection method. Based on the criteria from Hair *et al.* (2021) a VIF value below 3 is considered ideal for testing free from common method bias issues. However, a value below 5 is still acceptable; if the result is above 5, the test indicates a problem with multicollinearity, meaning the variables are too similar and correlate with each other.

Table 3. Variance Inflation Factor

Variable	VIF
AT1	1.536
AT2	1.420
AT3	1.310
AT4	1.487
FA1	1.351
FA2	1.212
FA3	1.301
PB1	2.229
PB2	2.118
PB3	1.809
PB4	2.034
PB5	1.887
PB6	1.965
PB7	2.102
PB8	1.996
PB9	1.917

Variable	VIF
PB10	2.013
PB11	2.065
PB12	2.117
PEOU1	1.541
PEOU4	1.472
PEOU5	1.439
PR1	2.576
PR2	2.786
PR3	3.012
PR4	3.143
PR5	3.683
PR6	3.192
PU1	1.755
PU2	1.545
PU3	1.643
PU4	1.515
PU5	1.446

From the test results in Table 3, the VIF (variance inflation factor) values are still in the range of 1.212 to 3.683, in accordance with the criteria that VIF values will be accepted within the range of below 5, and ideally below 3 according to Hair *et al.* (2021) thus the VIF test results for these variable indicators are accepted. This indicates that there is no multicollinearity issue among the variables, and the model does not exhibit indicators of common method bias.

Validity

In this study, validity testing is necessary. Validity testing shows that the data being tested is valid, as a reflected by the values of outer loadings value, AVE, and discriminant validity. If the outer loading value is above > 0.7 , indicate that each questionnaire item consistently reflects the concept it is designed to measure (Hair *et al.*, 2021). Additionally, the AVE values for all variables are above 0.50, indicating that the majority of information contained in the indicators is effectively captured. Overall, these findings indicate the measurement items possess adequate consistency and accuracy, consistent, and suitable for further analysis.

Table 4. Validity of Construct

Variable	Outer-loading	Average Variance Extracted	Description
AT1	0.784	0.567	Valid
AT2	0.739		Valid
AT3	0.732		Valid
AT4	0.755		Valid
FA1	0.759	0.588	Valid
FA2	0.729		Valid
FA3	0.811		Valid
PB1	0.788	0.561	Valid
PB2	0.751		Valid
PB3	0.708		Valid
PB4	0.761		Valid
PB5	0.723		Valid
PB6	0.744		Valid
PB7	0.766		Valid
PB8	0.743		Valid

Variable	Outer-loading	Average Variance Extracted	Description
PB9	0.744	0.660	Valid
PB10	0.752		Valid
PB11	0.755		Valid
PB12	0.749		Valid
PEOU1	0.828		Valid
PEOU4	0.794	0.714	Valid
PEOU5	0.815		Valid
PR1	0.944		Valid
PR2	0.848		Valid
PR3	0.846		Valid
PR4	0.815		Valid
PR5	0.832		Valid
PR6	0.778	0.569	Valid
PU1	0.804		Valid
PU2	0.753		Valid
PU3	0.773		Valid
PU4	0.727		Valid
PU5	0.711		Valid

Reliability

To determine whether a tested variable is reliable, reliability test through cronbach's alpha and composite reliability is necessary. Cronbach's alpha indicates that a variable is reliable if the value is above 0.60 – 0.70, making the variable acceptable for the research. If the value is between 0.70 – 0.90, the value is more satisfactory for acceptance in the research (Hair *et al.*, 2021). The research results in Table 5 show that the values for cronbach's alpha and composite reliability are above 0.60, concluding that all constructs in the research are reliable to support the research model.

Table 5. Reliability of Construct

Variable	Cronbach's alpha	Composite reliability	Description
AT	0.746	0.840	Reliable
FA	0.653	0.811	Reliable
PB	0.929	0.939	Reliable
PEOU	0.743	0.854	Reliable
PR	0.936	0.937	Reliable
PU	0.810	0.868	Reliable

Discriminant Validity

Discriminant validity is a test to show that a construct is truly different from other constructs. Which shows that each construct cannot be represented by other constructs, meaning they have different characteristics. The Fornell-Lacker test is an approach to show that the square root of the Average Variance Extracted (AVE) value for each construct is greater than that of other constructs (Hair *et al.*, 2021). Based on the results of the Fornell-Lacker test, this yields values for each construct that are greater than those of other constructs, thus meeting the criteria for discriminant validity.

Table 6. Fornell-Lacker Criterion Test

	AT	FA	PB	PEOU	PR	PU
AT	0.753					
FA	0.424	0.767				
PB	0.442	0.445	0.749			
PEOU	0.498	0.483	0.455	0.813		
PR	0.104	0.127	0.051	0.022	0.845	
PU	0.434	0.565	0.412	0.487	0.045	0.754

Additionally, testing using the Heterotrait-Monotrait Ratio (HTMT) is necessary to test discriminant validity, with a value below 0.90 indicating that the construct meets the validity criteria (Hair *et al.*, 2021) Based on Table 7 below, the value of each construct is below 0.90, indicating all constructs meet the criteria can be accepted in the discriminant validity test.

Table 7. Heterotrait-Monotrait Ratio (HTMT)

	AT	FA	PB	PEOU	PR	PU
AT						
FA	0.596					
PB	0.524	0.564				
PEOU	0.663	0.694	0.546			
PR	0.083	0.135	0.066	0.084		
PU	0.556	0.767	0.473	0.629	0.068	

Goodness of Fit

This test aims to compare research models that can accurately present data. The goodness of fit test uses the Standardized Root Mean Square Residual (SRMR) index to measure the average error value against the value predicted by the model. Based on the results in Table 7, which evaluates the goodness of fit model using Smart-PLS, the SRMR value is 0.053. According to the findings of Sathyanarayana and Mohanasundaram (2024) the general threshold for SRMR is below 0.08. In this study, it can be interpreted that the model's error level is relatively low, effectively linking the variables well.

Table 8. Model Fit

Indicator Model Fit	Result
Standardized Root Mean Square Residual (SRMR)	0.053
R Square	
Attitude (AT)	0.340
Fintech Adoption (FA)	0.180
R Square Adjusted	
Attitude (AT)	0.333
Fintech Adoption (FA)	0.178

The R square coefficient determination is used to assess the ability of variables to explain the dependent variable in the research model. According to Hair *et al.* (2021) the criteria for R square values between 0 and 0.10 are indicated as weak in explaining the variable, R square values from 0.11 to 0.30 adequately explain the variable's influence, between 0.30 and 0.50 show moderate strength in explaining the correlation between the independent variable and the dependent variable, and above 0.50 indicate a strong influence in explaining the dependent variable.

From the results shown in Table 8, the value of the R square for the AT variable is 0.340 and the R square adjusted value is 0.333, indicating that the independent variable can explain the AT variable by 34 percent. Meanwhile, the R square value for FA is 0.180

and the R square adjusted value is 0.178, indicating that the variable can sufficiently explain the dependent variable FA by 18 percent. Thus, the AT can be categorized as moderately sufficient for the independent variable to explain the AT construct, while FA falls into the category of being quite weak in explaining the correlation between the independent variable and the dependent variable FA. Therefore, this research model is still quite limited in explaining the fintech adoption variable.

Direct and Indirect Effect

The results of the direct and indirect influence tests thru mediation between the independent variable and the dependent variable are explained in the P-values to clarify the significance level of the variable's influence and indicate whether the hypothesis is accepted or not. Based on the category from Hair *et al.* (2021) a variable will be considered to have a significant effect if the P-value is below 0.05. If the P-value is above 0.05, it can be stated that the test results of the variable's influence are not significant.

Table 9. Direct Effect Findings

	Coefficient	T-statistics	P-values	Result	Hypothesis
PU $\square$ AT	0.193	2.918	0.004	Significant	Accepted
PEOU $\square$ AT	0.296	4.505	0.000	Significant	Accepted
PR $\square$ AT	0.073	1.165	0.244	Insignificant	Rejected
PB $\square$ AT	0.229	3.169	0.002	Significant	Accepted
AT $\square$ FA	0.429	5.850	0.000	Significant	Accepted

From the results of Table 9, it can be concluded that there are 4 results from the hypothesis of a significant direct effect and there is 1 variable hypothesis rejected because the results are not significant. Based on Table 9, it can be stated that PU has a positive effect on AT with P-values of $0.004 < 0.05$, coefficient value of 0.193 and T-statistics $2.928 > 1.96$ so that **H1** is accepted. The effect of PEOU on AT has a P-value of $0.000 < 0.05$ with a coefficient value of 0.296 and T statistics $4.505 > 1.98$, it can be stated that PEOU has a significant positive effect on AT so that **H2** is accepted. The test results of the influence of PR on AT have P-values of $0.244 > 0.05$ with a coefficient value of 0.073 and T statistics of $1.164 < 1.98$ which can be stated that the test results state that PR has no effect on AT and the **H3** hypothesis is rejected, because the P-values do not meet the criteria must be below 0.05 and T-statistics are still below 1.96 so there is no significant influence of the PR variable on AT. The test results of the influence of PB on AT have P-values of $0.002 < 0.05$ with a coefficient value of 0.229 and T-statistics of $3.169 > 1.96$ which means that PB has a significant positive effect on AT and **H4** is accepted. And the test results of the influence of AT on FA have P-values of $0.000 < 0.05$ with a coefficient value of 0.429 and T-statistics of $5.850 > 1.96$ which means that AT has a significant positive effect on FA and **H5** is accepted.

It can be concluded that the variables perceived usefulness, perceived ease of use, and perceived benefit significantly and positively influence the variable attitude. Additionally, perceived ease of use is the variable with the strongest influence on attitude, with a coefficient value of 0.296. Meanwhile, the variable perceived risk has the lowest value and has been proven not to influence the variable attitude. On the other side, the variable attitude has been shown to have a strong influence on fintech adoption, with the highest coefficient value in the test results, explaining its role as a mediator that drives fintech adoption.

Table 10. Indirect Effect Findings

	Coefficient	T-statistics	P-values	Result	Hypothesis
PU $\square$ AT $\square$ FA	0.084	2.313	0.021	Significant	Accepted
PEOU $\square$ AT $\square$ FA	0.128	3.188	0.001	Significant	Accepted
PR $\square$ AT $\square$ FA	0.032	1.163	0.245	Insignificant	Rejected
PB $\square$ AT $\square$ FA	0.099	2.551	0.011	Significant	Accepted

From findings results in Table 10 are the test results for the indirect influence of independent variables on the dependent variable through attitude as mediation. Based on the results of this test, it shows that PU on FA through AT as mediation has a P-value of $0.021 < 0.05$ and with a coefficient value of 0.084 and a T-statistics value of $2.313 > 1.96$ so that the AT variable can mediate the influence of the PU variable on FA and **H6** is accepted. The PEOU variable on FA with AT as mediation has a P-value of $0.001 < 0.05$ with a coefficient value of 0.128 and T-statistics of $3.188 > 1.96$ which means that AT can mediate the influence of PEOU on FA so that **H7** is accepted. And the results of testing the influence of PB on FA through AT show a P-value of 0.011 and a coefficient value of 0.099 and T-statistics of $2.551 > 1.96$, which means that AT can mediate the influence of PB on FA so that **H9** is accepted.

However, the results of the indirect influence test with AT as a mediator show the results of PR on FA with attitude as a mediator, the results of P-values of 0.245 with a coefficient value of 0.032 and T-statistics $1.163 < 1.96$, which means that AT does not mediate the influence of PR on FA. The influence of PR shows an insignificant influence on AT and this also does not affect FA even though the AT variable as a mediator is included so that **H8** is rejected. Based on the test results, it shows that the variable of perceived risk does not have a strong influence in encouraging fintech adoption through attitude as a mediator, and from all the results of the indirect influence test, the perceived ease of use variable has a strong influence shown by the coefficient value of 0.128 with the attitude variable as a mediator on the fintech adoption variable.

Discussion Hypothesis Result

The Influence of Perceived Usefulness on Attitude

Based on the results of the test, the variable perceived usefulness can influence attitude to encourage the use of fintech. The higher the perceived usefulness felt by users toward fintech, the more it encourages a positive attitude among users toward adopting fintech. This outcome is consistent with the findings by Setiawan *et al.* (2021) which indicates that individuals assess the aspect of utility or usefulness when evaluating technology. The higher the perceived benefits such as efficiency, effectiveness, and ease of performing activities, the greater the tendency for users to have a positive attitude toward fintech adoption (Mamun & László, 2025). Perceived usefulness becomes a cognitive factor that can facilitate users in showing a positive attitude because it is related to the functions of technology, such as fintech making tasks easier, and this strongly influences attitude (Krah *et al.*, 2024). Theoretically, this finding aligns with the TAM theory by Alnemer (2022) which asserts that perceived usefulness is a strong driver in forming a positive attitude.

However, this relationship's intensity seems to be different from the European data published by Neves *et al.* (2023), which discovered that while perceived usefulness remained significant, it was frequently accompanied by users' assessments of security, institutional trust, and financial competence. The disparity in financial literacy could be

one reason for this disparity. In comparison to many European nations, Indonesia still has very low financial literacy, which leads users to prioritize immediate practical benefits above more complex factors like long-term financial ramifications or institutional dependability. As a result, in emerging markets as opposed to established fintech ecosystems, perceived utility becomes a more important factor in shaping attitudes.

The Influence Perceived Ease Use on Attitude

From the findings results, it is evident the variable perceived ease of use have a strong influence on attitude, indicating that the level of ease of use significantly contributes to forming a positive user attitude. The easier it is to use, the less effort users need to operate the fintech system, which can encourage its use (Almashhadani *et al.*, 2023). Perceived ease of use becomes a cognitive driver that can encourage users to use technology by reducing barriers and ease of access Baba *et al.* (2023) and can provide comfort in accessing fintech technology without the need for significant demands to learn Carranza *et al.* (2021) making users more likely to accept it and form positive attitudes. However, the magnitude of this effect is different from the results reported by Neves *et al.* (2023) in European countries, where users typically have more experience with digital financial services and view usability as a standard feature rather than a competitive advantage, so perceived ease of use, while significant, was not the dominant determinant. The disparities in user experience and fintech market maturity could account for these discrepancies. Many customers are relatively new to digital financial services, and Indonesia's fintech sector is currently expanding quickly. As a result, application accessibility and simplicity become crucial elements in lowering technical obstacles and promoting positive views. Theoretically, in the TAM, perceived ease of use is consistently discussed as a strong indicator influencing positive attitudes in the research model (Jafri *et al.*, 2024).

The Influence Perceived Risk on Attitude

The result reveal that perceived risk variable does not have statistically effect on attitude, lending to the rejection third hypothesis. This is because perceived risk is not always one of the factors that can influence user attitudes or behavior toward adopting fintech, as user attitudes are not significantly affected by the perceived risk in adopting fintech. Generally, users pay more attention to the benefits of convenience rather than the risks that may arise from using fintech technology (Abdul-Rahim *et al.*, 2022). When the perceived risk does not interfere with user activities, users tend to ignore it and it is less likely to affect their attitudes. Therefore, this findings reflects a divergence from earlier studies that emphasize the role of perceived risk can increase the adoption of fintech usage (Gupta *et al.*, 2024; Jain & Raman, 2022).

On the other hand, Neves *et al.* (2023) discovered that perceived risk is still a major factor in European nations due to users' generally higher levels of financial literacy and understanding of data privacy, cybersecurity, and financial protection. Numerous contextual factors could account for this discrepancy. First, users may prioritize short-term gains over long-term dangers due to Indonesia's relatively low level of financial awareness. Second, the widespread use of e-wallets has normalized fintech usage and decreased customers' perceptions of risk thanks to government initiatives and intensive marketing campaigns. Lastly, the study's respondents were primarily young adults with a great deal of experience using e-wallet and mobile banking apps, indicating that familiarity and frequent use lessen uncertainty and lessen the impact of perceived risk on attitude.

The Influence Perceived Benefit on Attitude

Based on the results of testing, the perceived benefit variable has been proven to influence attitude, as shown by the benefits perceived by users from transaction smoothness and security (Jain & Raman, 2022). This indicates that the perceived benefit felt by users plays an important role in shaping a positive attitude toward the adoption of fintech. In line with the NVF theory, which states that a positive attitude can be formed supported by users who can perceive the benefits (Abdul-Rahim *et al.*, 2022). Someone will find it easier to adopt fintech if benefits arise that support user effectiveness, one of which is the perceived benefit often associated with price value, meaning the financial benefits perceived (Xie *et al.*, 2021). With this perceived benefit, it strengthens users' perception of the value received from the use of technology such as fintech, which can be an important factor in reinforcing the relationship between users' perception and attitude toward fintech. When users can perceive the benefits or advantages received as greater than the expenses in terms of cost and effort, they tend to have a more positive attitude (Ribeiro *et al.*, 2022).

The Influence Attitude on Fintech Adoption

The fifth hypothesis test confirms that attitude significantly influences fintech adoption variable directly. That indicates that attitude is a variable that can drive users' perceptions toward the adoption of fintech technology (Gunnnoo *et al.*, 2023). This finding aligns with the TAM theory, which explains that attitude is a determinant in forming a positive attitude toward the use of fintech technology (Shahzad *et al.*, 2022). In the use of fintech, a person's attitude becomes the main factor in evaluating and directly interacting to assess the positive and negative impacts of an object such as fintech usage (Irimia-Diéguez *et al.*, 2023). The impact of this usage is evaluated by individuals in terms of benefits, ease, and user comfort while using fintech services, therefore when users have a positive perception of fintech services, they tend to increase their interest in long-term usage (Sultana *et al.*, 2023).

The Influence of Perceived Usefulness on Fintech Adoption Through Attitude

The testing of sixth hypothesis demonstrate that the attitude serves as a significant mediating mechanism in the correlation between perceived usefulness and fintech adoption. This indicates that perceived usefulness serves as a positive driver for users' perceptions to use fintech thru attitude, which will ultimately influence users to adopt fintech (Mailangkay & Juwono, 2023). Perceived usefulness is a significant driver of user behavior because it is greatly influenced by the benefits obtained from adopting fintech, which will increase interest in fintech services (Ullah *et al.*, 2022). When individuals perceive the effectiveness and benefits of using fintech services, this can shape a positive attitude among users, who will tend to start adopting fintech. Over time, this usage will become more habitual and internalized within the individual, so fintech is seen as a necessity that can accelerate and simplify user activities.

The Influence of Perceived Ease of Use on Fintech Adoption Through Attitude

The results reveal that attitude play significant mediating role in the correlation between perceived ease of use on fintech adoption. This indicates that higher level perceived ease of use can increase users' adoption of fintech mediated by attitude. Such a pattern is consistent with the findings of Mailangkay and Juwono (2023) that when someone experiences ease of access and ease of operating fintech services, it will be easier for users to accept fintech services. Because ease in terms of access, efficiency, real-time transactions, and flexibility will support user satisfaction and form a positive attitude toward fintech (Karim *et al.*, 2022). Perceived ease of use in this finding shows its

influence as a strong driver for adopting fintech, with the effect of attitude as a mediator capable of driving fintech usage. Thus, it can be concluded that attitude serves as a psychological mechanism to connect and strengthen the influence of perceived ease of use on fintech adoption.

The Influence of Perceived Risk on Fintech Adoption Through Attitude

The mediation analysis involving the perceived risk variable and fintech adoption through attitude, the research findings were not significant. This outcome is consistent with earlier finding that perceived risk does not significantly affect on attitude, and ultimately the influence of the perceived risk variable was not accepted by the dependent variable. This is because risk does not become the main factor for individuals to encourage user attitudes toward adopting fintech; users will prefer the perceived benefits over the potential risks (Abdul-Rahim *et al.*, 2022). Perceived risk shows limited impact on influencing individuals to adopt fintech, because individuals more strongly guided by perceived benefits and do not consider the moderate influence of risk. As a result, perceived risk cannot enhance fintech adoption, although thru attitude mediation, its influence is not strong enough to encourage fintech adoption among users of fintech services.

The Influence of Perceived Benefit on Fintech Adoption Through Attitude

The influence of perceived benefit on fintech adoption thru attitude From the findings of the test on the influence of the perceived benefit variable on fintech adoption mediated by attitude, it shows that perceived benefit can be a positive driver of fintech adoption. In line with the research by Appiah and Agblewornu (2025) which explains that the level of perceived benefit received by users, whether from an economic, efficiency, or convenience perspective, can make users more inclined to adopt fintech. This is because perceived benefit can drive a positive user attitude to support fintech usage (Jain & Raman, 2022). The presence of attitude as a mediating effect, which shows a significant influence, indicates that attitude contributes to strengthening the relationship between perceived benefit and fintech adoption. This reflects that the user experience in adopting fintech is often influenced by the benefits of cost and convenience, as this ease provides advantages to users without requiring them to spend much time on transactions (Gupta *et al.*, 2024).

CONCLUSION

This study integrated the Technology Acceptance Model (TAM) and the Net Valence Framework (NVF) to investigate the impact of perceived usefulness, perceived ease of use, perceived risk, and perceived benefit on fintech adoption using attitude as a mediating variable. By showing that users' cognitive assessments affect fintech adoption both directly and indirectly through attitude, the results effectively meet the research goal.

The findings of the study: first, there is a strong positive correlation between perceived utility and attitude, meaning that those who think fintech services are helpful are more likely to adopt fintech. Second, attitude is significantly positively impacted by perceived ease of use, indicating that straightforward and intuitive fintech applications promote more favorable user assessments. Third, perceived benefit greatly improves attitude, demonstrating that customers are more inclined to embrace fintech when they perceive definite practical and financial advantages. Fourth, attitude is not significantly influenced by perceived risk, suggesting that risk perception is not the main factor influencing fintech adoption in Indonesia. This research implies that when making adoption decisions, people may give perceived benefits, ease, and usefulness precedence

over possible hazards. Fifth, attitude is a key psychological mechanism that converts users' cognitive assessments into actual adoption behavior. It also has a significant impact on fintech adoption and mediates the relationships between perceived usefulness, perceived ease of use, perceived benefit, and fintech adoption.

By combining the Technology Acceptance Model (TAM) and the Net Valence Framework (NVF) into a single conceptual model with attitude as the mediating variable, this study theoretically adds to the literature on fintech acceptance. This study shows that attitude functions as a crucial psychological mechanism connecting perceived usefulness, perceived ease of use, perceived benefit, and perceived risk to adoption behavior, in contrast to earlier research that mainly looked at the direct effects of cognitive perception variables on fintech adoption. Particularly in developing nations with comparatively low levels of financial literacy, this integration offers a more thorough explanation of fintech uptake.

Practically, the results indicate that fintech companies should give top priority to tactics that improve service utility, usability, and perceived benefits through user-friendly application design, tailored financial services, and efficient user education. In order to enhance people's capacity to assess digital financial services critically and promote favorable attitudes toward financial innovation, legislators and financial regulators should also keep bolstering financial literacy initiatives.

This study has several limitations. First, the findings may not be as applicable to the larger Indonesian population due to the convenience sample technique. Second, the study was limited to Indonesia, where distinct socioeconomic, cultural, and legal factors may have an impact on fintech adoption behavior. Third, other psychological concepts that might also account for fintech adoption behavior were not taken into account in this study, which concentrated on attitude as the sole mediating variable.

In order to gain a more thorough knowledge of fintech adoption behavior, it is advised that future study expand this model by adding variables like trust, perceived security, privacy concern, or user experience. Future research might compare novice and seasoned users, look at financial literacy as an individual-level moderating variable, or perform cross-national studies to see if the suggested model is still relevant in other cultural and legal contexts.

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