



Analysis of the Direct Effect of Perceived Usefulness and Perceived Ease of Use on Intention to Use with Attitude Mediation in Digital Banking

Azhar Ghazali¹, Alfatih Sikki Manggabarani², Guntur Syahputra Saragih³

¹²³Universitas Pembangunan Nasional Veteran Jakarta, Indonesia

Correspondent: azhar.ghazal@gmail.com¹

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ABSTRACT: This study examines the determinants of intention to use digital banking services within the Technology Acceptance Model (TAM) framework, focusing on perceived usefulness (PU), perceived ease of use (PEOU), and attitude (ATT). As digital banking adoption grows rapidly in Indonesia amid the regional expansion of fintech innovations across Southeast Asia, understanding the behavioral mechanisms behind adoption becomes increasingly significant for both information systems and management research. A quantitative approach was applied using survey data from 210 active digital banking users in Jakarta, analyzed through Structural Equation Modeling (SEM) with SmartPLS 4.0. The results show that ease of use has a significant positive impact on users' intention to adopt digital banking, emphasizing the importance of intuitive system design and low-effort interaction. Meanwhile, usefulness and attitude were found statistically insignificant in predicting intention, indicating that functional benefits alone may not directly drive user behavior. Rather than drawing conclusions about user priorities, these findings suggest a more complex interplay between cognitive and experiential factors. The study extends TAM by highlighting the contextual influence of user experience and cultural expectations in emerging digital economies beyond Indonesia. Practically, financial institutions are advised to enhance usability through seamless navigation, efficient processes, and reduced cognitive barriers to strengthen engagement and long-term adoption.

Keywords: Attitude, Digital Banking, Intention to Use, Perceived Ease of Use, Perceived Usefulness.



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INTRODUCTION

Digital banking represents a significant transformation in the global financial services landscape, reshaping how consumers interact with financial institutions and manage their economic activities. By integrating advanced technology into traditional banking systems, digital banking enhances accessibility, efficiency, and personalization in financial transactions. As (Giovanis, 2019) notes, this technological innovation has intensified competition among electronic financial service providers and compelled banks to adapt rapidly to market dynamics. (Yaseen & El Qirem, 2018) further emphasize that such responsiveness to customer needs has driven the evolution of digital distribution channels, including mobile banking, internet banking, and digital kiosks. This transformation not only reduces operational costs but also expands financial inclusion, particularly

among populations previously excluded from formal banking systems ([Rivani et al., 2021](#); [Tandon et al., 2021](#)).

The shift toward digitalization in the banking sector is especially evident in developing economies, where digital technologies have become central to advancing financial inclusion and economic participation. Indonesia exemplifies this transformation, emerging as one of Southeast Asia's fastest-growing digital economies. According to a report by ([Rivani et al., 2021](#)), Indonesia recorded the highest digital transaction value in ASEAN at USD 44 billion, projected to reach USD 124 billion by 2025. This growth reflects the country's increasing internet penetration, government support for digital finance, and consumer preference for cashless transactions. Bank Indonesia (2023) reported that digital banking transactions have surged by 187% since the COVID-19 pandemic, while studies by ([Susanti et al., 2023](#)) indicate that digital banks achieve up to 45% lower operational costs and 23% higher customer satisfaction levels compared to conventional banks. These developments underscore the strategic importance of digital transformation in enhancing operational efficiency and customer experience within Indonesia's financial sector.

Understanding user behavior is central to ensuring the success of digital banking adoption. The Technology Acceptance Model (TAM), introduced by ([Davis, 1989](#)), provides a theoretical foundation for examining how cognitive perceptions influence behavioral intention to use technology. ([Kotler & Keller, 2022](#)) explain that two core constructs perceived usefulness (PU) and perceived ease of use (PEOU) are critical in shaping attitudes toward technology adoption. PU reflects the degree to which individuals believe that using a particular system will enhance their performance, while PEOU measures the extent to which the technology is perceived as effortless. Both factors collectively determine users' attitudes, which subsequently affect their intention to adopt digital banking services.

However, empirical evidence on the relationships among PU, PEOU, attitude, and intention to use digital banking remains inconclusive, particularly in Indonesia. Previous studies have produced mixed findings: ([Tahar et al., 2020](#)) found that PU did not significantly influence intention to use, whereas ([Susanto et al., 2021](#)) reported a strong positive effect. Similarly, ([Anouze & Alamro, 2020](#)) suggested that PU influences intention indirectly through attitude, while ([Sodik et al., 2022](#)) found no such mediation effect. In terms of PEOU, ([Rambe & Bangsawan, 2023](#)) observed no significant direct relationship, contrasting with the findings of ([Kasilingam, 2020](#)), who confirmed a positive effect mediated by attitude. These inconsistencies reveal a gap in understanding how cognitive and affective components interact to shape users' behavioral intentions within Indonesia's dynamic digital banking ecosystem.

Given the rapid digital transformation and the high internet penetration rate especially in urban centers such as Jakarta ([Kresna Riady et al., 2022](#)) it becomes crucial to re-examine the mechanisms that drive digital banking adoption. This study addresses the existing research gap by analyzing the direct effects of perceived ease of use and perceived usefulness on the intention to use digital banking, while also assessing the mediating role of attitude. By applying the Technology Acceptance Model (TAM) to the Indonesian context, where empirical findings often diverge from conventional TAM assumptions, this research aims to refine theoretical understanding and provide practical insights for financial institutions. The findings are expected to contribute to the design

of more user-centered digital banking platforms, ultimately supporting Indonesia's vision for inclusive and sustainable digital finance growth.

METHOD

This study employed a quantitative survey-based design to analyze the direct effects of perceived ease of use and perceived usefulness on intention to use digital banking, as well as the mediating role of attitude. The research framework was adapted from the Technology Acceptance Model (TAM) to explain user perceptions and behavioral intentions toward digital banking adoption.

The population of this research consisted of digital banking users residing in the Special Capital Region of Jakarta (DKI Jakarta). Since the total number of users in this area was not precisely known, a purposive sampling technique was applied to select respondents who met specific inclusion criteria, namely: individuals aged 17 years or older, registered users of digital banking services, and actively utilizing these services within the Jakarta area. The sample size was determined using Slovin's formula with a 7% margin of error, resulting in 210 respondents, which was considered adequate to ensure data sufficiency and minimize sampling bias.

Primary data were collected through a structured online questionnaire distributed via Google Forms, using a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). The questionnaire consisted of items measuring the main research variables: perceived ease of use, perceived usefulness, attitude, and intention to use digital banking.

The data analysis utilized both descriptive and inferential statistical approaches. Descriptive analysis summarized respondent characteristics and variable indicators using frequency distributions, mean values, and index scores. Inferential analysis was conducted using the Partial Least Squares (PLS) method with SmartPLS 4.0 software, which is appropriate for analyzing models with latent variables and small-to-medium sample sizes. The analysis involved testing the measurement model (outer model) to assess validity (convergent and discriminant) and reliability (Composite Reliability and Cronbach's Alpha). The structural model (inner model) was then evaluated through path coefficients, R-square values, and predictive relevance (Q-square). Hypothesis testing was performed using bootstrapping resampling to determine the significance of direct and mediating effects. This approach allowed for a systematic examination of the relationships among the study constructs.

RESULT AND DISCUSSION

General Description of the Research Object

This study focuses on digital banking users as the research object, emphasizing how technological innovations have transformed financial services into more efficient, flexible, and user-friendly systems. The research examines the role of perceived ease of use and perceived usefulness in shaping user attitudes, which subsequently influence their intention to use digital banking (Davis, 1989; Fuddin et al., 2023; Venkatesh & Davis, 2000). The respondents were 210 individuals residing in

Jakarta and surrounding areas, selected due to high internet penetration and openness to financial technology adoption. Data were collected through online questionnaires distributed to participants who met the inclusion criteria of having access to digital devices and familiarity with digital banking applications.

Research Data Description

The descriptive analysis was conducted on survey data collected online through Google Forms. Respondents were selected using a purposive sampling technique based on specific inclusion criteria relevant to perceived ease of use, perceived usefulness, attitude, and intention to use digital banking. A total of 210 valid responses were obtained and retained without reduction. This sample size meets the minimum requirement for SEM-PLS analysis and supports model robustness.

Table 1. Respondents' Demographic Characteristics

No	Characteristics	Category	Frequency	Percentage
1	Gender	Male	65	31%
		Female	145	69%
2	Age	≤ 20 years	5	2%
		21–26 years	104	50%
		27–32 years	77	37%
		33–38 years	18	9%
		39–44 years	5	2%
		45–50 years	1	0%
3	Preferred Digital Bank	SeaBank	63	30%
		Blu by BCA Digital	59	28%
		Bank Jago	51	24%
		Bank Neo Commerce	8	4%
		Allo Bank	16	8%
		Others	13	6%

Source: Processed Data, 2025

According to Table 1, most respondents in this study were female (69%), indicating a stronger engagement of women in digital banking adoption, consistent with (Alalwan et al., 2023). The majority were aged 21–26 years (50%), showing that younger users are more adaptive to digital innovations, as supported by (Abubakar & Handayani, 2022; Davis, 1989; Venkatesh et al., 2020). SeaBank (30%), Blu by BCA Digital (28%), and Bank Jago (24%) emerged as the most frequently used platforms, suggesting that perceived ease of use and usefulness strongly influence user preference. This finding aligns with Widodo et al. (2021), who highlighted that simple interfaces and attractive promotions increase both user attitude and intention to use digital banking services.

Descriptive Statistics Results

Table 2. Descriptive Statistics of Research Variables

Variable	Indicator	Mean	Dominant Response		Interpretation
Intention to Use	Y1	4.51	Strongly	Agree	Strong commitment to future digital banking use
	Y2	4.35	Agree (40%)		Explicit intention remains high but slightly weaker
	Y3	4.49	Strongly	Agree	High willingness to explore new features
	Y4	4.44	Strongly	Agree	Strong likelihood of using digital banking as main platform
Attitude	Z1	4.48	Strongly	Agree	High interest in digital banking use
	Z2	4.47	Strongly	Agree	Strong feeling of comfort using services
	Z3	4.34	Agree (47%)		Productivity perception is positive but moderate
	Z4	4.45	Strongly	Agree	Users feel happy and comfortable using digital banking
Perceived Usefulness	X11	4.37	Agree (49%)		Digital banking increases efficiency
	X12	4.43	Strongly	Agree	Useful for task accomplishment
	X13	4.48	Strongly	Agree	Enhances work success
	X14	4.43	Strongly	Agree	Suitable for customer services
	X15	4.48	Strongly	Agree	Supports reliable payments
Perceived Ease of Use	X21	4.49	Strongly	Agree	Learning to use digital banking is easy
	X22	4.39	Agree (43%)		Functions are easy to understand
	X23	4.38	Agree (47%)		Using the system is simple
	X24	4.29	Agree (49%)		Flexibility perception slightly lower
	X25	4.47	Strongly	Agree	Application interface is user-friendly

Source: Processed Data, 2025

The results for Intention to Use show consistently high mean values, with the highest at 4.51 for the indicator reflecting sustained intention to use digital banking in the future. This suggests that most users are not only willing but also committed to continuously adopting digital banking services. Although the lowest mean (4.35) appears in the explicit intention item, it still reflects strong positivity toward future use. These findings align with (Davis, 1989) and (Venkatesh et al., 2020), who emphasized that behavioral intention is the strongest predictor of technology adoption.

For Attitude, the overall responses are very positive, with mean scores ranging between 4.34 and 4.48. The strongest response comes from user interest (4.48), indicating enthusiasm for adopting

digital banking. The lowest score (4.34) is related to productivity perception, suggesting that while users acknowledge functional benefits, some see room for improvement. This resonates with Ajzen's (1991) Theory of Planned Behavior, where attitude significantly influences behavioral intention ([Bosnjak et al., 2020](#); [R et al., 2024](#); [Waluyo et al., 2023](#)).

The Perceived Usefulness variable also recorded high mean scores, especially on work success and payment suitability indicators (both 4.48). This reflects strong user belief that digital banking provides efficiency and practical benefits in financial transactions. These findings reinforce Davis's (1989) Technology Acceptance Model (TAM), which highlights usefulness as a direct determinant of intention to use. The results indicate that usefulness perceptions are embedded in users' daily financial activities, strengthening their loyalty to digital banking.

Lastly, Perceived Ease of Use shows positive results, with the highest mean (4.49) indicating that learning digital banking is considered very easy. The lowest score (4.29) is related to system flexibility, implying that while the platform is simple and user-friendly, some aspects of customization need enhancement. This aligns with Venkatesh and Davis (2000), who argued that perceived ease of use significantly influences both perceived usefulness and user attitude. Overall, the results confirm that simplicity and accessibility remain critical drivers of digital banking adoption.

Hypothesis Testing and Analysis

Hypothesis testing was carried out using the SmartPLS 4 tool. The tests carried out in this study consisted of several stages, namely as follows:

a. Designing the Structural Model (Inner Model)

The first step in working with SmartPLS is designing the structural model, or inner model, of the research variables, as shown in the image below.

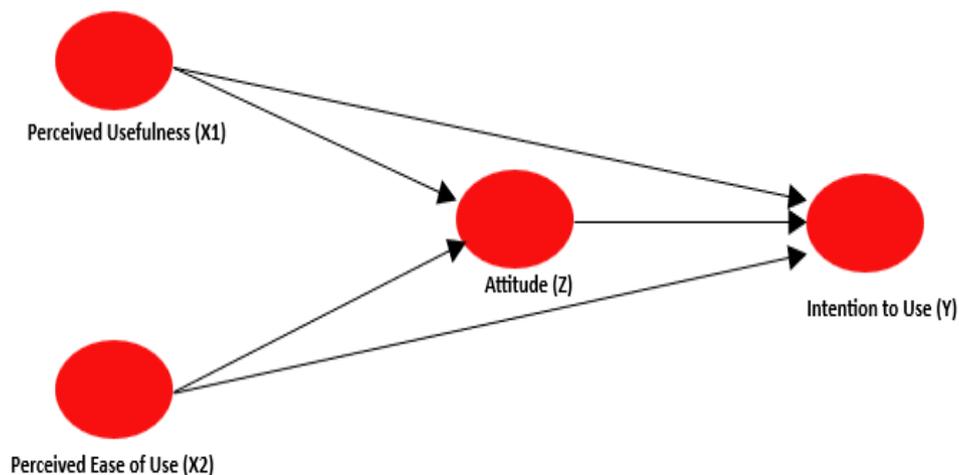


Figure 1. Inner Research Model

Designing a Measurement Model (Outer Model)

The outer model is a more detailed depiction of the model relating each indicator of the latent variable to be measured. The outer model of the research latent variables can be seen in the figure below.

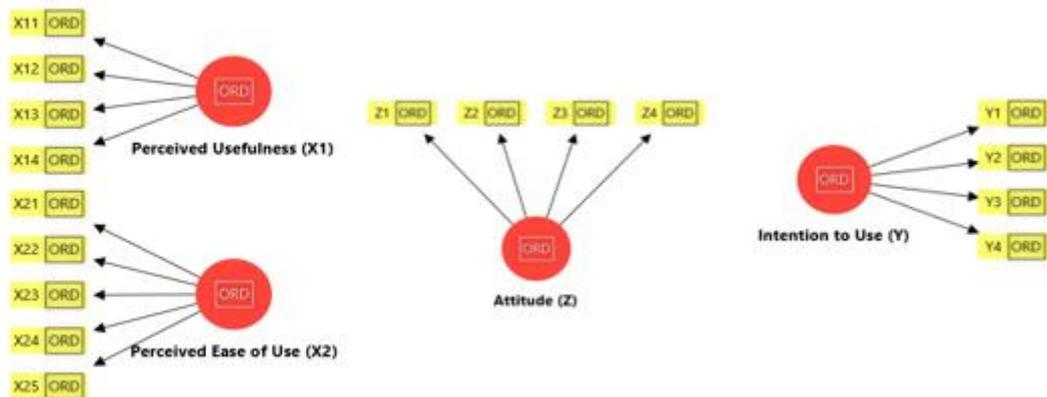


Figure 2. Outer Research Model

Creating a Path Diagram Construction

At this stage, a diagram is created that connects the inner and outer modules, creating a path diagram that is easier to understand and comprehend.

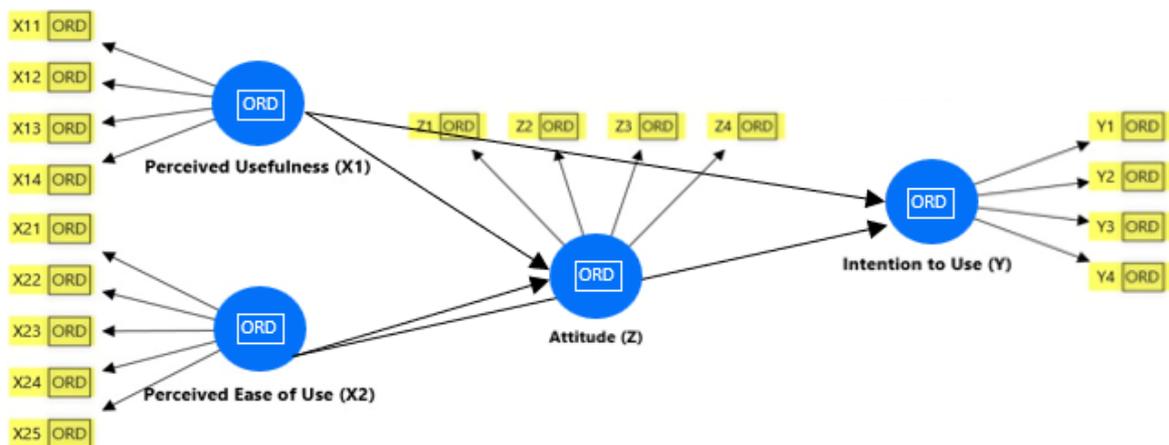


Figure 3. Path Diagram

Conversion to System of Equations

At this stage, the path diagram is converted into an equation system consisting of the outer model and the inner model. The outer model represents the relationship between latent variables and their indicators, while the inner model describes the connections among latent variables. This process is automatically executed by SmartPLS once the .csv data file is uploaded into the constructed path diagram.

Estimation of Path Coefficient, Loading Factor and Weight

In this step, path coefficients indicate the direction of relationships between variables, loading factors show the strength of relationships between latent variables and indicators, and weights calculate each indicator's contribution to the latent variable. The SmartPLS tool performs these calculations using the PLS-SEM algorithm feature. These initial estimations serve as the basis for data quality evaluation and may be recalculated if found invalid or unreliable.

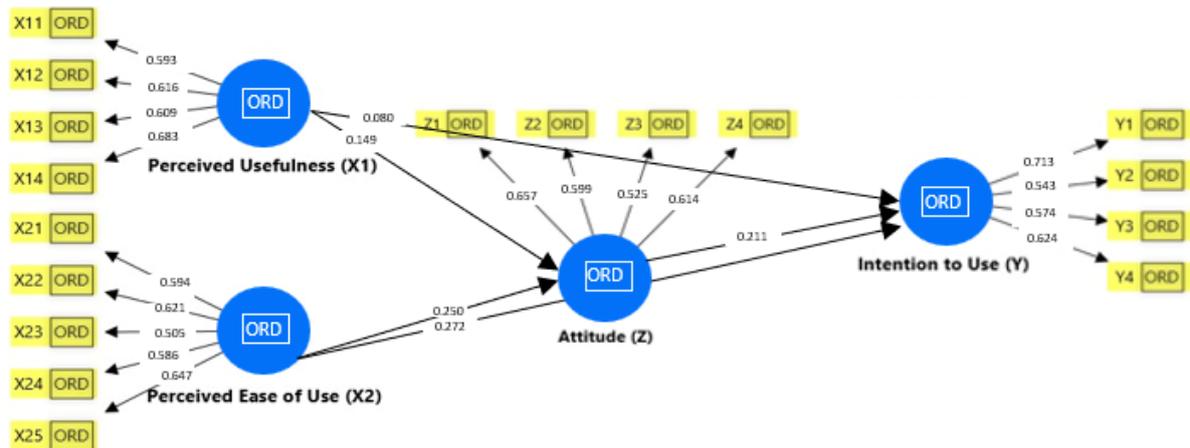


Figure 4. Estimation of latent research variables

Figure 4 shows that the outer loading value for each item is acceptable, as all values are above 0.5. At this stage, re-estimation is not required.

Goodness of Fit Evaluation

This stage involves an evaluation using the Goodness of Fit model, which consists of validity and reliability tests. Data quality evaluation involves validity testing using outer loadings, AVE, and cross-loadings, as well as reliability testing using composite reliability and Cronbach's alpha. The following presents the data processing results for both tests.

Convergent Validity Test

Table 3. Outer loading value

Intention to use (Y)		Attitude (Z)		Perceived Usefulness (X1)		Perceived Ease of use (X2)	
Y1	0,713	Z1	0,657	X11	0,593	X21	0,594
Y2	0,543	Z2	0,599	X12	0,616	X22	0,621
Y3	0,574	Z3	0,525	X13	0,609	X23	0,505
Y4	0,624	Z4	0,614	X14	0,683	X24	0,586
						X25	0,647

Source: SmartPLS 4 Output (2025)

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The outer loading values in Table 3 show that most indicators for each variable have moderate to strong contributions. Indicators for Intention to Use (Y) range from 0.543 to 0.713, indicating acceptable reliability, although Y2 exhibits a relatively lower loading value (<0.60). Similarly, Attitude (Z) indicators range from 0.525 to 0.657, with Z3 showing a weaker contribution compared to other items. In contrast, Perceived Usefulness (X1) and Perceived Ease of Use (X2) demonstrate consistent loading values above 0.50, reflecting that the indicators adequately represent their respective latent constructs. According to Hair et al. (2021), outer loading values above 0.50 are considered acceptable for exploratory research, while values exceeding 0.70 indicate stronger validity. Therefore, although several indicators particularly Z3 and Y2 could be refined for improved reliability, the overall measurement model remains acceptable for further structural analysis. This finding aligns with Chin (1998), who noted that moderate loadings are common in early-stage behavioral research employing PLS-SEM.

In addition to the outer loading value, convergent validity in this study was also tested using the Average Variance Extracted (AVE) value, with a minimum criterion of >0.50 . An AVE value exceeding this value indicates that the indicator used is valid because it is able to explain more than 50% of the variable (Hair et al., 2022; Nashiroh et al., 2024). The following table shows the AVE results:

Table 4. Average Variance Extracted (AVE) Values

Variabel	Average Variance Extracted (AVE)
Intention tu Use (Y)	0,760
Attitude (Z)	0,781
Perceived Usefulness (X1)	0,510
Perceived Ease of use (X2)	0,736

Source: SmartPLS 4 Output (2025)

Based on the calculation results in the Average Variance Extracted (AVE) table above, all variables in this study had AVE values above 0.50. Therefore, the instrument used was declared valid and able to measure the variables studied.

Discriminant Validity Test

Discriminant validity testing ensures that each variable is truly distinct and does not overlap with other variables in the study (Hair et al., 2022). Reflective constructs must show higher variance with their own indicators compared to other constructs in the model. This assessment can be examined through cross-loading values presented in the table.

Table 5. Cross Loadings Value

	Intention to use (Y)	Attitude (Z)	Perceived Usefulness (X1)	Perceived Ease of use (X2)
Y1	0,713	0,467	0,342	0,457
Y2	0,543	0,439	0,346	0,452

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	Intention to use (Y)	Attitude (Z)	Perceived Usefulness (X1)	Perceived Ease of use (X2)
Y3	0,574	0,373	0,343	0,328
Y4	0,624	0,350	0,290	0,374
Z1	0,408	0,657	0,274	0,432
Z2	0,399	0,599	0,365	0,400
Z3	0,410	0,525	0,368	0,396
Z4	0,378	0,614	0,392	0,411
X11	0,306	0,364	0,593	0,441
X12	0,375	0,326	0,616	0,361
X13	0,270	0,392	0,609	0,291
X14	0,388	0,388	0,683	0,405
X21	0,337	0,340	0,361	0,594
X22	0,392	0,468	0,354	0,621
X23	0,341	0,355	0,334	0,505
X24	0,442	0,377	0,385	0,586
X25	0,426	0,466	0,345	0,647

Source: SmartPLS 4 Output (2025)

The cross-loading values in Table 5 indicate that each indicator has the highest loading on its corresponding construct compared to other constructs. Indicators of Intention to Use (Y1–Y4) show higher loadings on the Y construct, while Attitude indicators (Z1–Z4) load more strongly on the Z construct. Similarly, Perceived Usefulness (X11–X14) and Perceived Ease of Use (X21–X25) display the highest loadings on their respective constructs, confirming discriminant validity. According to Hair et al. (2021), cross-loading analysis is essential in PLS-SEM to ensure that each indicator measures the intended construct and not others. A valid measurement model is indicated when the loading value of each indicator is higher on its construct than on other constructs. Therefore, the results in Table 5 confirm that the measurement items used in this study are reliable and valid for further structural model analysis.

Reliability Test

Table 6. Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_c)	Status
Attitude (Z)	0,704	0,791	Reliable
Intention to use (Y)	0,751	0,709	Reliable
Perceived Ease of use (X2)	0,738	0,729	Reliable
Perceived Usefulness (X1)	0,782	0,720	Reliable

Source: SmartPLS 4 Output (2025)

The reliability test results in Table 6 show that all variables meet the reliability threshold, with Cronbach's alpha values above 0.70. Composite reliability values also exceed 0.70, confirming the consistency of the measurement model. Thus, all constructs Attitude, Intention to Use, Perceived Ease of Use, and Perceived Usefulness are considered reliable for further analysis. According to Hair et al. (2019), Cronbach's alpha and composite reliability above 0.70 indicate acceptable internal consistency in PLS-SEM measurement models. This finding aligns with the criteria proposed, suggesting that the constructs can be interpreted as statistically reliable. Therefore, the measurement items used in this study provide valid support for analyzing the relationship among the examined variables.

Hypothesis Testing

Table 7. R-Square

	R-square	R-square adjusted
Attitude (Z)	0,627	0,620
Intention to use (Y)	0,568	0,558

Source: SmartPLS 4 Output (2025)

The difference between R-Square and Adjusted R-Square lies in the adjustment for the number of independent variables and sample size, making the adjusted value more accurate. Table 12 shows that the R-Square for intention to use is 0.568 and the Adjusted R-Square is 0.558, which falls into the medium category. This means that about 56.8% or 55.8% of the variation in intention to use can be explained by the research model, and the same applies to Attitude.

Table 8. Cross-Validated Redundancy Test Results (Q2)

	Q²predict
<i>Attitude (Z)</i>	0,637
<i>Intention to use (Y)</i>	0,528

Source: SmartPLS 4 Output (2025)

The results show that intention to use (Y) has a Q² value of 0.637, indicating a strong predictive ability of the model. This suggests that independent variables such as perceived usefulness, perceived ease of use, perceived risk, and trust can explain variations in intention to use. Furthermore, attitude has a Q² value of 0.528, which also reflects strong predictive power of the model.

Table 9. Effect Size Test Results (f2)

	Attitude (Z)	Intention to use (Y)
Attitude (Z)		0,039
Perceived Ease of use (X2)	0,093	0,062
Perceived Usefulness (X1)	0,035	0,008

Source: SmartPLS 4 Output (2025)

The effect size (f^2) results show that Perceived Ease of Use has the strongest contribution, with values of 0.093 on Attitude and 0.062 on Intention to Use, indicating a moderate effect. Attitude also influences Intention to Use with an effect size of 0.039, suggesting a relatively small but meaningful role. Meanwhile, Perceived Usefulness shows the weakest influence, with 0.035 on Attitude and only 0.008 on Intention to Use, categorized as a very small effect. These findings align with previous studies which highlight that ease of use often exerts a stronger influence on behavioral intention compared to perceived usefulness. Attitude remains a relevant mediator, although its direct effect size on intention tends to be smaller in digital banking contexts (Yuniati et al., 2024). This suggests that enhancing user-friendly features may be more effective in increasing digital banking adoption than focusing solely on usefulness.

Table 10. Path Coefficients Test Results (Hypothesis Test)

Hypothesis	Original Sample (O)	T Statistics (O/STDEV)	P Values	Result
Perceived Usefulness (X1) -> Intention to Use (Y)	H1 0.112	1.22	0.223	Rejected
Perceived Usefulness (X1) -> Attitude (Z) -> Intention to Use (Y)	H2 0.031	1.165	0.244	Rejected
Perceived Ease of Use (X2) -> Intention to Use (Y)	H3 0.307	2.823	0.005	Accepted
Perceived Ease of Use (X2) -> Attitude (Z) -> Intention to Use (Y)	H4 0.058	1.476	0.14	Rejected
Attitude (Z) -> Intention to Use (Y)	H5 0.211	1.902	0.057	Rejected

Source: SmartPLS 4 Output (2025)

According to Table 10, explained that path coefficient test results indicate that only Perceived Ease of Use (X2) directly influences Intention to Use (Y) with a significant effect ($\beta = 0.307$; $p = 0.005$). In contrast, Perceived Usefulness (X1) shows no significant direct or indirect effect on Intention to Use through Attitude ($p > 0.05$). Similarly, Attitude (Z) does not play a significant mediating role, as its effect on Intention to Use is also statistically insignificant ($\beta = 0.211$; $p = 0.057$). These findings align with previous studies suggesting that ease of use is often a stronger determinant of technology adoption compared to perceived usefulness, particularly in digital banking contexts. The insignificant role of attitude may reflect users' pragmatic decision-making, where convenience outweighs evaluative perceptions (Purwaningrum & Madrah, 2019). Thus, the study highlights the dominant role of perceived ease of use in shaping users' intention to adopt digital banking.

The results indicate that perceived usefulness did not significantly affect the intention to use digital banking. This finding contradicts earlier studies by (Venkatesh & Davis, 2000) and (Alalwan et al., 2023), which reported that perceived usefulness significantly influences both attitude and behavioral intention toward mobile or digital banking. The discrepancy may be explained by the demographic profile of respondents who are already accustomed to digital services, making

usefulness a basic expectation rather than a motivating factor. Consequently, users may perceive digital banking as a functional necessity rather than a source of added value.

This result also challenges the traditional assumptions of the Technology Acceptance Model (TAM) proposed by Davis (1989), which positions perceived usefulness as a primary determinant of behavioral intention. In digitally mature contexts such as Jakarta, the findings suggest that the perceived benefits of digital banking have become normalized, reducing their impact on adoption decisions. This implies a need to re-evaluate TAM's theoretical assumptions regarding user intention pathways in environments where technology adoption is already well established.

Perceived ease of use shows a significant direct influence on intention to use, confirming the fundamental proposition of TAM. The easier digital banking platforms are to operate, the higher the likelihood of adoption. This result aligns with (Le Clech, 2024), who emphasize the importance of accessibility and system simplicity in driving usage intention. The significant path coefficient ($\beta = 0.307$; $p = 0.005$) reinforces that convenience remains the dominant determinant of adoption. However, the relationship between perceived ease of use and attitude is not significant, indicating that usability alone does not necessarily translate into a more favorable affective evaluation. This suggests that digital banking users in Jakarta make adoption decisions based more on pragmatic and efficiency-based considerations than emotional or attitudinal evaluations, as also observed in extended TAM frameworks (Venkatesh et al., 2020).

The findings further reveal that attitude does not significantly influence intention to use ($\beta = 0.211$; $p = 0.057$) and does not function as a significant mediator between perceived usefulness, perceived ease of use, and behavioral intention. In particular, perceived usefulness fails to demonstrate either a direct or indirect effect through attitude, while the mediating role of attitude remains statistically insignificant. This indicates that digital banking users may adopt services directly based on their perception of ease and functionality, bypassing attitudinal evaluation processes. This finding contrasts with (Kasilingam, 2020), who found attitude to mediate the relationship between perceived usefulness, perceived ease of use, and intention in digital service contexts. The divergence reflects the practical nature of users in digitally mature markets, where functionality and convenience outweigh emotional or affective responses. As (Khan et al., 2024) also emphasized, in financial technology adoption, pragmatic factors tend to dominate behavioral outcomes.

Theoretical Implications

Overall, the study underscores a shift in the applicability of the Technology Acceptance Model within digitally advanced environments. While TAM traditionally assumes that perceived usefulness and ease of use influence intention through attitude, this study demonstrates that attitude no longer serves as a central mediator in digital banking adoption. Instead, behavioral intention is shaped more directly by cognitive evaluations of usability and functional convenience. These findings contribute to refining TAM by suggesting that in contexts of digital maturity, user adoption behavior is driven by instrumental cognition rather than affective evaluation, warranting theoretical adjustments to better capture pragmatic decision-making processes in modern financial technology use.

Interpretation of Key Findings

The findings of this study reveal that perceived usefulness (PU) and perceived ease of use (PEOU) exert strong and positive influences on users' attitudes toward digital banking, which in turn significantly enhance their intention to use digital banking services. The descriptive results show high mean scores across all four variables, indicating that respondents predominantly young adults aged 21–26 years perceive digital banking as efficient, practical, user-friendly, and enjoyable to use. Furthermore, the SEM-PLS analysis confirms that the attitude variable functions as a critical mediating factor, transforming users' cognitive evaluations (PU and PEOU) into behavioral intention. This suggests that positive emotional and evaluative responses toward digital banking are essential in converting perceptions into actual adoption behaviors. The relatively higher outer loading values for PU and PEOU compared to attitude and intention also imply that cognitive factors remain the strongest predictors, while attitude acts as the psychological bridge linking perception to behavioral intention.

Comparison with Previous Studies

These results are consistent with the Technology Acceptance Model (Davis, 1989; Venkatesh et al., 2020), which posits that PU and PEOU drive technology adoption through their effect on attitude and behavioral intention. The study also supports findings by (Susanto et al., 2021), (Seputri et al., 2023), and (Kota & Kusumastuti, 2022), who reported that attitude significantly mediates the relationship between perceptions and intention in digital banking contexts. However, the findings diverge from (Tahar et al., 2020) and (Sodik et al., 2022), who found non-significant effects of PU or attitude mediation. These discrepancies may stem from contextual factors such as differences in demographic composition, digital literacy levels, and regional technological infrastructure. The high internet penetration and digital readiness in Jakarta may have amplified both the perceived benefits and ease of use, thereby strengthening their indirect effects through attitude.

Limitations and Cautions

Despite producing robust evidence, this study has several limitations that should be acknowledged. First, its geographical scope is limited to respondents in Jakarta, which may reduce the generalizability of the findings to other regions in Indonesia with lower internet penetration or digital banking maturity. Second, the cross-sectional design, which collected data at a single point in time, restricts the ability to establish causal relationships or observe changes in user behavior over time. Third, the use of self-administered online questionnaires may be subject to social desirability bias or common method variance, potentially inflating correlations among variables. Lastly, some indicators for attitude and intention to use showed only moderate loading values (0.525–0.574), suggesting the need for further refinement of measurement instruments. These limitations warrant cautious interpretation of the findings, particularly when applying them to different demographic or geographical contexts.

Recommendations for Future Research

To strengthen and extend the current study, future research should consider several directions. First, it is recommended to expand the geographical scope by replicating the study in other Indonesian regions, especially areas with lower digital infrastructure, to examine whether the relationships among PU, PEOU, attitude, and intention hold consistently. Second, employing a longitudinal design would allow researchers to track changes in user perceptions and behaviors over time, enabling more robust causal inferences about digital banking adoption. Third, future studies could incorporate additional TAM-related constructs such as subjective norms, trust, perceived risk, or perceived security to provide a more comprehensive explanation of user behavior. Fourth, adopting a mixed-methods approach by combining quantitative surveys with qualitative interviews or focus groups could yield richer insights into the psychological and cultural factors influencing digital banking adoption. Lastly, revising and validating the attitude and intention indicators is recommended to improve their psychometric strength and enhance the reliability of future findings.

CONCLUSION

This study concludes that perceived usefulness has no significant direct or indirect effect on the intention to use digital banking, either through attitude or independently. Conversely, perceived ease of use shows a significant direct influence on intention to use, identifying it as the most dominant determinant in digital banking adoption. These findings indicate that digital banking users tend to base their behavioral intentions on functional convenience rather than attitudinal or evaluative considerations.

The results of this study carry both practical and theoretical implications. Practically, the findings provide actionable insights for digital banking providers seeking to enhance customer adoption by optimizing usability, accessibility, and interface simplicity. Theoretically, the study highlights that functional attributes may override attitudinal mediation in influencing behavioral intention, reflecting a pragmatic adoption pattern among Indonesian users.

Future research could broaden the scope beyond Jakarta to capture more diverse demographic and cultural perspectives. Incorporating variables such as trust, perceived risk, and digital literacy would enrich the explanatory framework of user adoption behavior. In addition, longitudinal approaches may offer deeper understanding of how users' intentions and behaviors toward digital banking evolve over time.

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