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From Digital Financial Literacy to E-Wallet Usage Decisions: The Mediating Role of Trust in Fintech

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Abstract
Electronic wallets (e-wallets) have expanded access to digital payments in Indonesia, while usage decisions remain linked to users' ability to evaluate digital financial services and their trust in providers. This study examines the influence of digital financial literacy on e-wallet usage decisions, with trust in fintech as the mediating variable. Data were collected from 75 active e-wallet users in Indonesia who were at least 18 years old and had used an e-wallet for a minimum of three months; respondents were selected through purposive sampling. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The measurement model met the reported reliability, convergent validity, and discriminant validity criteria. Digital financial literacy had a significant positive effect on trust in fintech, but its direct effect on e-wallet usage decisions was not statistically significant. Trust in fintech had a significant positive effect on e-wallet usage decisions, and the significant indirect path combined with the non-significant direct path indicates indirect-only mediation. The results establish trust in fintech as the mechanism through which digital financial literacy is associated with e-wallet usage decisions in this sample. The study contributes to digital financial behavior research and provides practical direction for fintech providers to strengthen trust alongside user financial capability.

Keywords: digital financial literacy, trust in fintech, e-wallet usage decision, fintech adoption, digital payment adoption

Introduction

Electronic wallets (e-wallets) have become one of the most widely used forms of digital financial services in Indonesia, allowing individuals to make payments, transfer funds, and manage transactions directly from a smartphone. As a documented national benchmark, the Financial Services Authority's (OJK) 2022 National Survey on Financial Literacy and Inclusion (SNLIK) recorded a financial inclusion index of 85.10 percent, up from 76.19 percent in 2019, while the financial literacy index reached only 49.68 percent, leaving a gap of 35.42 percentage points between individuals' access to financial products and their understanding of how to use them appropriately (Otoritas Jasa Keuangan, 2022). These figures document a substantial separation between access and literacy in the survey period. The distinction is relevant to e-wallet usage decisions because access to a digital payment service and the capability to evaluate its use represent different dimensions of financial participation.

Digital financial literacy refers to the knowledge, skills, attitude, and behavior required to use digital financial products safely and effectively, including the ability to evaluate digital financial information and identify digital financial risk (Chhillar et al., 2024; Prasad et al., 2018). Evidence on its relationship with e-wallet-related behavior is not

uniform across outcome types. Pradnyani et al. (2025) found that digital financial literacy had a significant negative effect on the decision to use the DANA e-wallet among university students. Damayanti and Nurhidayah (2023) found that fintech literacy was not a factor considered by Generation Z respondents in their intention to use e-wallets. The first result concerns a specific usage decision, while the second concerns usage intention; neither outcome is identical to observed usage behavior. This distinction establishes the need to define the dependent construct consistently and to examine the mechanism connecting literacy with the usage decision.

Trust in fintech provides the intervening mechanism examined in this study. Trust reflects a user's willingness to be vulnerable to a service provider based on the expectation that the provider will act reliably and in the user's interest (Mayer et al., 1995), and is a well-established determinant of technology adoption in online and mobile financial contexts (Gefen et al., 2003). Lestari et al. (2026) found that trust in fintech had a significant positive effect on e-wallet adoption decisions among university students, and Abbas and Khan (2024) found that trust in technology plays a substantial role in shaping the relationship between financial literacy and fintech adoption. Together, these findings position trust as a proximal evaluative mechanism between user competence and the decision to use a digital financial service.

Despite this evidence, the literature leaves an explanatory gap concerning how digital financial literacy is converted into an e-wallet usage decision. Prior studies in the Indonesian context have examined literacy and usage or trust and usage as separate relationships, while the mechanism connecting literacy, trust, and the usage decision remains underdeveloped. The theoretical issue is therefore the process through which user competence becomes a behavioral choice, not merely the simultaneous inclusion of variables or the use of PLS-SEM.

Based on this background, the present study examines the influence of digital financial literacy on e-wallet usage decisions, with trust in fintech positioned as a mediating variable. The model adopts a technology-adoption and trust perspective: digital financial literacy represents an upstream competence, trust in fintech represents the evaluative mechanism, and the e-wallet usage decision represents the behavioral outcome. The study tests both the direct literacy-to-decision path and the indirect path through trust and provides practical input for fintech providers seeking to strengthen user adoption.

Digital Financial Literacy and Trust in Fintech

Digital financial literacy refers to an individual's knowledge, skills, attitude, and behavior in using digital financial products and services responsibly (Chhillar et al., 2024; Prasad et al., 2018). Trust in fintech reflects a user's willingness to be vulnerable to a fintech provider based on the expectation that the provider will perform reliably, securely, and in the user's interest (Mayer et al., 1995). In the e-wallet context, stronger digital financial literacy equips users to evaluate a provider's security features, data protection practices, and service reliability against identifiable criteria. This evaluative capability provides a basis for confidence in the provider. Abbas and Khan (2024) found that financial literacy and technological savviness are significant positive predictors of trust in technology among fintech and banking users. Based on this reasoning, the following hypothesis is proposed:
H1: Digital financial literacy has a significant positive effect on trust in fintech.

Digital Financial Literacy and E-Wallet Usage Decision

E-wallet usage decision refers to an individual's decision to use an electronic wallet application for financial transactions (Lestari et al., 2026). Digital financial literacy provides knowledge and skills for evaluating e-wallet functions, transaction procedures, and financial risks, thereby supporting an informed usage decision. Existing empirical results, however, show different direct relationships. Pradnyani et al. (2025) found that digital financial literacy had a significant negative effect on the decision to use the DANA e-wallet, while Damayanti and Nurhidayah (2023) found that fintech literacy was not considered a determining factor of e-wallet usage intention among Generation Z users. The direct hypothesis therefore tests the theoretically positive literacy-to-decision relationship against this mixed empirical background:

H2: Digital financial literacy has a significant positive effect on e-wallet usage decisions.

Trust in Fintech and E-Wallet Usage Decision

Trust is a well-established determinant of technology adoption in online and mobile financial contexts, because it reduces users' perceived vulnerability to financial and information risk (Gefen et al., 2003; Mayer et al., 1995). In an e-wallet setting, trust reflects confidence that funds, personal data, and transactions are handled securely and reliably; this confidence reduces the psychological barrier associated with using the service. Lestari et al. (2026) found that trust in fintech had a significant positive effect on e-wallet adoption decisions among university students, with trust emerging as the more dominant predictor relative to perceived security. Based on this evidence, the following hypothesis is proposed:

H3: Trust in fintech has a significant positive effect on e-wallet usage decisions.

The Mediating Role of Trust in Fintech

Digital financial literacy improves users' capacity to assess the reliability, security, and operational characteristics of digital financial services. This evaluative capacity supports trust because users can judge provider performance against concrete service criteria. Trust then reduces perceived vulnerability and becomes the proximal psychological condition associated with the e-wallet usage decision. The mediation model therefore positions trust in fintech as the mechanism that translates digital financial literacy into a usage decision. This reasoning leads to the following hypothesis:

H4: Trust in fintech mediates the effect of digital financial literacy on e-wallet usage decisions.

Method

This study employs a quantitative associative design to examine the relationships among digital financial literacy, trust in fintech, and e-wallet usage decisions. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is appropriate for models involving multiple latent constructs, mediation relationships, and moderate sample sizes (Hair et al., 2019). The analysis was performed using SmartPLS (Ringle et al., 2015). The population of this study consists of individuals in Indonesia who actively use e-wallet applications. A total of 75 respondents were selected using purposive sampling, based on the criteria that respondents were at least 18 years old and had used at least one e-wallet application for a minimum of three months. A sensitivity power assessment for the most complex endogenous equation, which contains two predictors,

shows that a sample of 75 provides 80 percent statistical power at alpha = 0.05 for effects of approximately f-squared = 0.134 or larger. Because the sampling design is non-probability based, the findings are interpreted for the observed respondent group rather than as population estimates for all Indonesian e-wallet users. Data were collected through an online, self-administered questionnaire.

The questionnaire measured three latent constructs using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Digital Financial Literacy (DFL) was measured with five indicators reflecting individuals' digital financial knowledge, skills, attitude, and behavior, adapted from Prasad et al. (2018) and Chhillar et al. (2024). Trust in Fintech (TF) was measured with five indicators adapted from Mayer et al. (1995) and Gefen et al. (2003), reflecting users' confidence in the reliability, security, and integrity of fintech providers. E-Wallet Usage Decision (EUD) was measured with five indicators adapted from Lestari et al. (2026), reflecting respondents' decision to use an e-wallet application for financial transactions. All three constructs were measured within one self-administered questionnaire; accordingly, the single-source design is treated as a methodological limitation rather than as a basis for causal inference.

Consistent with the two-stage approach commonly applied in PLS-SEM (Hair et al., 2019), the measurement model (outer model) was first evaluated based on indicator loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE) for internal consistency and convergent validity, followed by the Fornell-Larcker criterion and the heterotrait-monotrait ratio (HTMT) for discriminant validity (Fornell & Larcker, 1981; Henseler et al., 2015). The structural model (inner model) was then assessed based on the coefficient of determination (R^2), effect size (f^2), collinearity statistics (VIF), and path coefficients. Hypotheses were tested using a bootstrapping procedure with 5,000 resamples to obtain t-statistics and p-values for both the direct and indirect (mediation) paths.

Results and Discussion

This section presents the results of the measurement model and the structural model, followed by hypothesis testing and a discussion of each finding in relation to the theoretical framework and prior research presented above.

Measurement Model (Outer Model)

The measurement model was evaluated before structural testing. Table 1 reports the observed loading range for each construct together with Cronbach's alpha, composite reliability, and average variance extracted (AVE). The measurement evidence is therefore presented at the construct-summary level using the values available in the SmartPLS output reported in this manuscript.

Table 1. Construct Reliability and Validity

Construct	Indicators	Loading Range	Cronbach's Alpha	Composite Reliability	AVE
Digital Financial Literacy (DFL)	5	0.738–0.816	0.853	0.895	0.630

Construct	Indicators	Loading Range	Cronbach's Alpha	Composite Reliability	AVE
Trust in Fintech (TF)	5	0.777–0.872	0.891	0.920	0.697
E-Wallet Usage Decision (EUD)	5	0.740–0.844	0.864	0.902	0.649

Source: SmartPLS output, processed data (2026).

All indicator loadings exceeded the recommended minimum threshold of 0.70 (Hair et al., 2019), and each construct achieved a Cronbach's alpha and composite reliability above 0.85, well beyond the conventional cut-off of 0.70. The average variance extracted for all constructs exceeded 0.50, ranging from 0.630 to 0.697, indicating that each construct explained more than half of the variance in its respective indicators. These results confirm that the measurement model achieved adequate internal consistency reliability and convergent validity. Discriminant validity was examined using the Fornell-Larcker criterion, as presented in Table 2.

Table 2. Discriminant Validity (Fornell–Larcker Criterion)

	DFL	TF	EUD
DFL	0.794		
TF	0.508	0.835	
EUD	0.419	0.673	0.806

Source: SmartPLS output, processed data (2026).

As shown in Table 2, the square root of the AVE for each construct (the diagonal values) exceeded its correlation with every other construct, satisfying the Fornell-Larcker criterion for discriminant validity. This result was further supported by the heterotrait-monotrait ratio (HTMT), which ranged from 0.472 to 0.759 and remained below the conservative threshold of 0.90 (Henseler et al., 2015), confirming that the three constructs are empirically distinct. In addition, all inner and outer variance inflation factor (VIF) values ranged from 1.00 to 2.94, well below the threshold of 5, indicating that collinearity did not pose a concern in either the measurement or the structural model. The reported discriminant validity evidence is limited to the Fornell-Larcker matrix and the observed HTMT range contained in the available analysis; no unreported item-level or pairwise coefficients are introduced.

Structural Model (Inner Model)

The structural model was assessed based on the coefficient of determination (R^2) and effect size (f^2), followed by hypothesis testing for the direct and indirect paths. Table 3 presents the R^2 values for the endogenous constructs.

Table 3. Coefficient of Determination (R^2)

Endogenous Variable	R^2	R^2 Adjusted	Category
Trust in Fintech (TF)	0.258	0.248	Moderate
E-Wallet Usage Decision (EUD)	0.460	0.445	Moderate

Source: SmartPLS output, processed data (2026).

Table 3 shows that digital financial literacy explained 25.8 percent of the variance in trust in fintech. The full model, comprising digital financial literacy and trust in fintech, explained 46.0 percent of the variance in e-wallet usage decisions, which can be classified as a moderate level of explanatory power (Hair et al., 2019). In terms of effect size, digital financial literacy exerted a large effect on trust in fintech ($f^2 = 0.348$), and trust in fintech exerted a large effect on e-wallet usage decisions ($f^2 = 0.527$), whereas the direct effect of digital financial literacy on e-wallet usage decisions was negligible ($f^2 = 0.015$).
The direct effects among constructs were tested using a bootstrapping procedure with 5,000 resamples. The results are presented in Table 4.

Table 4. Direct Effects and Hypothesis Testing

Hyp.	Path	Original Sample (O)	T Statistics	P Values	Decision
H1	DFL → TF	0.508	4.575	0.000	Supported
H2	DFL → EUD	0.105	0.714	0.475	Not Supported
H3	TF → EUD	0.619	4.369	0.000	Supported

Source: SmartPLS bootstrapping output (5,000 resamples), processed data (2026).

The indirect (mediation) effect of digital financial literacy on e-wallet usage decisions through trust in fintech was also tested using bootstrapping, as presented in Table 5.

Table 5. Indirect Effect and Mediation Testing

Hyp.	Path	Original Sample (O)	T Statistics	P Values	Decision
H4	DFL → TF → EUD	0.315	3.232	0.001	Supported (Indirect-only Mediation)
—	Total Effect (DFL → EUD)	0.420	—	—	Significant

Source: SmartPLS bootstrapping output (5,000 resamples), processed data (2026).

Because the direct effect of digital financial literacy on e-wallet usage decisions was not statistically significant (H2, $p = 0.475$) while the specific indirect effect was significant (H4), the statistical pattern is classified as indirect-only mediation. The total effect of digital financial literacy on e-wallet usage decisions, combining the direct and indirect paths, was

0.420 and statistically significant. Accordingly, digital financial literacy is associated with e-wallet usage decisions through trust in fintech rather than through a statistically supported direct path.

The estimated model produced a Standardized Root Mean Square Residual (SRMR) of 0.089, which exceeds the conventional 0.08 threshold reported in the manuscript (Henseler et al., 2014). The value is therefore treated as a model-quality limitation rather than as evidence of strong fit. The saturated and estimated model SRMR values were identical. Model interpretation consequently rests on the reported measurement quality, collinearity diagnostics, R^2, f^2, and bootstrapped path estimates, while the SRMR result is retained as a limitation.

Digital Financial Literacy and Trust in Fintech

The results support H1, showing that digital financial literacy has a significant positive effect on trust in fintech ($\beta = 0.508$, $t = 4.575$, $p < 0.001$), consistent with the large effect size reported earlier ($f^2 = 0.348$). This finding indicates that users who better understand digital financial products and services report stronger trust in the fintech providers they use. This result is consistent with Abbas and Khan (2024), who found that financial literacy and technological savviness are significant positive predictors of trust in technology, and demonstrates that, within this sample, digital financial literacy is positively associated with confidence in the reliability and security of fintech platforms.

Digital Financial Literacy and E-Wallet Usage Decision

In contrast, H2 was not supported: the direct effect of digital financial literacy on e-wallet usage decisions was positive but statistically insignificant ($\beta = 0.105$, $t = 0.714$, $p = 0.475$), with a negligible effect size ($f^2 = 0.015$). This result shows that digital financial literacy did not independently explain e-wallet usage decisions after trust was included in the model. This finding is broadly consistent with Damayanti and Nurhidayah (2023), who found that fintech literacy was not a factor considered by Generation Z respondents in forming their intention to use e-wallets, and echoes Pradnyani et al. (2025), who found that digital financial literacy did not straightforwardly encourage e-wallet usage among the students they studied. The pattern separates user competence from the behavioral decision: literacy was strongly associated with trust in H1, whereas trust carried the statistically supported relationship with the usage decision. Within this model, the direct literacy-to-usage path is negligible, and the explanatory pathway operates through trust.

Trust in Fintech and E-Wallet Usage Decision

H3 was supported, with trust in fintech exerting a significant positive effect on e-wallet usage decisions ($\beta = 0.619$, $t = 4.369$, $p < 0.001$), the strongest structural path observed in this study and consistent with the large effect size reported earlier ($f^2 = 0.527$). In this sample, stronger trust corresponded with stronger e-wallet usage decisions. This finding corroborates Lestari et al. (2026), who found that trust in fintech was the more dominant predictor of e-wallet adoption decisions relative to perceived security, and reinforces the theoretical proposition that trust reduces the perceived vulnerability associated with adopting a digital financial service (Mayer et al., 1995; Gefen et al., 2003).

The Mediating Role of Trust in Fintech

The mediation result supports H4 and is classified as indirect-only mediation. Because the direct path (H2) was not significant while the indirect path was significant, the statistical pattern shows that digital financial literacy is associated with e-wallet usage decisions through trust rather than through a supported direct path. This mechanism is consistent with the broader technology-trust literature, which frames literacy and competence as upstream conditions that operate through trust to shape adoption behavior (Gefen et al., 2003; Mayer et al., 1995). The finding also complements Abbas and Khan (2024), whose results place trust between financial and technological literacy and fintech adoption. In the present model, trust is the proximal mechanism that links user competence with the usage decision.

Conclusion

This study examined the influence of digital financial literacy on e-wallet usage decisions, with trust in fintech positioned as a mediating variable, using a sample of 75 active e-wallet users. The measurement model demonstrated adequate reliability, convergent validity, and discriminant validity across all constructs. The structural model results show that digital financial literacy has a significant positive effect on trust in fintech, while its direct effect on e-wallet usage decisions is not statistically significant. Trust in fintech has a significant positive effect on e-wallet usage decisions and fully mediates the relationship between digital financial literacy and e-wallet usage decisions. These findings extend the literature on digital financial behavior by clarifying that digital financial literacy does not translate into e-wallet usage decisions through a direct pathway, but rather through the psychological mechanism of trust in fintech. This supports a view of digital financial literacy as an upstream competence that must first be internalized as trust in a specific provider before it meaningfully shapes the decision to adopt and use that provider's service. From a practical perspective, fintech providers seeking to strengthen e-wallet adoption should recognize that improving users' digital financial knowledge alone is unlikely to be sufficient. Providers should invest in trust-building strategies, such as transparent security communication, visible data-protection practices, responsive customer service, and consistent service reliability, because these are the factors most directly associated with users' decision to adopt and continue using an e-wallet service.

This study is subject to several limitations. The sample size of 75 respondents, while adequate for PLS-SEM estimation, limits the generalizability of the findings to the broader population of e-wallet users in Indonesia. The cross-sectional design also precludes conclusions about causality over time. In addition, the estimated model's SRMR value was slightly above the conventional threshold, suggesting that additional variables, such as perceived security, perceived usefulness, or social influence, may further improve the explanatory power of the model. Future research is encouraged to extend the model with a larger and more demographically diverse sample, incorporate additional mediating or moderating variables such as perceived security, and consider a longitudinal design to examine how digital financial literacy, trust, and usage decisions jointly evolve as e-wallet adoption matures.

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