



From Digital Financial Competence to Financial Resilience: The Mediating Role of Financial Self-Efficacy among Digital Financial Service Users in Tomohon, Indonesia

Jones Xavierius Pontoh

Department of Management, Faculty of Economics and Business, Manado State University, Tondano, Indonesia

jones.pontoh@unima.ac.id

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Abstract

The rapid expansion of digital financial services has transformed financial inclusion strategies across emerging economies. However, increasing evidence suggests that access to digital financial technologies does not automatically translate into financial resilience, as many digitally connected individuals remain financially vulnerable. Addressing this gap, this study examines how digital financial competence contributes to financial resilience and investigates the mediating role of financial self-efficacy within this relationship. Drawing on Social Cognitive Theory, the study proposes that digital financial competence enhances financial resilience both directly and indirectly through financial self-efficacy, reflecting individuals' confidence in managing financial decisions and adapting to financial challenges. Data were collected from 100 users of digital financial services in Tomohon City, Indonesia, and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that digital financial competence positively influences both financial self-efficacy and financial resilience. Financial self-efficacy also exerts a significant positive effect on financial resilience and partially mediates the relationship between digital financial competence and financial resilience. The model explains 41.4% of the variance in financial self-efficacy and 52.8% of the variance in financial resilience, indicating moderate explanatory and predictive capability. This study contributes to existing digital finance research by integrating psychological capability into the competence–resilience pathway, demonstrating that digital financial competence strengthens resilience through self-regulatory beliefs rather than through digital access alone. Financial resilience is conceptualized as a higher-order outcome because it reflects individuals' capacity to sustain financial well-being and adapt to financial uncertainty beyond merely possessing financial knowledge or engaging in routine financial behaviors. The findings suggest that sustainable financial inclusion requires not only wider digital access but also the development of digital financial competencies and psychological capabilities that enable individuals to translate digital opportunities into long-term financial resilience.

Keywords: Digital financial competence; Financial self-efficacy; Financial resilience; Digital financial services; Social Cognitive Theory

Introduction

The promise of digital financial inclusion rests on a deceptively simple assumption: expanding access to digital financial services will improve individual financial outcomes. This premise has driven substantial investments in mobile banking, digital wallets, and FinTech platforms across emerging economies, accelerating financial participation at an unprecedented scale ([Adel, 2024](#); [Başar et al., 2025](#)). Yet growing evidence challenges this assumption. Across diverse contexts, many individuals who actively use digital financial

services continue to experience financial stress, inadequate savings, and limited capacity to absorb financial shocks ([Bhat et al., 2024](#); [Chhillar et al., 2025](#)). The persistence of financial vulnerability among digitally connected populations suggests that digital access alone may be insufficient to generate financial resilience, raising an important question regarding the mechanisms through which participation in digital financial ecosystems is translated into sustainable financial outcomes.

Despite this expansion, a critical paradox has emerged within the financial inclusion literature. While policymakers and financial institutions have largely assumed that greater digital access improves financial outcomes, growing evidence suggests that digitally connected individuals often remain financially vulnerable. Cross-country studies indicate substantial variation in the economic benefits derived from FinTech adoption, suggesting that access alone is insufficient to generate sustainable financial security ([Başar et al., 2025](#)). Similarly, evidence from emerging economies reveals that many users of digital financial services continue to experience financial stress, weak savings capacity, and limited preparedness for financial shocks ([Bhat et al., 2024](#); [Chhillar et al., 2025](#)). These findings raise an important question: why do some users of digital financial services become financially resilient while others remain financially vulnerable despite operating within the same digital ecosystem?

One possible explanation lies in digital financial competence, defined as an individual's ability to effectively access, evaluate, manage, and optimize financial resources through digital technologies ([Kumar et al., 2023](#)). As financial services become increasingly technology-driven, digital financial competence may determine whether individuals can transform digital access into meaningful financial outcomes. However, competence alone may not be sufficient. Individuals often possess the necessary skills yet fail to apply them effectively under conditions of uncertainty and financial pressure. Drawing on Social Cognitive Theory ([Bandura, 1986](#)), the influence of competence on outcomes is expected to operate through self-belief mechanisms. In this context, financial self-efficacy, the confidence to manage financial decisions and challenges may represent the critical mechanism through which digital financial competence contributes to financial resilience.

Although digital financial competence is often discussed alongside digital financial literacy, the two constructs are conceptually distinct. Digital financial literacy primarily refers to individuals' knowledge and understanding of digital financial products, services, and associated risks. In contrast, digital financial competence extends beyond cognitive knowledge by encompassing the practical ability to evaluate, manage, and strategically apply digital financial resources in diverse financial situations. As digital financial environments become increasingly dynamic and technology-driven, competence reflects an action-oriented capability that enables individuals not only to understand digital financial services but also to use them effectively to achieve sustainable financial outcomes.

Financial resilience, defined as the ability to withstand, adapt to, and recover from adverse financial circumstances, has increasingly been recognized as a higher-order financial outcome extending beyond financial inclusion or service usage ([Yadav et al., 2025](#)). Unlike digital financial literacy, which primarily reflects financial knowledge, or financial behavior, which captures routine financial actions, financial resilience represents

a higher-order adaptive outcome because it reflects individuals' capacity to maintain financial well-being, withstand financial shocks, and recover from adverse economic circumstances. Consequently, financial resilience provides a more comprehensive indicator of long-term financial capability, as it captures not only what individuals know or routinely do but also how effectively they translate financial competencies and psychological resources into sustained financial security under conditions of uncertainty.

Nevertheless, existing studies have predominantly focused on digital finance adoption, financial inclusion, financial behavior, and, more recently, psychological mechanisms such as financial self-efficacy. Although these studies have advanced understanding of financial decision-making, relatively limited attention has been devoted to explaining how digital financial competence is translated into financial resilience through self-regulatory psychological processes. Rather than treating financial self-efficacy as an independent predictor of financial behavior, the present study conceptualizes it as the mechanism through which digital financial competence strengthens long-term financial resilience. Unlike previous studies that primarily examined financial self-efficacy as an antecedent of financial behavior or financial decision-making, the proposed framework integrates digital financial competence, financial self-efficacy, and financial resilience within a unified explanatory model of adaptive financial outcomes.

Addressing these gaps is particularly relevant in Indonesia, where digital financial adoption has expanded rapidly over the past decade, while financial literacy, digital financial capability, and household financial preparedness remain uneven across regions. Tomohon City provides a particularly relevant empirical setting because it represents a rapidly developing secondary city experiencing accelerated adoption of digital financial services while continuing to face disparities in financial preparedness and digital financial capability. These characteristics make Tomohon a meaningful context for examining how digital financial competence is translated into financial resilience within an emerging digital economy.

This study contributes to the digital finance literature in three important ways. First, it conceptually differentiates digital financial competence from digital financial literacy by positioning competence as an action-oriented capability that enables individuals to effectively translate digital financial opportunities into sustainable financial outcomes. Second, it extends the application of Social Cognitive Theory by conceptualizing financial self-efficacy as a self-regulatory mechanism linking digital financial competence to financial resilience, thereby providing additional empirical support for the theory within digital financial settings. Third, it provides empirical evidence from an emerging economy context where rapid digital financial transformation coexists with persistent financial vulnerability, offering practical insights into how digital competencies and psychological capabilities jointly strengthen financial resilience. Based on the theoretical arguments developed above, the following hypotheses are proposed:

H1: Digital Financial Competence positively influences Financial Self-Efficacy.

H2: Digital Financial Competence positively influences Financial Resilience.

H3: Financial Self-Efficacy positively influences Financial Resilience.

H4: Financial Self-Efficacy mediates the relationship between Digital Financial Competence and Financial Resilience.

Methods

Research Context and Sample

This study employed a quantitative cross-sectional survey design to examine the relationships among digital financial competence (DFC), financial self-efficacy (FSE), and financial resilience (FR) among users of digital financial services in Tomohon City, Indonesia. A cross-sectional approach was considered appropriate because the study sought to investigate theoretically specified relationships among latent constructs and to assess the explanatory and predictive mechanisms through which digital financial competence contributes to financial resilience.

Tomohon City provides a relevant empirical setting because it is a rapidly developing secondary city experiencing accelerated adoption of digital financial services through mobile banking, electronic wallets, QRIS-based payment systems, and other technology-enabled financial platforms. At the same time, heterogeneous levels of household financial preparedness make Tomohon an appropriate context for examining how digital financial competence contributes to financial resilience under conditions commonly observed across emerging economies.

The target population consisted of adults aged 18 years and above who had actively used at least one digital financial service within the preceding six months. Eligible services included mobile banking applications, electronic wallets, QRIS-based payment systems, online financial platforms, and other digital financial technologies. To ensure sufficient exposure to digital financial ecosystems, individuals who reported using digital financial services less than once per month were excluded from the study.

Because no official sampling frame of digital financial service users was available, purposive sampling was employed. Purposive sampling was considered appropriate because the study sought to recruit respondents who possessed direct and recent experience in using digital financial services, a prerequisite for accurately evaluating the proposed theoretical constructs. Respondents were recruited through both online and offline channels, targeting individuals with demonstrated experience in using digital financial services.

Sample adequacy was evaluated using the inverse square root method recommended for Partial Least Squares Structural Equation Modeling ([Kock & Hadaya, 2018](#)). This approach was selected because it was specifically developed for variance-based SEM and provides a theoretically grounded minimum sample size estimation based on the expected structural relationships among latent constructs. Unlike general statistical power analyses, the inverse square root method is designed to accommodate the estimation characteristics of PLS-SEM and has been recommended for studies emphasizing prediction and theory development ([Kock & Hadaya, 2018](#)). The final sample consisted of 100 valid responses, exceeding the minimum sample size requirement for the proposed PLS-SEM model and supporting stable estimation of the structural relationships.

Measures

Data were collected using a structured questionnaire consisting of two sections. The first section captured respondents' demographic characteristics, including gender, age,

education level, occupation, and frequency of digital financial service usage. The second section measured the study constructs. The measurement items were translated into Indonesian and subsequently reviewed by a panel of experts to ensure semantic equivalence, conceptual consistency, and contextual relevance for Indonesian respondents and assessed using a five-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). Although a formal back-translation procedure was not conducted, semantic equivalence and contextual appropriateness were established through expert review involving specialists in finance, behavioral finance, and quantitative research, followed by pilot testing among digital financial service users.

Digital Financial Competence (DFC) was measured using seven indicators developed from the digital financial capability literature ([Kumar et al., 2023](#); [Vieira et al., 2024](#)). The indicators reflected respondents’ ability to access, evaluate, manage, and effectively utilize digital financial services and information. Consistent with contemporary conceptualizations of digital financial capability, the construct captures not only technical knowledge but also the practical competencies required to navigate increasingly digitalized financial environments.

Financial Self-Efficacy (FSE) was measured using seven indicators adapted from the Financial Self-Efficacy Scale originally developed and subsequently validated in financial behavior research ([Farrell et al., 2016](#); [Lown, 2011](#)). The indicators assessed individuals’ confidence in their ability to manage financial challenges, make sound financial decisions, maintain financial goals, and respond effectively to unexpected financial circumstances.

Financial Resilience (FR) was measured using seven indicators derived from the financial resilience literature ([Rayampatt & Rajan, 2025](#); [Salignac et al., 2019](#)). The indicators captured respondents’ perceived capacity to withstand financial shocks, manage unexpected expenses, maintain financial stability, and adapt to adverse financial conditions. The measurement reflects the multidimensional nature of financial resilience as a higher-order financial outcome encompassing both financial resources and adaptive financial behaviors.

The measurement items were translated into Indonesian and reviewed by a panel of experts specializing in finance, behavioral finance, and quantitative research methods to ensure semantic equivalence, conceptual consistency, and contextual relevance. Although a formal back-translation procedure was not conducted, semantic equivalence and contextual appropriateness were established through expert review and iterative wording refinement. Subsequently, a pilot study involving 30 digital financial service users confirmed the clarity and reliability of the instrument, supporting its use in the main survey.

Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) implemented through SmartPLS 4 software. PLS-SEM was selected because the study aimed to explain and predict Financial Resilience through a mediation framework involving multiple latent constructs measured by several indicators. The method is particularly appropriate for theory extension, prediction-oriented research, and the estimation of complex relationships among latent variables ([Hair, Black, et al., 2019](#); [Ringle et al., 2020](#)). Following established PLS-SEM procedures, the analysis was

conducted in two stages. The first stage involved assessment of the measurement model. Reliability and convergent validity were evaluated using indicator loadings, Cronbach's alpha, composite reliability (ρ_a and ρ_c), and average variance extracted (AVE). Discriminant validity was assessed using both the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT), following contemporary recommendations for reflective measurement models ([Hair, Risher, et al., 2019](#)).

The second stage involved assessment of the structural model. Structural relationships were evaluated using path coefficients, coefficients of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2). Statistical significance was assessed through bootstrapping with 5,000 resamples, no sign changes, and bias-corrected confidence intervals ([Hair, Risher, et al., 2019](#)). Particular attention was given to examining the mediating role of Financial Self-Efficacy in the relationship between Digital Financial Competence and Financial Resilience.

Given that all variables were measured using self-report survey instruments collected at a single point in time, procedural remedies were incorporated during questionnaire design to minimize the potential influence of common method bias. Predictor and outcome items were arranged to reduce respondents' tendency to infer causal relationships among constructs. In addition, a post-hoc statistical assessment was conducted using the full collinearity variance inflation factor (VIF), whereby values below 3.3 indicate the absence of problematic common method bias. Although PLS-SEM enables the estimation of theoretically specified structural relationships, the cross-sectional self-report design limits causal inference. Accordingly, the findings should be interpreted as evidence of theoretical associations rather than definitive causal relationships.

Results

Measurement Model Assessment

The measurement model was evaluated through assessments of convergent validity, discriminant validity, reliability, and common method bias before proceeding to the structural model analysis.

Convergent validity

Convergent validity was assessed through indicator loadings, composite reliability (CR), and average variance extracted (AVE). As shown in Table 1, all indicators exceeded the recommended loading threshold of 0.70, ranging from 0.794–0.863 for Digital Financial Competence, 0.757–0.833 for Financial Resilience, and 0.787–0.852 for Financial Self-Efficacy.

Internal consistency reliability was also satisfactory. Cronbach's alpha values ranged from 0.902 to 0.920, while composite reliability values ($\rho_a = 0.903$ – 0.922 ; $\rho_c = 0.923$ – 0.936) exceeded the recommended threshold of 0.70. Furthermore, AVE values ranged from 0.630 to 0.677, surpassing the minimum criterion of 0.50 and indicating that each construct explained more than half of the variance in its indicators ([Hair et al., 2021](#)). Collectively, these results provide evidence of satisfactory convergent validity and construct reliability.

Table 1. Convergent Validity and Reliability Assessment

Construct	Item	Outer Loading	Cronbach's α	ρ_A	CR	AVE
Digital Financial Competence	DFC1	0.794	0.920	0.922	0.936	0.677
	DFC2	0.830				
	DFC3	0.807				
	DFC4	0.826				
	DFC5	0.803				
	DFC6	0.863				
	DFC7	0.836				
Financial Resilience	FR1	0.808	0.902	0.903	0.923	0.630
	FR2	0.806				
	FR3	0.809				
	FR4	0.763				
	FR5	0.833				
	FR6	0.757				
	FR7	0.779				
Financial Self-Efficacy	FSE1	0.849	0.916	0.916	0.933	0.664
	FSE2	0.852				
	FSE3	0.802				
	FSE4	0.818				
	FSE5	0.787				
	FSE6	0.802				
	FSE7	0.792				

Discriminant Validity

Discriminant validity was primarily assessed using the heterotrait–monotrait ratio (HTMT), supplemented by the Fornell–Larcker criterion and cross-loadings inspection. As shown in Table 2, all HTMT values were below the conservative threshold of 0.85, ranging from 0.698 to 0.729, indicating satisfactory discriminant validity.

The Fornell–Larcker criterion was also satisfied, as the square root of AVE for each construct exceeded its correlations with other constructs (Table 2). In addition, all indicators loaded more strongly on their intended constructs than on any other construct. Collectively, these results confirm adequate discriminant validity among Digital Financial Competence, Financial Self-Efficacy, and Financial Resilience.

Table 2. Discriminant Validity

Construct	HTMT			Fornell–Larcker criterion		
	DFC	FR	FSE	DFC	FR	FSE
Digital Financial Competence				0.823		
Financial Resilience	0.729			0.668	0.794	
Financial Self-Efficacy	0.698	0.713		0.644	0.649	0.815

Common Method Bias and Collinearity Assessment

Potential common method bias and multicollinearity were assessed using the full collinearity variance inflation factor (VIF) approach (Kock, 2015). This procedure is widely recommended in PLS-SEM because it simultaneously evaluates the presence of common method bias and lateral collinearity among predictor constructs. VIF values below 3.3 indicate that common method bias is unlikely to threaten the validity of the results and

that multicollinearity does not distort structural estimates ([Diamantopoulos & Siguaw, 2006](#)).

The results showed that all indicator-level VIF values ranged from 1.849 (FR6) to 2.913 (DFC6), remaining well below the recommended threshold of 3.3. These findings indicate the absence of problematic common method bias and confirm that multicollinearity is not a concern in the present study. Therefore, the measurement and structural models can be interpreted without concern that the observed relationships are inflated by common measurement sources or excessive collinearity among constructs.

Structural Model Assessment

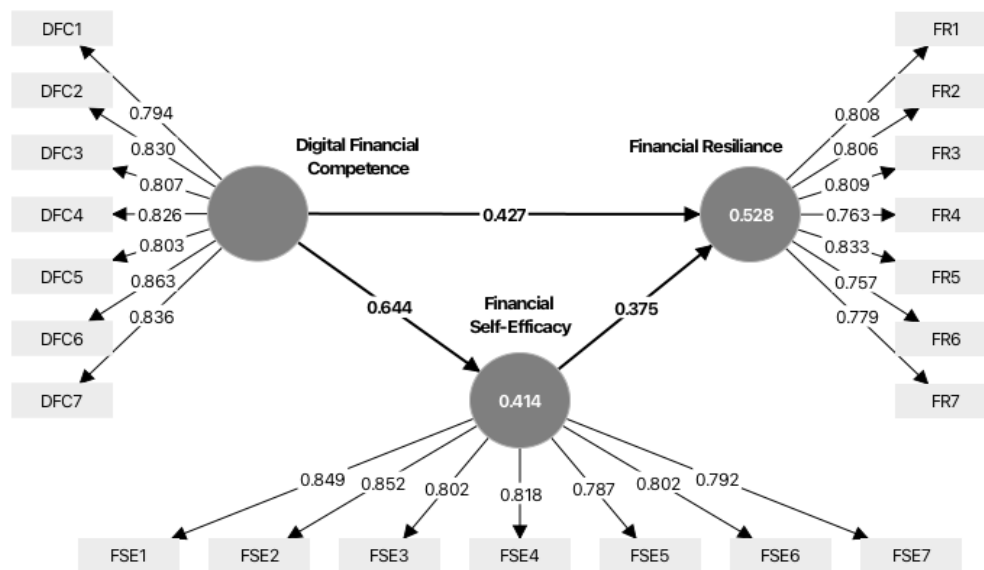


Figure 1. Model SEM-PLS Analysis

Structural Model Estimation and Path Coefficients

The structural model was estimated using SmartPLS 4 with the path weighting scheme, a maximum of 300 iterations, and a stop criterion of 1×10^{-7} . The significance of the hypothesized relationships was assessed through bootstrapping with 5,000 resamples and bias-corrected confidence intervals. Table 3 presents the path coefficients, effect sizes, and hypothesis testing results.

Digital financial competence demonstrates a significant positive direct effect on financial resilience ($\beta = 0.427$, $t = 4.797$, $p < 0.001$), supporting H2. The effect size is moderate ($f^2 = 0.226$), indicating that higher levels of digital financial competence are positively associated with greater perceived financial resilience, particularly individuals' capacity to withstand and recover from adverse financial circumstances. This result suggests that the benefits of digital financial competence extend beyond psychological confidence and are directly associated with greater financial adaptability and preparedness.

The results indicate that digital financial competence exerts a strong positive effect on financial self-efficacy ($\beta = 0.644$, $t = 10.444$, $p < 0.001$), supporting H1. The effect size is large ($f^2 = 0.707$), suggesting that digital financial competence is strongly associated with individuals' confidence in managing financial decisions and challenges. From a practical perspective, this finding indicates that improvements in digital financial competence are associated with meaningful increases in individuals' confidence to manage

financial decisions, highlighting the practical value of competence-building initiatives. This finding implies that individuals who are more capable of accessing, evaluating, and utilizing digital financial services tend to exhibit higher levels of financial self-belief.

Furthermore, financial self-efficacy exerts a significant positive effect on financial resilience ($\beta = 0.375$, $t = 4.175$, $p < 0.001$), supporting H3. The effect size is moderate ($f^2 = 0.174$), indicating that confidence in one's financial capabilities plays an important role in strengthening resilience against financial shocks and uncertainties. Although the effect size is moderate, the result suggests that strengthening financial self-efficacy may have practically meaningful implications for enhancing financial resilience among digital financial service users. Collectively, these findings provide empirical support for the theoretical proposition derived from Social Cognitive Theory that digital financial competence is positively associated with financial resilience partly through individuals' financial self-efficacy. Given the cross-sectional nature of the study, these findings should be interpreted as statistical associations rather than evidence of causal relationships.

Table 3. Direct Path Coefficients and Effect Sizes

Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	f ²	Decision
DFC -> FR	0.427	0.426	0.089	4.797	0.000	0.226	Supporting Effect Moderate
DFC -> FSE	0.644	0.648	0.062	10.444	0.000	0.707	Supporting Effect Large
FSE -> FR	0.375	0.378	0.090	4.175	0.000	0.174	Supporting Effect Moderate
DFC -> FSE -> FR	0.241	0.245	0.064	3.789	0.000		Supporting

The mediating role of financial self-efficacy was assessed by examining the indirect effect of digital financial competence on financial resilience. As reported in Table 3, the indirect effect was positive and statistically significant ($\beta = 0.241$, $t = 3.789$, $p < 0.001$), supporting H4.

Because both the direct effect of digital financial competence on financial resilience ($\beta = 0.427$, $p < 0.001$) and the indirect effect through Financial Self-Efficacy ($\beta = 0.241$, $p < 0.001$) remained significant, the results indicate partial mediation. The total effect of digital financial competence on financial resilience was 0.668, of which approximately 36.1% was transmitted through financial self-efficacy. The Variance Accounted For (VAF) was 36.1%, indicating partial mediation according to established PLS-SEM guidelines. These findings indicate that Financial Self-Efficacy constitutes an important, although not exclusive, mechanism through which Digital Financial Competence is statistically associated with Financial Resilience. The coexistence of significant direct and indirect effects indicates that the relationship is only partially mediated, suggesting that other behavioral and contextual mechanisms, such as the effective use of financial information and digital financial services, may also contribute to financial resilience.

Explanatory Power and Predictive Relevance

The explanatory power of the model was assessed using the coefficient of determination (R^2). The results indicate that Digital Financial Competence accounts for 41.4% of the variance in Financial Self-Efficacy ($R^2 = 0.414$), while Digital Financial Competence and Financial Self-Efficacy jointly account for 52.8% of the variance in Financial Resilience ($R^2 = 0.528$). These values indicate moderate explanatory power, suggesting that the model captures a substantial proportion of the variation in both endogenous constructs. Nevertheless, approximately 47.2% of the variance in Financial Resilience remains unexplained, indicating that additional factors beyond those included in the present model may also contribute to financial resilience.

In addition to explanatory capability, predictive relevance was evaluated using the Stone–Geisser Q^2 statistic obtained through the blindfolding procedure. Both endogenous constructs produced positive Q^2 values, exceeding the recommended threshold of zero and therefore demonstrating predictive relevance beyond a naïve benchmark. Financial Self-Efficacy yielded a Q^2 value of 0.267, indicating moderate predictive relevance, while Financial Resilience achieved a Q^2 value of 0.324, suggesting relatively strong predictive capability. These findings indicate that the proposed model not only explains a meaningful proportion of variance in financial resilience and self-efficacy but also possesses satisfactory out-of-sample predictive potential within the context of digital financial service users.

From a practical perspective, these Q^2 values indicate that the proposed model possesses meaningful predictive capability for individuals with characteristics similar to those represented in the present sample. Accordingly, the model may be useful for predicting financial resilience among digital financial service users in contexts comparable to Tomohon City rather than for broad population-level prediction.

Table 4. Explanatory Power and Predictive Relevance

Endogenous Construct	R^2	Q^2
Financial Self-Efficacy	0.414	0.267
Financial Resilience	0.528	0.324

Discussion

The findings provide important insights into why digital financial participation does not automatically translate into financial resilience. While digital financial services have expanded rapidly across emerging economies, access alone appears insufficient to ensure that individuals can effectively cope with financial uncertainty ([Adel, 2024](#); [Başar et al., 2025](#)). The present study demonstrates that digital financial competence constitutes a critical resource that enables users to transform digital financial access into meaningful financial outcomes. Individuals who possess stronger capabilities in accessing, evaluating, and managing digital financial services exhibit higher levels of financial resilience, both directly and indirectly through enhanced financial self-efficacy.

The strong relationship between digital financial competence and financial self-efficacy supports the central proposition of Social Cognitive Theory that competence development strengthens efficacy beliefs, which subsequently influence individual behavior and performance ([Bandura, 2001](#)). In the context of digital finance, individuals

who understand how to navigate digital financial platforms, evaluate financial information, and utilize technology-enabled financial tools appear more confident in their ability to manage financial decisions and respond to financial challenges ([Farrell et al., 2016](#); [Lown, 2011](#)). This finding suggests that digital financial competence functions not merely as a technical skill set but also as a psychological resource that shapes how individuals perceive their capacity to control financial outcomes ([Chhillar et al., 2025](#)). Such an interpretation complements previous research on digital financial literacy and financial capability by highlighting financial self-efficacy as an important mechanism statistically associated with the relationship between digital financial competence and financial outcomes ([Kumar et al., 2023](#); [Pillai et al., 2025](#)).

The results further reveal that digital financial competence remains positively associated to financial resilience, even after accounting for the influence of financial self-efficacy. This finding indicates that competence is positively associated with resilience through multiple pathways. Beyond strengthening confidence, digitally competent individuals are likely to possess greater ability to access financial information, compare financial products, manage savings, monitor expenditures, and utilize digital tools during periods of economic uncertainty ([Bhat et al., 2024](#); [Yadav et al., 2025](#)). Consequently, competence may serve as a practical resource that enhances preparedness and adaptability in the face of financial shocks ([Salignac et al., 2019](#)). This evidence broadens the existing literature, which has largely focused on digital finance adoption, financial inclusion, and financial well-being ([Ante, 2025](#)), by identifying financial resilience as a more substantive outcome of digital financial capability.

Equally important, financial self-efficacy emerged as a significant predictor of financial resilience and partially mediated the relationship between digital financial competence and resilience ([Preacher & Hayes, 2008](#)). The mediation finding suggests that resilience is shaped not only by what individuals know and can do, but also by what they believe they are capable of doing. Competence without confidence may limit the application of financial skills, while confidence unsupported by competence may produce ineffective financial decisions ([Farrell et al., 2016](#); [Lown, 2011](#)). Financial resilience appears to emerge from the interaction of both capability-based and confidence-based resources ([Rayampatt & Rajan, 2025](#)). This finding provides additional empirical support for the application of Social Cognitive Theory within digital finance by suggesting that efficacy beliefs are an important psychological mechanism associated with the relationship between digital financial competence and financial resilience ([Bandura, 1986](#); [Kumar et al., 2023](#)).

The Indonesian context provides additional insight into these relationships. Over the past decade, the rapid expansion of mobile banking, electronic wallets, QRIS-based payments, and other fintech services has significantly increased opportunities for financial participation ([Adel, 2024](#); [Ante, 2025](#)). However, greater participation has not always translated into stronger household financial security ([Bhat et al., 2024](#); [Chhillar et al., 2025](#)). These findings suggest that digital financial competence plays an important role in enabling individuals to convert digital financial participation into resilient financial outcomes within increasingly digital financial ecosystems. In this regard, digital financial competence should be viewed not merely as a component of financial literacy but as a

strategic capability required for navigating increasingly complex digital financial ecosystems ([Pillai et al., 2025](#); [Yadav et al., 2025](#)).

The present findings suggest that policies focused solely on expanding digital financial access may have limited effectiveness unless accompanied by efforts to strengthen users' competencies and confidence in managing digital financial resources.

Theoretical Contributions

The present study contributes to the emerging literature on digital finance and financial resilience by clarifying the mechanisms through which participation in digital financial ecosystems is translated into sustainable financial outcomes. While prior studies have predominantly examined digital financial access, adoption, and usage behavior, the present findings extend the literature by demonstrating that the benefits of digital finance depend not only on access to technology but also on individuals' capability to use digital financial services effectively.

The findings are consistent with Social Cognitive Theory and provide additional empirical evidence supporting its application in digital financial settings. Consistent with the theory's central proposition, competence strengthens efficacy beliefs, which subsequently influence individual outcomes. However, the results further indicate that digital financial competence retains a substantial direct effect on financial resilience even after accounting for financial self-efficacy. This suggests that competence contributes to resilience not merely through confidence formation but also through informational and behavioral mechanisms that enable individuals to navigate financial uncertainty. Consequently, the findings suggest that the application of Social Cognitive Theory may also be relevant for understanding financial resilience within increasingly digital financial environments.

Perhaps most importantly, the partial mediation finding suggests that financial resilience emerges from the joint operation of capability-based and confidence-based mechanisms. Existing studies have often treated financial capability and financial self-efficacy as alternative explanations for financial outcomes. The present findings indicate that these perspectives are complementary rather than competing. Individuals require both the competence to manage digital financial resources and the confidence to deploy those competencies under uncertain conditions. This integrated perspective offers additional insight into how capability-based and confidence-based resources are jointly associated with financial resilience in increasingly digitalized financial environments.

Practical Implications

The findings carry several implications for financial inclusion policy and digital financial capability development in emerging economies. Most importantly, the results challenge the dominant assumption that expanding digital financial access is sufficient to strengthen household financial security. Although digital financial services continue to diffuse rapidly across Indonesia, the present findings indicate that resilience appears to be associated not merely with access but also with individuals' ability to effectively utilize digital financial tools and convert those capabilities into confident financial decision-making.

For policymakers, these results suggest that digital financial inclusion programs should move beyond infrastructure provision and account ownership targets toward competence-oriented interventions. Current initiatives frequently emphasize adoption metrics, such as the number of digital accounts, transactions, or platform users. The evidence presented here indicates that such indicators may overestimate the developmental benefits of digital finance if users lack the competence required to evaluate digital financial products, manage financial information, and make informed decisions in increasingly complex financial environments. Programs designed to strengthen digital financial competence may therefore produce more durable resilience outcomes than policies focused exclusively on expanding access.

The significant mediating role of financial self-efficacy further implies that competence development alone may be insufficient. Individuals may possess the technical ability to navigate digital financial platforms while remaining hesitant to make financial decisions under uncertainty. Consequently, financial education initiatives should incorporate experiential and confidence-building components, including financial simulations, guided budgeting exercises, goal-setting interventions, and scenario-based financial planning. Such approaches may help transform acquired competence into behavioral confidence and ultimately into greater financial resilience.

For digital financial service providers, the findings highlight the importance of platform design as a mechanism for capability development. Rather than functioning solely as transaction interfaces, digital financial platforms can serve as environments that strengthen users' financial competence and confidence. Features such as spending analytics, savings progress dashboards, personalized budgeting recommendations, and real-time financial feedback may support users in developing the skills and self-beliefs necessary for resilient financial behavior. In this sense, digital financial platforms should be viewed not only as access channels but also as learning environments that facilitate capability accumulation over time.

Although these implications provide useful insights for digital financial inclusion initiatives, they should be interpreted in light of the study's empirical scope. The recommendations are derived from a purposive sample of digital financial service users in Tomohon City and therefore are most applicable to contexts with similar socioeconomic and digital financial characteristics. Broader policy generalization should be made cautiously until the proposed relationships are validated across more diverse populations and institutional settings.

Limitations and Future Research

Several limitations should be considered when interpreting the findings. First, the cross-sectional design captures relationships among digital financial competence, financial self-efficacy, and financial resilience at a single point in time. Although the hypothesized relationships are theoretically grounded in Social Cognitive Theory and supported by strong statistical evidence, the developmental process implied by the model is inherently dynamic. Financial competence is expected to accumulate through repeated interaction with digital financial systems, while self-efficacy evolves through successful experiences and feedback. Longitudinal studies are therefore needed to examine how competence and

self-efficacy co-develop over time and whether improvements in competence generate sustained resilience gains under changing economic conditions.

Second, the study focuses on active users of digital financial services in Tomohon City, an urban setting characterized by relatively high exposure to digital financial technologies. The mechanisms identified may operate differently in contexts where digital infrastructure, financial service availability, and technological familiarity are less developed. Future research should investigate whether the competence–self-efficacy–resilience pathway remains stable across rural, peri-urban, and geographically remote populations where barriers to digital financial engagement are more pronounced.

In addition, the use of purposive sampling limits the representativeness of the sample and may restrict the generalizability of the findings beyond digital financial service users with characteristics similar to those included in this study. Future studies employing probability sampling techniques and larger, more geographically diverse samples would provide stronger evidence regarding the broader applicability of the proposed model.

Third, financial resilience was conceptualized and measured as a perceived adaptive capacity rather than as an objective record of financial outcomes. While perception-based measures are consistent with contemporary resilience research, they may not fully capture actual financial preparedness or recovery behavior. Future studies should integrate objective indicators such as emergency savings adequacy, debt servicing capacity, financial shock recovery trajectories, or transaction-level financial behavior to examine whether the psychological resilience reported by respondents translates into observable financial outcomes.

Fourth, the finding of partial mediation suggests that additional mechanisms beyond financial self-efficacy remain unexplored. While self-efficacy explains a meaningful portion of the relationship between digital financial competence and financial resilience, a substantial direct effect persists. This indicates the presence of other pathways through which competence may influence resilience. Future research should therefore investigate complementary mediators such as digital financial trust, financial self-control, financial planning behavior, technology readiness, or financial social capital to develop a more comprehensive explanation of how digital capabilities are transformed into resilience outcomes.

Finally, the growing sophistication of digital financial ecosystems raises questions regarding whether greater competence always produces beneficial outcomes. Individuals with high digital financial competence may also be exposed to more complex financial products, algorithmic recommendations, embedded credit systems, and speculative investment opportunities. Future studies should therefore examine potential nonlinear or contingent effects of digital financial competence, including circumstances under which increased digital engagement may strengthen resilience or alternatively increase financial vulnerability. Such investigations would contribute to a more nuanced understanding of digital financial capability in increasingly complex financial environments.

Conclusion

This study examined why individuals with access to digital financial services exhibit different levels of financial resilience. The findings demonstrate that digital financial

competence is positively associated with financial resilience among digital financial service users in Indonesia, both directly and indirectly through financial self-efficacy. The persistence of a significant direct effect indicates that digital financial competence contributes to financial resilience beyond its association with psychological confidence alone. These findings extend the digital finance literature by highlighting the importance of individual capability and self-efficacy in understanding financial resilience within increasingly digital financial environments. The findings should be interpreted within the empirical scope of the study. Because the analysis was based on a purposive sample of digital financial service users in Tomohon City using a cross-sectional design, the observed relationships should be interpreted as statistical associations rather than causal effects and may not be directly generalizable to other populations or institutional settings. Future research employing larger, more diverse, and longitudinal samples is needed to examine the robustness of the proposed relationships across different contexts. Overall, the study provides empirical evidence consistent with Social Cognitive Theory by demonstrating significant associations among digital financial competence, financial self-efficacy, and financial resilience. These findings suggest that strengthening digital financial competence and financial self-efficacy may support more resilient financial outcomes in increasingly digital financial environments.

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