

Digital Financial Literacy and Financial Satisfaction of Technopreneurs in East Java: The Mediating Role of Financial Behavior

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ABSTRACT

Amidst the rapid growth of technopreneurship in East Java, low digital financial literacy remains a major challenge that hinders the achievement of financial satisfaction among business actors. This study aims to analyse the mechanism through which digital financial literacy affects financial satisfaction, with financial behaviour acting as a mediating variable. Using an explanatory quantitative approach, the study involved 75 technopreneurs who are active users of digital financial services, selected through purposive sampling and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results show that digital financial literacy has no significant direct effect on financial satisfaction. In contrast, digital financial literacy significantly improves financial behaviour, which in turn becomes the main determinant of higher financial satisfaction. Financial behaviour is confirmed to play a full mediating role in the relationship between digital financial literacy and financial satisfaction, indicating that digital knowledge alone is insufficient to enhance technopreneurs' financial well-being. These findings support a behavioural perspective in which digital financial literacy contributes to higher financial satisfaction only when it is translated into disciplined and well-planned financial actions. Consequently, digital SME development strategies should move beyond technological training and focus on strengthening concrete financial habits, such as budgeting, saving, and prudent use of digital financial services.

Keywords: *Digital Financial Literacy; Financial Behaviour; Financial Satisfaction; Technopreneur; East Java*

1. INTRODUCTION

Digital transformation has become the primary driver of change in the global economic structure. The Fourth Industrial Revolution has not only altered consumption and production patterns but also given rise to a new form of technology-based entrepreneurship known as technopreneurship. Technopreneurs play a crucial role in fostering digital innovation, expanding employment opportunities, and accelerating technology-driven economic growth (Awan, Haroon ul Hasnain, & Jawad Arshad, 2023).

At the national level, Indonesia occupies a strategic position within the global technopreneurship ecosystem. According to Startup Ranking (2025), Indonesia ranks sixth in the world with more than 3,000 active startups. The government continues to strengthen this sector through various initiatives such as the National Movement for 1000 Digital Startups and MSMEs Go Digital, launched by the Ministry of Communication and Information Technology (Komdigi, 2024). Despite this progress, the advancement of digital entrepreneurship has not been accompanied by a proportional increase in digital financial literacy among business actors. The Financial Services Authority OJK (2022) reported that the national financial literacy index reached 49.68%, while the digital financial literacy index remains at a moderate level. This relatively low level of digital financial literacy affects technopreneurs' financial management abilities and, consequently, their financial satisfaction.

Although Indonesia demonstrates strong national progress, regional disparities persist. Data from Startup Ranking (2025) indicate that the number of top active startups by province are concentrated in DKI Jakarta (469), followed by West Java (39), Yogyakarta (28), and East Java (21). These figures illustrate the uneven development of digital startup ecosystems across regions, highlighting differences in the maturity of local digital economies and in the readiness of business actors to manage technology-based financial aspects.

At the regional level, East Java represents one of Indonesia's most promising technopreneurial centers. According to the East Java Statistics Agency (BPS, 2023), the province hosts more than nine million MSMEs, making it the largest entrepreneurial population in the country. Although the number of top startups in East Java remains smaller compared to DKI Jakarta, West Java, or Yogyakarta, its potential for technopreneurship development is high due to strong entrepreneurial activity and government support for digitalization. Nevertheless, low digital financial literacy remains a critical challenge that affects financial management capabilities and ultimately reduces financial satisfaction among technopreneurs.

Financial satisfaction refers to an individual's subjective perception of economic well-being, encompassing the ability to meet basic needs, manage expenses, and achieve long-term financial goals (Joo & Grable, 2004). Beyond material aspects, financial satisfaction also reflects a sense of security and confidence in future economic stability (Choung, Chatterjee, & Pak, 2023). In the context of technopreneurship, where income tends to fluctuate sound financial management becomes essential. Two main factors that influence financial satisfaction are digital financial literacy and financial behavior.

Digital financial literacy can be defined as an individual's ability to understand, evaluate, and utilize digital technologies to manage finances effectively. The OECD (2022) explains that digital financial literacy encompasses knowledge about both the risks and opportunities associated with digital financial services. Hitesh and Sandhu (2024) further emphasize that digital financial literacy is an integration of financial knowledge, digital skills, and decision-making competence in the digital era.

Empirical studies have demonstrated that digital financial literacy has a positive and significant impact on financial satisfaction. Individuals who can effectively use financial technology for budgeting, transactions, and investments tend to manage resources more efficiently, leading to higher financial satisfaction (Adelaide & Siahaan, 2024). However, other findings suggest that the relationship between digital financial literacy and financial satisfaction is conditional. Lone, Bhat, Irfan, & Darzi (2025) argue that limited access to digital infrastructure or technological constraints can weaken this relationship. Their findings align with the digital divide theory proposed by Lal, Bawalle, Khan, & Kadoya (2025), which states that disparities in access, skills, and technology use can hinder individuals from achieving financial satisfaction through digital means.

In addition to its direct effect, digital financial literacy also indirectly influences financial satisfaction through financial behavior. Individuals with higher literacy levels are more capable of using digital tools to save, track expenses, and manage online investments effectively (Lone et al., 2025). Similarly, Başar, Keskin, Esen, Merter, & Balcıoğlu (2025) found that, across 12 countries, FinTech adoption significantly improves saving habits, budgeting discipline, and overall financial management, particularly when combined with strong financial knowledge.

Financial behavior itself refers to the practical application of financial knowledge in daily life, including budgeting, saving, and investing (Gutter & Copur, 2011). Prior research consistently shows that responsible financial behavior contributes positively to financial satisfaction (Vineeth, Shiju, & Sruthy Melbin, 2025). Furthermore, financial behavior serves as a mediating factor between digital financial literacy and financial satisfaction Adelaide & Siahaan (2024), suggesting that improving literacy enhances satisfaction indirectly through better behavioral practices.

Despite the growing body of research, most studies in Indonesia have focused on general financial literacy, particularly among students or non-business populations (Ajeng Trixsiana & Wiwik Lestari, 2024). Research on digital financial literacy and financial satisfaction among technopreneurs remains limited, especially regarding the mediating role of financial behavior. Previous studies have generally examined digital financial literacy in the context of financial inclusion or consumer behavior, whereas this study specifically focuses on technopreneurs, a group characterized by high technology adoption but varying financial literacy levels. Furthermore, few studies have explored this relationship within the regional context of East Java, an area with strong entrepreneurial potential yet relatively low digital financial literacy. Therefore, the novelty of this research lies in integrating digital financial literacy, financial behavior, and financial satisfaction into a single analytical model applied to technopreneurs in East Java. To achieve this objective, the study employs a quantitative approach using survey data from technopreneurs in East Java, analyzed through Structural Equation Modeling (SEM) to test the proposed relationships.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS FORMULATION

This study is grounded in two complementary theoretical perspectives, Behavioral Finance Theory (BFT) and the Theory of Planned Behavior (TPB), which together provide a comprehensive conceptual framework for understanding the dynamics of financial decision-making among technopreneurs in the digital era. The integration of these theories is essential because modern financial decisions are influenced not only by rational and cognitive factors but also by psychological, social, and behavioral aspects that shape how individuals perceive risk, manage resources, and

respond to technological changes in finance. According to BFT proposed by Thaler (1999), financial decision-making is not always rational since it is often affected by cognitive and emotional biases such as overconfidence, anchoring, and representativeness, which lead to deviations from rational economic principles and influence both investment and consumption behavior (Maina Waweru, Munyoki, & Uliana, 2008). In the digital finance context, these biases become more pronounced due to easy access to information, transaction speed, and social media influence. Consequently, Digital Financial Literacy (DFL) functions as both a cognitive and an affective capability that enables individuals to recognize, assess, and manage biases in digital financial decision-making, fostering more rational, disciplined, and goal-oriented Financial Behavior (FB). From the TPB perspective (Ajzen, 1991), FB results from the interaction of attitudes toward financial behavior, subjective norms within digital social environments, and perceived behavioral control over financial management. DFL strengthens these psychological components by enhancing individuals' knowledge, confidence, and awareness of the consequences of their financial choices (Riwayati, Markonah, & Siladjaja, 2016). Individuals with higher DFL tend to demonstrate more responsible financial behavior, such as budgeting, debt control, and informed investment decisions, which ultimately enhance Financial Satisfaction (FS) through increased financial stability, reduced financial stress, and improved subjective well-being (Borgschulte, Corredor-Waldron, & Marshall, 2018). Thus, the integration of BFT and TPB explains that DFL operates not merely as a cognitive competence but as a psychological and behavioral mechanism that shapes financial decision-making patterns, ultimately leading to higher FS among technopreneurs navigating the complexities of digital financial ecosystems.

Financial Satisfaction

Financial satisfaction reflects an individual's subjective evaluation of financial well-being, integrating cognitive judgments and emotional perceptions of one's current and future financial condition (Choung et al., 2023; Joo & Grable, 2004). For technopreneurs, whose income streams tend to fluctuate due to the uncertain nature of digital ventures, financial satisfaction becomes a key indicator of adaptive capacity and psychological resilience in managing financial instability. Prior research indicates that digital financial literacy (DFL) contributes to improving financial satisfaction by enhancing one's ability to plan, control, and evaluate financial outcomes more effectively; however, empirical findings remain inconclusive. While some studies reveal a significant and positive relationship between DFL and FS, implying that higher literacy promotes better financial decision-making and overall satisfaction (Adelaide & Siahaan, 2024; Sarlawa, 2025), other studies emphasize the mediating role of financial behavior or contextual limitations that may weaken this linkage (Lone et al., 2025). This inconsistency highlights the importance of exploring how DFL translates into FS through financial behavior, especially in developing digital ecosystems such as East Java, where access to digital tools and financial education varies widely among technopreneurs. Ultimately, as emphasized by Joo & Grable (2004), financial satisfaction can be assessed through five interrelated indicators that represent tangible manifestations of financial well-being: financial stability, the ability to meet personal and business needs, control over debt, satisfaction with financial decisions, and a sense of security about the future. These indicators underscore that financial satisfaction is not merely about income adequacy but reflects a balanced integration of financial competence, behavior, and emotional assurance regarding one's financial future.

Digital Financial Literacy

Digital financial literacy (DFL) refers to an individual's ability to understand, evaluate, and effectively use technology-based financial services while maintaining awareness of potential risks and digital security (OECD, 2021; Sarlawa, 2025). DFL represents the intersection of traditional financial knowledge and digital competence, enabling individuals to make informed and secure financial decisions through platforms such as e-wallets, fintech applications, mobile banking, and online investment tools (Hitesh & Sandhu, 2024). Beyond basic digital familiarity, DFL encompasses analytical and behavioral dimensions that influence how individuals interpret digital financial information, manage risk, and build long-term financial strategies. In the context of technopreneurs, DFL serves as a critical capability that supports financial autonomy and adaptability amid rapid technological and market changes. Empirical evidence increasingly supports the argument that DFL plays a crucial role in shaping responsible financial behavior and improving satisfaction with financial outcomes. For instance, Adelaide & Siahaan (2024) found that DFL exerts both direct and indirect effects on financial satisfaction through positive behavioral adjustments among technopreneurs, emphasizing that higher digital competence leads to more effective money management and confidence in financial decision-making. Mubarokah, Sari, & Kusumawardhani (2024) demonstrated that digital literacy enhances budgeting discipline, saving consistency, and accountability in financial record-keeping among Indonesian entrepreneurs. Nonetheless, the impact of DFL on financial satisfaction is not uniform; it can be moderated by contextual elements such as digital infrastructure availability, accessibility of financial education, and behavioral consistency (Kusumawardhani, Prihatin, Damanik, & Mubarokah, 2025). These findings highlight that digital financial literacy alone is insufficient without corresponding behavioral adaptation and environmental support. According to Adelaide & Siahaan (2024), DFL can be measured through five interrelated indicators that reflect both cognitive and behavioral aspects: (1) understanding of digital financial service features, (2) awareness of transaction security and risk, (3) ability to evaluate the benefits of fintech, (4) frequency of digital service usage in business activities, and (5) understanding of digital risk management strategies. These indicators emphasize that DFL is not only a matter of technological proficiency but also a holistic competence integrating knowledge, awareness, and behavioral adaptation to ensure sustainable financial well-being among technopreneurs in an increasingly digitalized economy.

Financial Behavior

Financial behavior refers to the practical manifestation of financial knowledge, attitudes, and intentions in daily financial management activities, including spending control, saving, investing, and budgeting (Gutter & Copur, 2011). Within the context of technopreneurship, financial behavior extends beyond conventional money management to encompass the strategic use of digital tools for online accounting, financial record-keeping, and data-driven financial analysis, which play a crucial role in reducing exposure to income volatility and market uncertainty (Sarlawa, 2025). Empirical evidence consistently shows that sound financial behavior is a strong predictor of financial satisfaction, as individuals who engage in disciplined and goal-oriented financial practices tend to experience greater financial stability and psychological well-being. For instance, Adelaide & Siahaan (2024) reported that responsible financial habits significantly mediate the relationship between digital financial literacy and financial satisfaction among digital entrepreneurs, indicating that knowledge alone is insufficient without corresponding behavioral execution. Similarly,

(Kusumawardhani et al., 2025) observed that entrepreneurs who maintain structured and consistent financial routines exhibit higher levels of business resilience and sustainability in dynamic market environments. From the perspective of the Theory of Planned Behavior (TPB), digital financial literacy enhances technopreneurs' financial attitudes and perceived behavioral control, which in turn fosters prudent, self-regulated, and goal-oriented financial behavior. These behavioral mechanisms are essential precursors to sustained financial satisfaction, particularly in digital business settings characterized by rapid change and uncertainty. According to Gutter & Copur (2011), financial behavior can be operationalized through five key indicators: (1) financial planning and budgeting practices, (2) saving and investment habits, (3) expenditure control, (4) the use of digital applications for financial recording and planning, and (5) credit management. Collectively, these indicators capture both traditional and digital dimensions of financial behavior, reinforcing its mediating role between digital financial literacy and financial satisfaction.

The Effect of Digital Financial Literacy on Financial Satisfaction

Empirical findings on the influence of digital financial literacy (DFL) on financial satisfaction show varied results. Research by Adelaide & Siahaan (2024) revealed that DFL does not have a significant effect on financial satisfaction, indicating that digital financial skills alone may not guarantee individuals' sense of financial well-being. This suggests that other factors, such as income level, financial behavior, and emotional attitudes toward money, may play a more dominant role in determining financial satisfaction. In contrast, Sarlawa (2025) found that individuals with higher levels of DFL are more capable of managing digital financial services such as e-wallets, mobile banking, and online investments effectively, which leads to greater satisfaction and confidence in financial management. Supporting this, Joo & Grable (2004) emphasized that financial knowledge and attitudes are important predictors of financial well-being and satisfaction, implying that DFL can indirectly enhance satisfaction when supported by good financial behavior and decision-making ability. These mixed findings indicate that while digital financial literacy has the potential to improve financial satisfaction, its impact may depend on contextual factors such as financial experience, technological access, and behavioral characteristics.

H₁: Digital financial literacy has a positive effect on financial satisfaction

The Effect of Digital Financial Literacy on Financial Behavior

Empirical studies show that digital financial literacy (DFL) has an important role in shaping individuals' financial behavior. Research by Gutter & Copur (2011) found that individuals with higher financial knowledge and perceived control tend to engage in healthier and more responsible financial practices, including budgeting, saving, and managing debt effectively. In line with this, (Kusumawardhani et al., 2025) demonstrated that DFL significantly improves responsible budgeting and saving behaviors among Indonesian entrepreneurs, as individuals with better literacy can utilize digital financial tools to plan and monitor their financial activities more efficiently. Similarly, Ajzen (1991) emphasized that behavior is influenced by attitudes, norms, and perceived control, suggesting that higher DFL enhances individuals' confidence in making structured and rational financial decisions. These findings collectively indicate that digital financial literacy contributes positively to financial behavior by promoting discipline, awareness, and accountability in managing personal and business finances.

H₂: Digital financial literacy has a positive effect on financial behavior

The Effect of Financial Behavior on Financial Satisfaction

Previous research indicates that financial behavior has a significant positive effect on financial satisfaction. According to Thaler (1999), consistent and prudent financial behaviors such as saving, controlling expenditures, and investing wisely contribute more strongly to financial satisfaction than knowledge alone, as these actions directly influence individuals' sense of control and security. Supporting this, Gutter & Copur (2011) found that positive financial behavior mediates the relationship between financial literacy and financial well-being, suggesting that disciplined money management fosters stability and personal satisfaction. Similarly, Vineeth et al. (2025) discovered that individuals who actively plan and monitor their spending tend to report higher levels of financial satisfaction due to their ability to manage resources efficiently and reduce financial stress. These findings collectively show that financial satisfaction arises not merely from understanding financial concepts, but from consistently applying that knowledge through responsible financial behavior.

H3: Financial behavior has a positive effect on financial satisfaction

The Mediating Role of Financial Behavior

Previous studies have demonstrated that financial behavior mediates the relationship between digital financial literacy (DFL) and financial satisfaction. Research by Adelaide & Siahaan (2024) found that financial behavior significantly mediates the effect of DFL on financial satisfaction among technopreneurs, showing that individuals with higher DFL tend to develop better financial habits such as saving, budgeting, and managing investments, which ultimately enhance satisfaction. Similarly, Sarlawa (2025) confirmed that digital financial knowledge influences financial well-being indirectly through improved financial behavioral patterns. Joo & Grable (2004) also emphasized that financial attitudes and behaviors serve as critical intermediaries linking financial literacy with satisfaction, as behavioral consistency transforms knowledge into meaningful financial outcomes. These findings suggest that digital financial literacy affects financial satisfaction both directly and indirectly, with financial behavior functioning as the key pathway that connects understanding to practice, leading to better financial stability and well-being.

H4: Financial behavior mediates the effect of digital financial literacy on financial satisfaction

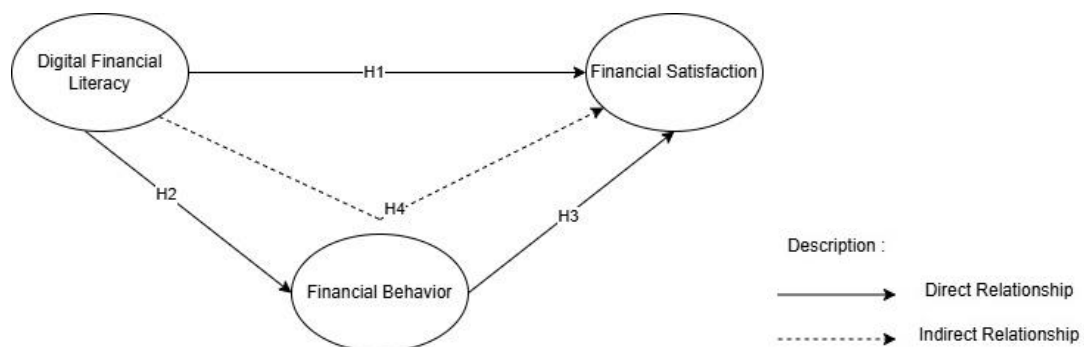


Figure 1: Conceptual model
Source: processed by Author (2025)

3. RESEARCH METHOD

Methods

This study uses an explanatory quantitative approach to examine the causal relationship between digital financial literacy, financial behavior, and financial satisfaction among technopreneurs in East Java Province. This approach was chosen because it is in line with the characteristics of the study, which aims to examine the influence between latent variables empirically through the Path Analysis method as recommended by (Hair, Risher, Sarstedt, & Ringle, 2019)

Population, Sampling, and Data Collection

The target population comprised active technopreneurs in East Java who operate digital-based businesses. Respondents were selected using purposive sampling. The inclusion criteria were: (1) minimum age of 17 years; (2) the business had been operating for more than one year; (3) the business regularly used digital financial services such as mobile banking, e-wallets, payment gateways, or online investment platforms.

Respondents were recruited through online business communities, technopreneur networks, incubator programs, and social media groups that focus on digital entrepreneurship in East Java. An online information sheet explained the study objectives, approximate completion time, and assurances of anonymity and confidentiality. Individuals who agreed to participate were directed to the online questionnaire and were first asked several screening questions to ensure that they met the specified criteria.

A total of 75 valid responses were obtained for analysis. This sample size meets the minimum requirement recommended by (Hair et al., 2019) for PLS-SEM, which suggests that the number of observations should be at least 5 to 10 times the number of indicators in the model. Given that this study employs 15 indicators, the required minimum sample size ranges from 75 to 150. Therefore, the sample of 75 respondents satisfies the lower bound of this rule of thumb and is considered adequate for exploratory PLS-SEM analysis. Nonetheless, the relatively modest sample size should be interpreted with caution and is further acknowledged as a limitation of the study. The minimum sample size is calculated as:

$$n = k \times i = 15 \times 5 = 75$$

where:

n = minimum sample size required

k = number of indicators in the research model

i = minimum number of observations per indicator (usually between 5 and 10, depending on the complexity of the model)

Research Instrument

The research instrument was a structured questionnaire developed from established scales in previous studies. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Before the main survey, a pilot test was conducted with 30 technopreneurs who met the same screening criteria. The pilot study was used to assess the clarity of wording, as well as preliminary construct validity and reliability. The results showed that all indicators had outer loading values ≥ 0.70 and composite reliability (CR) ≥ 0.70 , indicating that the measurement model was acceptable and that the questionnaire could be used in the main data collection. Minor wording adjustments were made to improve item clarity.

Ethical Considerations and Data Quality

Ethical considerations were addressed by ensuring voluntary participation, anonymity, and confidentiality of responses. Participation was entirely voluntary, and respondents could withdraw from the survey at any time without any penalty. No personally identifiable information, such as full names, tax numbers, or bank account data was collected. All data were analyzed and reported in aggregate form only. The research followed the ethical guidelines for social science research issued by the authors' institution.

Data screening and cleaning were carried out before the PLS-SEM analysis. Questionnaires with more than 10% missing responses were excluded from the final dataset. For the remaining cases, sporadic missing values were treated using mean substitution at the item level. Univariate outliers were examined using standardized z-scores, while multivariate outliers were inspected using the Mahalanobis distance; no extreme cases that threatened the model's stability were detected. To reduce potential common method bias, several procedural remedies were implemented, including assuring respondents of anonymity, varying item wording, and separating the measurement of predictor and outcome variables into different sections of the questionnaire. In addition, a full collinearity test was conducted in PLS-SEM; the variance inflation factor values for all constructs were below the commonly accepted threshold, indicating that common method bias was unlikely to be a serious concern.

Data Analysis

The structural model tested the direct and indirect effects of digital financial literacy (X) on financial satisfaction (Y) with financial behavior (Z) as a mediating variable. The relationships between variables can be expressed as:

$$Y = a + \beta_1 X + \beta_2 Z + e \quad (1)$$

$$Z = a + \beta_1 X + e \quad (2)$$

Explanation:

Y = Financial Satisfaction β = Coefficient

X = Digital Financial Literacy a = Constant

Z = Financial Behavior e = Error

Data analysis was performed using SmartPLS 3.0 software. The research model consisted of two main components, namely the outer model and the inner model. In the outer model stage, convergent validity was tested through outer loading values (≥ 0.70) and Average Variance Extracted (AVE) (≥ 0.50). Construct reliability was measured using Composite Reliability and Cronbach Alpha (≥ 0.70). The inner model stage was used to test the significance of the relationship between variables using the bootstrapping procedure with 5,000 subsamples. A t-statistic value > 1.96 and a p-value < 0.05 indicated a significant relationship. Model quality was assessed based on the R² value (coefficient of determination), Q² (predictive relevance), and SRMR (Standardized Root Mean Square Residual) ≤ 0.08 as indicators of goodness of fit (Sarstedt, Hair, Cheah, Becker, & Ringle, 2019).

4. RESULTS AND DISCUSSION

Results

Respondent Description

The research data used was obtained from 75 technopreneur respondents in East Java who were willing to fill out the questionnaire. The characteristics of the respondents can be seen in Table 1.

Table 1: Respondent characteristics

n = 75			
		Frequency	Percentage
Gender	Male	37	49.33%
	Female	38	50.67%
Age	< 20 years	1	1,33%
	21 – 30 years	60	80.00%
	> 30 years	14	18.67%
Length of Business	1-3 years	51	68,6%
	3-5 years	11	14%
	>5 years	13	17,4%
Type of Business	E-Commerce	22	29,3%
	Start-up	6	8%
	UMKM Digital	47	62,7%
Frequency of Fintech Service Use	Daily	38	50,7%
	Weekly	15	20%
	Monthly	16	21,3%
	Seldom	6	8%

Source: data processed (2025)

Based on Table 1, it can be concluded that the research subjects were predominantly young productive age groups (21-30 years old) who ran digital MSME start-ups with an operational period of 1-3 years. Although the gender proportion of respondents is balanced between men and women, their behavior patterns of respondents show a very high level of technology adoption, as seen from the majority of respondents who integrate fintech services into their daily operational activities.

Outer Model Test

Table 2: Outer model test

Construct	Item	Loading	<i>a</i>	CR	AVE
Digital Financial Literacy	I understand the main features and functions of digital financial services such as e-wallets and mobile banking.	0.888	0.906	0.931	0.730
	I understand the security and privacy risks involved in using digital financial services.	0.896			
	I can use digital financial services efficiently for business activities.	0.887			
	I know the steps to take if a transaction error occurs in a digital financial service.	0.757			
	I understand the strategies that can be used to manage or reduce risks in digital financial transactions.	0.835			
Financial Behavior	I regularly prepare financial budgets for both personal and business purposes.	0.865	0.896	0.923	0.707
	I consistently save and invest regularly for reserves or future needs.	0.776			
	I control my expenses so they do not exceed my income.	0.801			
	I monitor my personal and business financial conditions regularly.	0.893			
	I always pay my bills and financial obligations on time to avoid late payments.	0.765			
Financial Satisfaction	I am satisfied with my current financial situation.	0.839	0.880	0.912	0.675
	I feel capable of meeting my needs with my current income.	0.823			
	I feel secure about my future financial situation.	0.884			
	I am satisfied with how I manage my personal and business finances.	0.848			
	I feel capable of controlling my expenses and managing my debts well.	0.807			

Source: data processed (2025)

Based on Table 2, the Outer Model test results show that all indicators meet the convergent validity requirements. This is evidenced by the Loading Factor values for all items being above 0.70 and the Average Variance Extracted (AVE) values for the three variables (Digital Financial Literacy, Financial Behavior, and Financial Satisfaction) being greater than 0.50, namely 0.730, 0.707, and 0.675, respectively.

In addition, the research instrument was also declared reliable. This can be seen from the Cronbach's Alpha and Composite Reliability (CR) values for all variables, which are well above the 0.70 threshold. Thus, it can be concluded that the indicators used in this study are valid and reliable for further measurement.

Inner Model Test

Table 3: Inner model test

	R ²	Q ²	SRMR
Y	0,600	0,368	
Z	0,507	0,338	
			0,100

Source: data processed (2025)

R² Analysis (R-Square)

The analysis of the coefficient of determination (R²) indicates that digital financial literacy (DFL) and financial behavior (FB) collectively account for a meaningful share of the variation observed in the endogenous constructs. In particular, DFL explains 50.7% of the variance in FB (R² = 0.507), suggesting that individuals with stronger digital financial competencies are more likely to engage in prudent financial conduct such as maintaining budgets, saving regularly, and performing secure digital transactions. This finding reinforces DFL's position as a fundamental antecedent that shapes financial behavior, which subsequently serves as a bridge to greater financial satisfaction (FS). Furthermore, DFL and FB together explain 60% of the variance in FS (R² = 0.600). This outcome reveals that digital financial skills and responsible behavioral patterns significantly contribute to individuals' sense of financial well-being. Importantly, while DFL has a direct impact on FS, much of this effect is transmitted indirectly through FB, affirming the mediating role of financial behavior within the structural framework. Consistent with Hair et al. (2019), these R² values are categorized as moderate to strong, indicating a model with considerable explanatory strength.

Q² Analysis (Q-Square)

The predictive relevance analysis (Q²) further substantiates the model's robustness. The Q² value for FB (0.338) indicates moderate-to-high predictive relevance, implying that DFL not only explains current behavioral outcomes but also effectively forecasts financial behavior across new or unobserved contexts. Similarly, the Q² value for FS (0.368) surpasses the 0.35 benchmark, reflecting strong predictive validity. This demonstrates that both direct and mediated pathways from DFL through FB enhance the model's predictive precision regarding financial satisfaction. From a substantive standpoint, these findings highlight that strengthening individuals' digital financial literacy promotes healthier financial behaviors, which, in turn, elevate their overall satisfaction with personal finances, thereby underscoring the pivotal mediating role of financial behavior within the proposed model.

SRMR (Standardized Root Mean Square Residual) Analysis

SRMR is used to measure model fit. It measures the difference between the observed correlation and the correlation predicted by the model. A commonly used standard (Sarstedt et al., 2019) recommends an SRMR value < 0.08 to be considered a good fit. However, some more lenient PLS-SEM literature accepts values up to < 0.10 as an acceptable fit. With a value of exactly 0.100, this model is borderline. It can still be considered acceptable, but it does not qualify as a perfect good fit.

Hypothesis Test

Table 4: Hypothesis test

	Hypothesis	(β)	t-Statistic	p-Value	Description
H1	Digital Financial Literacy → Financial Satisfaction	0.164	1.226	0.220	Not Significant
H2	Digital Financial Literacy → Financial Behavior	0.649	5.208	0.000	Significant
H3	Financial Behavior → Financial Satisfaction	0.712	7.774	0.000	Significant
H4	Digital Financial Literacy → Financial Satisfaction through Financial Behavior	0.462	4.992	0.000	Mediate

Source: data processed (2025)

Based on research conducted by (Hair et al., 2019), it is explained that a hypothesis in a study can be accepted if sig (P-Values) < 0.05 and the T-statistic is > 1.96. Based on the hypothesis test results in Table 4, the following results can be seen:

1. Digital financial literacy (DFL) shows a path coefficient value of 0.164 with a t-statistic of 1.226, and a p-value of 0.220 (> 0.05), indicate that DFL does not have a significant direct effect on financial satisfaction.
2. Digital financial literacy (DFL) shows a path coefficient value of 0.649, with a t-statistic of 5.208, and a p-value of 0.000 (< 0.05), indicate that DFL has a strong and significant positive effect on financial behavior.
3. Financial behavior shows a path coefficient value of 0.712, with a t-statistic of 7.774, and a p-value of 0.000 (< 0.05), indicate that financial behavior has a dominant and significant positive effect on financial satisfaction.
4. The mediation analysis confirms that financial behavior fully mediates the relationship between digital financial literacy (DFL) and financial satisfaction. The indirect effect of DFL on financial satisfaction through financial behavior is significant (β = 0.462; t = 4.992; p = 0.000), while the direct effect remains insignificant (β = 0.164; p = 0.220).

Discussion

Digital Financial Literacy on Financial Satisfaction

Digital financial literacy does not have a significant direct effect on financial satisfaction. This means that an increase in digital financial knowledge does not necessarily result in higher satisfaction levels among technopreneurs. The relatively small coefficient suggests that, in practical terms, understanding digital finance tools contributes only minimally to feelings of financial well-being when not accompanied by consistent behavioral application.

These findings align with the results of Adelaide and Siahaan (2024), who also reported that DFL did not significantly influence financial satisfaction, implying that

literacy alone is insufficient without active implementation. However, this contrasts with Sarlawa (2025), whose study showed a positive and significant relationship between DFL and satisfaction, particularly in more digitally literate populations. According to Thaler (1999) and Ajzen (1991), the insignificant relationship found here indicates that while knowledge can shape rational decision-making, it must first translate into behavior and perceived control to affect satisfaction meaningfully.

Field observations reinforce this result. Many respondents demonstrated a high level of awareness of financial applications and digital services, such as e-wallets and online banking, but admitted they rarely used these tools for structured budgeting or saving. Some technopreneurs focused more on day-to-day business transactions without integrating digital features for long-term financial planning. This suggests that the presence of knowledge alone does not guarantee effective financial management or satisfaction, as it requires habit formation and behavioral consistency.

This pattern illustrates that the relationship between digital financial literacy and financial satisfaction operates more effectively through behavioral mechanisms rather than direct influence. In other words, DFL serves as an enabling factor that must be followed by disciplined financial behavior — such as saving, expense monitoring, and responsible credit use — to generate tangible satisfaction. Hence, the indirect effect of DFL through financial behavior becomes more substantial than its direct effect, emphasizing that digital competence must be integrated into consistent financial practices to improve financial well-being.

Digital Financial Literacy on Financial Behavior

The analysis shows that digital financial literacy has a strong and significant positive effect on financial behavior. This indicates that improvements in digital financial literacy substantially increase the likelihood that individuals engage in responsible financial behaviors, such as budgeting, saving, and managing credit prudently. The coefficient magnitude also suggests that the behavioral impact of DFL is much stronger than its direct effect on financial satisfaction, reinforcing the idea that DFL primarily shapes outcomes through behavioral transformation rather than direct influence.

These results are consistent with the Theory of Planned Behavior proposed by Ajzen (1991), which asserts that knowledge and perceived control influence behavioral intention and subsequent actions. In line with Gutter and Copur (2011), individuals with higher financial knowledge tend to demonstrate stronger self-control and more structured financial practices. Similarly, Kusumawardhani et al. (2025) found that DFL significantly enhances responsible budgeting and saving behaviors among Indonesian entrepreneurs, suggesting that digital competence builds both confidence and discipline in financial management.

Field observations support these empirical findings. Many technopreneurs who actively use digital financial platforms, such as mobile banking, digital wallets, and accounting apps, report greater consistency in recording transactions, monitoring cash flow, and planning savings. Respondents with higher DFL levels showed stronger commitment to tracking expenses and using financial data to guide business decisions. Conversely, those with lower literacy tended to rely on manual or ad-hoc systems, leading to less disciplined financial management.

This relationship demonstrates that digital financial literacy acts as a behavioral catalyst, transforming abstract knowledge into tangible financial actions. DFL empowers individuals to apply their understanding of technology in practical financial management, bridging the gap between awareness and execution. Therefore, the indirect

effect of DFL through financial behavior becomes a critical mechanism in improving overall financial well-being. Programs aimed at strengthening financial literacy should thus focus not only on knowledge dissemination but also on behavioral reinforcement — for example, through digital budgeting workshops, simulation-based financial applications, or peer learning initiatives that encourage sustained financial discipline.

Financial Behavior on Financial Satisfaction

The analysis shows that financial behavior has a dominant and significant positive effect on financial satisfaction. This indicates that consistent and disciplined financial behavior contributes far more strongly to satisfaction than any direct effect of digital financial literacy (DFL). Comparatively, the behavioral effect ($\beta = 0.712$) is more than four times greater than the direct literacy effect ($\beta = 0.164$), reinforcing that practical actions, rather than knowledge alone, are the main determinants of financial satisfaction among technopreneurs.

These findings support Behavioral Finance Theory (Thaler, 1999), which argues that satisfaction and well-being are shaped by repeated decision-making patterns and financial habits rather than informational awareness. Gutter and Copur (2011) also observed that positive financial behavior, such as saving regularly and managing expenses prudently, mediates the relationship between literacy and well-being by fostering psychological comfort and a sense of control. Similarly, Vineeth et al. (2025) found that individuals who plan and monitor their spending report higher levels of financial satisfaction, as these habits help reduce stress and enhance confidence in financial stability.

Field evidence further strengthens these findings. Respondents who consistently applied structured financial practices—such as setting savings targets, maintaining digital transaction records, and adhering to spending limits—tended to express higher satisfaction with their financial condition. In contrast, those who lacked consistent behavioral patterns often reported uncertainty and dissatisfaction, even when they possessed sufficient financial knowledge. This suggests that satisfaction emerges from behavior that translates literacy into meaningful, daily financial discipline.

This relationship illustrates that financial behavior functions as the central channel through which technopreneurs attain financial satisfaction. Behavioral consistency, rather than mere understanding of financial tools, transforms digital literacy into real financial security and peace of mind. Consequently, policy initiatives and financial training programs should prioritize behavioral coaching and habit formation — for example, digital expense tracking, peer accountability systems, or gamified saving programs — to cultivate lasting improvements in financial satisfaction and well-being.

The Mediation of Financial Behavior

The mediation analysis confirms that financial behavior fully mediates the relationship between digital financial literacy and financial satisfaction. These results indicate that almost all of DFL's impact on financial satisfaction operates through behavioral change. The relatively large indirect coefficient highlights that behavioral transformation serves as the primary mechanism through which digital financial knowledge influences overall financial well-being.

This finding integrates the logic of the Theory of Planned Behavior (Ajzen, 1991) and Behavioral Finance Theory (Thaler, 1999), illustrating that literacy (cognitive understanding) influences behavior (action), which subsequently determines satisfaction (affective outcome). Consistent with Adelaide and Siahaan (2024) as well

as Sarlawa (2025), the study confirms that financial behavior significantly mediates the effect of DFL on satisfaction, reinforcing the notion that knowledge must be operationalized through consistent financial actions. Likewise, Joo and Grable (2004) emphasize that attitudes and behaviors are key mediating components linking financial literacy to financial well-being, which aligns with the full mediation observed in this study.

Field observations provide further empirical support. Respondents who demonstrated higher digital financial literacy but failed to apply it in daily financial practices did not experience higher satisfaction, while those who consistently implemented digital tools for budgeting, tracking, and saving reported stronger financial confidence and stability. This suggests that DFL alone is insufficient to improve satisfaction unless it is embodied in habitual financial management.

Overall, these findings confirm that financial behavior acts as a full mediator between digital financial literacy and financial satisfaction. This mechanism underscores the importance of behavioral reinforcement programs—such as financial mentoring, digital habit tracking, and incentive-based savings applications—to ensure that literacy translates into real improvements in financial satisfaction and long-term financial well-being.

5. CONCLUSIONS, IMPLICATIONS, SUGGESTIONS AND LIMITATION OF THE RESEARCH

Based on the results of the study, it can be concluded that digital financial literacy has a positive and significant effect on financial behavior, which in turn has a significant effect on financial satisfaction. However, this study found that digital financial literacy does not have a significant direct effect on financial satisfaction, so that a high level of financial technology knowledge alone does not automatically increase satisfaction without actual implementation. This condition confirms that financial behavior acts as a full mediation variable in the relationship between digital financial literacy and financial satisfaction, where digital knowledge will only have an impact on economic well-being if it is successfully transformed into disciplined and planned financial management actions.

This study provides crucial managerial and policy implications, particularly regarding the finding that digital financial literacy cannot improve financial satisfaction without tangible behavioral improvements. Practically, these results suggest to technopreneurs that simply understanding financial technology features is not enough; they are required to transform this knowledge into disciplined daily routines, such as neat cash flow recording and consistent use of digital accounting applications, because it is this discipline that ultimately creates a sense of security and economic stability. On the other hand, for the government and policymakers, these findings provide a basis for evaluating the redesign of financial education models. Training programs should no longer stop at cognitive aspects or theoretical introduction alone, but must be accompanied by behavioral interventions and the provision of supporting tools that compel or facilitate the formation of healthy financial habits among business actors.

This study acknowledges several limitations. The analysis was limited to technopreneurs in East Java, which may constrain the generalization of the findings to a broader national context. Financial satisfaction is influenced by various factors beyond those examined in this study. Future research is encouraged to expand the model by including additional variables, such as business income, financial stress, risk tolerance, or social support, to provide a more comprehensive understanding of financial

satisfaction. Expanding the study to cover a wider geographical scope or conducting comparative analyses across different demographic or generational groups is also recommended to enhance the external validity and representativeness of future findings.

6. REFERENCES

- Adelaide, P. K., & Siahaan, A. (2024). *The Influence of Digital Financial Literacy and The Use of Financial Technology Towards Financial Satisfaction Through Financial Behavior*. https://doi.org/10.2991/978-94-6463-585-0_15
- Ajeng Trixsiana, & Wiwik Lestari. (2024). The Impact of Financial Literacy, Pocket Money, Financial Education in The Family and Hedonis Lifestyle on Students Financial Behavior. *Ekspektra: Jurnal Bisnis Dan Manajemen*, 8(1), 64–79. <https://doi.org/10.25139/ekt.v8i1.7676>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Awan, A., Haroon ul Hasnain, M., & Jawad Arshad, H. M. (2023). Technopreneurship for Driving Economic Growth in Pakistan: A Comprehensive Literature Review. *Journal of Policy Research*, 12(4), 60–66. <https://doi.org/10.61506/02.00127>
- Başar, D., Keskin, H., Esen, E., Merter, A. K., & Balçioğlu, Y. S. (2025). Digital financial literacy and savings behavior: A comprehensive cross-country analysis of FinTech adoption patterns and economic outcomes across 12 nations. *Borsa Istanbul Review*, 25, 59–72. <https://doi.org/10.1016/J.BIR.2025.09.004>
- Borgschulte, M., Corredor-Waldron, A., & Marshall, G. (2018). A path out: Prescription drug abuse, treatment, and suicide. *Journal of Economic Behavior & Organization*, 149, 169–184. <https://doi.org/10.1016/J.JEBO.2018.03.006>
- Choung, Y., Chatterjee, S., & Pak, T. Y. (2023). Digital financial literacy and financial well-being. *Finance Research Letters*, 58, 104438. <https://doi.org/10.1016/J.FRL.2023.104438>
- Gutter, M., & Copur, Z. (2011). Financial Behaviors and Financial Well-Being of College Students: Evidence from a National Survey. *Journal of Family and Economic Issues*, 32(4), 699–714. <https://doi.org/10.1007/s10834-011-9255-2>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019, January 14). When to use and how to report the results of PLS-SEM. *European Business Review*, Vol. 31, pp. 2–24. Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hitesh, K., & Sandhu, S. (2024). Digital Financial Literacy And Perceived Financial Well-Being Among Indian Adolescents And Young Adults: The Importance Of Financial Capability And Resilience. *The Review of Finance and Banking*, 16(2), 231–247. <https://doi.org/10.24818/rfb.24.16.02.04>
- Joo, S.-H., & Grable, J. E. (2004). *An Exploratory Framework of the Determinants of Financial Satisfaction*.
- Komdigi. (2024). *Laporan perkembangan gerakan nasional 1000 startup digital*. Jakarta: Kominfo.
- Kusumawardhani, R., Prihatin, W., Damanik, J. M., & Mubarokah, S. (2025). Digital financial literacy and consumer financial behavior in emerging markets: Evidence from Indonesia. *Jurnal Ekonomi Dan Bisnis*, 28(Oktober), 491–512.
- Lal, S., Bawalle, A. A., Khan, M. S. R., & Kadoya, Y. (2025). What Determines Digital Financial Literacy? Evidence from a Large-Scale Investor Study in Japan. *Risks*, 13(8). <https://doi.org/10.3390/risks13080149>
- Lone, U. M., Bhat, S. A., Irfan, P. S. U., & Darzi, M. A. (2025). Impact of digital financial literacy on financial well-being: moderating role of gender and religiosity.

- Journal of Financial Services Marketing*, 30(2). <https://doi.org/10.1057/s41264-025-00309-8>
- Maina Waweru, N., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. In *Int. J. Business and Emerging Markets* (Vol. 1).
- Mubarokah, S., Sari, P. P., & Kusumawardhani, R. (2024). Influence of Digital Financial Literacy on Saving Behavior Among Gen Z in Indonesia. *Indonesian Journal of Economics, Business, Accounting, and Management (IJEBAAM)*, 2(5), 39–47. <https://doi.org/10.63901/ijebam.v2i5.86>
- OECD. (2021). *International Network on Financial Education*.
- OECD. (2022). *Infe Toolkit For Measuring Financial Literacy And Financial Inclusion 2022*. Retrieved from www.oecd.org/financial/education/2022-INFE-Toolkit-Measuring-Finlit-Financial-Inclusion.pdf
- Otoritas Jasa Keuangan (OJK). (2022). *Survei Nasional Literasi dan Inklusi Keuangan Indonesia 2022*. Jakarta: Otoritas Jasa Keuangan.
- Riwayati, H. E., Markonah, & Siladjaja, M. (2016). Implementation of Corporate Governance Influence to Earnings Management. *Procedia - Social and Behavioral Sciences*, 219, 632–638. <https://doi.org/10.1016/j.sbspro.2016.05.044>
- Sarlawa, R. (2025). Digital Financial Literacy and Financial Behavior: Pathways to Inclusion and Resilience. In *Jurnal Ilmiah Manajemen Kesatuan* (Vol. 13).
- Sarstedt, M., Hair, J. F., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 27(3), 197–211. <https://doi.org/10.1016/j.ausmj.2019.05.003>
- Startup Ranking. (2025). Top Startup Ranking 2025. Retrieved December 26, 2025, from <https://www.startupranking.com> website: <https://www.startupranking.com/countries>
- Thaler, R. H. (1999). The End of Behavioral Finance. *Journal of Behavioral Decision Making*, 12(3), 183–206.
- Vineeth, K., Shiju, C., & Sruthy Melbin, M. (2025). Influence of Financial Behaviour on Financial Satisfaction and Financial Wellbeing. *Research Journal of Humanities and Social Sciences*, 4(16), 273. <https://doi.org/10.52711/2321-5828.2025.00045>