Financial Literacy and Financial Self-Efficacy as Determinants of Responsible Financial Behavior: The Effect of Fintech Adoption and Financial Stress

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ABSTRACT

This study is motivated by the increasing complexity of financial behavior in the digital era, where the rapid expansion of Financial Technology (Fintech) has enhanced access to financial services but has not necessarily led to more responsible financial behavior. Although financial literacy and financial self-efficacy are recognized as key determinants of financial decision-making, empirical findings remain inconsistent, indicating the need to explore additional mechanisms such as fintech adoption. This study aims to examine the effects of financial literacy and financial self-efficacy on responsible financial behavior, incorporating fintech adoption as a mediating variable and financial stress as a moderating variable. A quantitative survey design was employed, involving 236 Generation Z respondents in Pontianak, Indonesia, and analyzed using SEM-PLS. The results reveal that financial literacy has a positive but insignificant direct effect, while financial self-efficacy significantly influences responsible financial behavior. Fintech adoption is found to have a positive effect and mediates both relationships. Additionally, financial stress weakens the relationship between financial literacy and financial behavior. In conclusion, promoting responsible financial behavior requires the integration of financial knowledge, self-efficacy, and effective utilization of fintech.

Keywords*: Financial Literacy, Financial Self-Efficacy, Financial Stress, Fintech Adoption, Responsible Financial Behavior.*

INTRODUCTION

Responsible Financial Behavior (RFB) has become an increasingly important issue in modern financial systems, particularly in the digital era characterized by growing complexity in individuals' financial decision-making. The rapid expansion of digital financial services has significantly improved access to financial products; however, this development has not always been accompanied by improvements in responsible financial practices. Many individuals continue to exhibit suboptimal financial behaviors, such as excessive consumption, low saving tendencies, and reliance on short-term credit, indicating a persistent gap between financial access and actual financial behavior (Van Raaij, 2016; Ergün, 2025).

Financial literacy and financial self-efficacy are commonly acknowledged as essential factors influencing financial behavior. Financial literacy involves a person's comprehension of financial concepts and products, whereas financial self-efficacy denotes the belief in one's capability to handle financial issues successfully. People who possess greater financial literacy and self-efficacy are typically anticipated to make more logical and responsible financial choices (Farrell et al., 2016; Yeh, 2022; Mahdzan et al., 2023; Nogueira et al., 2025). Nonetheless, empirical data continue to be inconsistent, as financial literacy does not consistently lead to responsible financial actions. This unpredictability is frequently linked to behavioral biases, cognitive restrictions, and

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contextual limitations that affect decision-making processes (Xu et al., 2022; Chen et al., 2023; Mireku et al., 2023)

In the context of digital transformation, Financial Technology (Fintech) has emerged as a potential mechanism for bridging the gap between financial capability and financial behavior. Fintech provides various services, including digital payments, financial management tools, and investment planning applications, which facilitate more efficient financial decision-making. Previous studies suggest that individuals with higher financial literacy and self-efficacy are more likely to adopt fintech services, which in turn may enhance financial outcomes (Amnas et al., 2023; Gafoor & Amilan, 2024; Budiyanto et al., 2025). Nevertheless, most existing research has primarily focused on adoption intention, rather than examining fintech's role as a mediating mechanism that shapes responsible financial behavior (Prabhakaran & Mynavathi, 2025).

In addition to cognitive and technological factors, psychological factors such as financial stress play a critical role in shaping financial decision-making. Financial stress, defined as psychological pressure resulting from financial difficulties, can impair cognitive functioning and lead individuals to prioritize short-term financial needs over long-term financial planning. Such conditions are often associated with reduced financial discipline and poorer financial outcomes (Kalra, 2010; Heo et al., 2021; Fan, 2021). Furthermore, higher levels of financial stress have been linked to negative financial behaviors and outcomes (Rahman et al., 2021; Zhang & Chatterjee, 2023). However, its role as a moderating variable in the relationship between financial capability and financial behavior remains underexplored in the literature.

This study is grounded in behavioral finance theory, which posits that financial decisions are not purely rational but are influenced by bounded rationality, heuristics, and emotional factors (Campitelli & Gobet, 2010; Gigerenzer & Gaissmaier, 2011). Based on this theoretical foundation, the study develops an integrated model incorporating financial literacy and financial self-efficacy as antecedent variables, fintech adoption as a mediating variable, and financial stress as a moderating variable in explaining responsible financial behavior.

This study's integrative framework, which incorporates cognitive, technological, and psychological aspects into a single analytical model, is what makes it new. This study further reconceptualizes fintech adoption not merely as an outcome of financial capability but as a mediating mechanism that translates financial knowledge and confidence into responsible financial behavior. Furthermore, a more thorough knowledge of how external influences may weaken or change behavioral outcomes is provided by the inclusion of financial stress as a contextual moderating factor. With fintech adoption as a mediating factor and financial stress as a moderating factor, this study attempts to examine how financial literacy and financial self-efficacy impact responsible financial behavior. This study aims to enhance the behavioral finance literature by providing a comprehensive explanatory model. The results are anticipated to offer important perspectives for policymakers and financial organizations in encouraging responsible financial practices in the digital age.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Influence on Responsible Financial Behavior

Financial literacy is widely recognized as a key determinant of responsible financial behavior, as it reflects an individual's knowledge and understanding of fundamental financial concepts such as interest rates, inflation, risk diversification, and long-term financial planning (Lusardi & Mitchell, 2014). Individuals with higher financial literacy are generally more capable of evaluating financial alternatives, managing debt effectively, and engaging in systematic saving and investment activities. Empirical studies by Barbić et al. (2019) and Bapat (2020) show that financial literacy contributes positively to improved financial decision-making, including better budgeting discipline and reduced financial vulnerability. However, prior literature by Yeh (2022) also highlights a persistent inconsistency between financial knowledge and actual behavior, indicating that

understanding financial concepts does not always translate into responsible financial actions.

In addition to cognitive knowledge, financial self-efficacy plays a significant psychological role in shaping financial behavior. Financial self-efficacy refers to an individual's perceived confidence in managing financial tasks effectively, including budgeting, saving, and handling financial challenges (Lown, 2011). Based on Bandura's (1989) and Bandura et al. (1999) social cognitive theory, self-efficacy influences motivation, persistence, and behavioral execution. Individuals with higher financial self-efficacy tend to demonstrate stronger financial discipline, greater spending control, and improved resilience in managing financial stressors (Farrell et al., 2016; Mahdzan et al., 2023). Accordingly, both financial literacy and financial self-efficacy are expected to significantly enhance responsible financial behavior.

H1: Financial literacy has a positive effect on responsible financial behavior.
H2: Financial self-efficacy has a positive effect on responsible financial behavior.

The Influence on Fintech Adoption

Financial Technology (Fintech) has transformed the financial landscape by providing digital platforms that facilitate payments, investments, savings, and financial management. Fintech adoption refers to the extent to which individuals utilize these digital financial services in their daily financial activities (Zhang & Fan, 2023). In this context, financial literacy becomes an essential determinant because individuals with higher financial knowledge are better able to understand financial products, assess risks, and evaluate the benefits of digital financial services. This cognitive ability enables them to make informed decisions regarding the use of fintech platforms, thereby increasing the likelihood of adoption (Prabhakaran & Mynavathi, 2025). Financial literacy thus enhances individuals' capability to navigate complex digital financial ecosystems effectively.

Similarly, financial self-efficacy significantly influences fintech adoption behavior. Individuals who possess strong confidence in their financial management abilities are more willing to engage with new financial technologies and overcome perceived barriers related to digital tools. Financial self-efficacy reduces anxiety toward technology use and increases adaptability in managing digital financial transactions (Farrell et al., 2016). As fintech platforms require active user engagement and decision-making, individuals with higher self-efficacy are more likely to adopt and consistently use such technologies. Therefore, both financial literacy and financial self-efficacy are expected to positively influence fintech adoption behavior.

H3: Financial literacy has a positive effect on fintech adoption.
H4: Financial self-efficacy has a positive effect on fintech adoption.

The Influence of Fintech Adoption on Financial Behavior

Because fintech adoption offers easily accessible, effective, and real-time financial management solutions, it plays an increasingly significant role in influencing people's financial behavior. Digital financial services such as mobile banking, e-wallets, and investment applications enable users to monitor transactions, manage budgets, and control expenditures more effectively (Zhang & Fan, 2023). By making managing personal finances more transparent and convenient, these technological elements promote better financial planning and improve financial discipline. From this perspective, fintech adoption can be seen as a facilitating mechanism that strengthens responsible financial behavior through improved financial awareness and control.

However, the impact of fintech adoption is not entirely positive, as digital convenience may also encourage impulsive spending behavior due to reduced psychological friction in transactions (Soman, 2001; Strömbäck et al., 2017). Despite this limitation, individuals with adequate financial literacy and self-control can leverage fintech tools to improve

financial outcomes rather than worsen them. When used effectively, fintech applications enhance budgeting accuracy, financial monitoring, and long-term financial planning (Prabhakaran & Mynavathi, 2025). Therefore, fintech adoption is expected to have a positive effect on financial behavior.

H5: Fintech adoption has a positive effect on responsible financial behavior.

The Effect of Fintech Adoption as a Mediating Variable

The relationship between financial capability and financial behavior is often indirect, as individuals do not always convert financial knowledge and confidence into actual behavior. In this context, fintech adoption serves as a mediating mechanism that bridges financial literacy and financial self-efficacy with financial behavior. Financially literate individuals are more capable of understanding digital financial services, while those with higher self-efficacy feel more confident in using such platforms. These factors jointly encourage the adoption of fintech applications, which subsequently influence financial behavior by providing structured tools for budgeting, saving, and financial tracking (Zhang & Fan, 2023).

Through fintech adoption, financial capability is translated into practical financial actions. Digital financial platforms enable individuals to monitor spending patterns, evaluate financial performance, and make more informed financial decisions in real time. This process strengthens responsible financial behavior by reinforcing discipline and reducing financial mismanagement (Prabhakaran & Mynavathi, 2025). Therefore, fintech adoption functions as an important intermediary that transforms financial literacy and self-efficacy into observable financial outcomes.

H6: Fintech adoption mediates the effect of financial literacy on responsible financial behavior.
H7: Fintech adoption mediates the effect of financial self-efficacy on responsible financial behavior.

The Effect of Financial Stress as a Moderating Variable

Financial stress refers to psychological strain caused by financial difficulties, which can negatively affect cognitive processing and decision-making quality (Heo et al., 2021). Individuals experiencing high financial stress tend to prioritize short-term survival needs over long-term financial planning, which may reduce their ability to apply financial knowledge effectively. As a result, financial stress can weaken the positive influence of financial literacy on responsible financial behavior, as cognitive overload limits rational financial decision-making (Fan, 2021).

Similarly, financial stress can also moderate the relationship between financial self-efficacy and financial behavior. Even individuals with high confidence in managing finances may experience reduced behavioral control under high stress conditions, leading to impulsive or suboptimal financial decisions (Singh et al., 2023; Simonse et al., 2024). Conversely, lower levels of financial stress allow individuals to fully utilize their financial knowledge and self-efficacy in making rational financial choices. Empirical studies confirm that financial stress can significantly alter the strength of financial capability effects on financial behavior (Fernandes et al., 2014; Heo et al., 2021).

H8: Financial stress moderates the effect of financial literacy on responsible financial behavior.
H9: Financial stress moderates the effect of financial self-efficacy on responsible financial behavior.

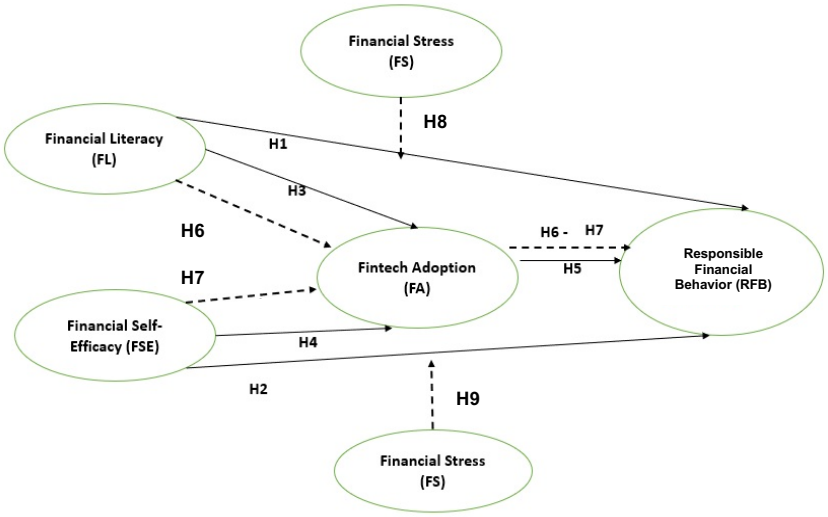

Figure 1. Conceptual Framework

Fintech adoption and responsible financial conduct are directly impacted by financial literacy and financial self-efficacy, as Figure 1 illustrates. Adoption of fintech also serves as a bridge that can increase the impact of self-efficacy and financial literacy on prudent financial conduct. Additionally, financial stress can have a direct or indirect impact on this relationship, either by strengthening or weakening the effects of fintech adoption, financial self-efficacy, and financial literacy on responsible financial conduct.

RESEARCH METHODS

This study adopts a quantitative research approach using a survey design to examine the relationships among financial literacy, financial self-efficacy, fintech adoption, financial stress, and responsible financial behavior. A cross-sectional design is employed, in which data are collected at a single point in time. This approach is considered appropriate as it enables the analysis of causal relationships among variables based on a theoretically developed conceptual framework derived from behavioral finance theory, without manipulating any of the observed variables.

The population of this study consists of Generation Z students in Pontianak City, West Kalimantan, Indonesia. The unit of analysis is individual students who have experience using digital financial services, such as e-wallets, mobile banking, and pay-later applications. Generation Z was selected due to their high familiarity with digital technologies and their dynamic financial behavior in response to digital financial innovations. A purposive sampling technique was applied with specific criteria, namely respondents aged 18–25 years, residing in Pontianak, and having experience using fintech services. Based on these criteria, a total of 236 valid responses were obtained for further analysis. Respondent profiles include demographic characteristics such as gender, age, income level, types of fintech services used, and frequency of usage.

This study involves five main constructs. Financial literacy is defined as an individual's ability to understand fundamental financial concepts, including interest rates, inflation, risk, and financial decision-making processes (Lusardi & Mitchell, 2014; OECD, 2020). Financial self-efficacy refers to an individual's confidence in effectively managing personal financial matters and overcoming financial challenges (Badrudin, 2025). Fintech adoption reflects the level of acceptance and utilization of digital financial services in everyday financial activities (Daqar et al., 2020). Financial stress is defined as psychological pressure arising from financial instability or financial difficulties (Heo et al., 2020). Meanwhile, responsible financial behavior refers to the ability to manage financial resources prudently, including budgeting, saving habits, debt management, and rational financial decision-making (Xiao & Porto, 2017).

Primary data were collected using an online questionnaire distributed via Google Forms. The instrument consisted of two sections: respondents' demographic information and measurement items for each research construct. All items were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), designed to capture respondents' perceptions and attitudes toward each variable.

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to examine direct, mediating, and moderating effects within the proposed model. Convergent validity (outer loadings > 0.70; AVE > 0.50), reliability (Cronbach's Alpha and Composite Reliability > 0.70), and discriminant validity (using the Fornell-Larcker criterion and HTMT ratio) were used to assess the measurement model. Meanwhile, the structural model was assessed using path coefficients, t-statistics, and p-values obtained through bootstrapping, as well as R-square values to determine the explanatory power of the model.

RESULTS

The data in this study describe the characteristics of the respondents, including gender, age, monthly income, type of fintech service used, and frequency of fintech use. This information is presented to provide an overview of the profile of the respondents involved in the study and to support an understanding of the context of the analysis. Details of these respondent characteristics are presented in Table 1.

Table 1. Characteristics of Respondent

Characteristics	Category	Frequency	Percentage (%)
Gender	Male	102	43.2
	Female	134	56.8
Age	18–20 years	98	41.5
	21–23 years	110	46.6
	24–25 years	28	11.9
Monthly Income (Allowance)	< IDR 2,000,000	72	30.5
	IDR 2,000,000 – 3,500,000	96	40.7
	IDR 3,500,000 – 5,000,000	48	20.3
	> IDR 5,000,000	20	8.5
Fintech Services Used	E-wallet (OVO, Dana, GoPay)	105	44.5
	Mobile Banking	65	27.5
	Pay later (BNPL)	60	25.4
	Digital Investment	6	2.6
Frequency of Fintech Usage	Rare (<1 time/week)	40	16.9
	Moderate (2–4 times/week)	110	46.6
	Frequent (≥5 times/week)	86	36.4

Table 1 summarizes the respondents' characteristics, showing that females constitute a slightly higher proportion (56.8%) than males (43.2%). The majority of respondents are aged 21–23 years (46.6%), followed by those aged 18–20 years (41.5%), while only 11.9% are between 24–25 years. In terms of monthly income, most respondents fall within the IDR 2,000,000–3,500,000 range (40.7%), indicating a generally moderate financial capacity. Regarding fintech usage, e-wallet services (OVO, Dana, GoPay) are the most commonly used (44.5%), followed by mobile banking (27.5%) and pay-later (BNPL) services (25.4%), whereas digital investment usage remains very low (2.6%). Additionally, the frequency of fintech usage is predominantly moderate (2–4 times per week) at 46.6%, followed by frequent usage (36.4%) and rare usage (16.9%), suggesting that most respondents are relatively active fintech users.

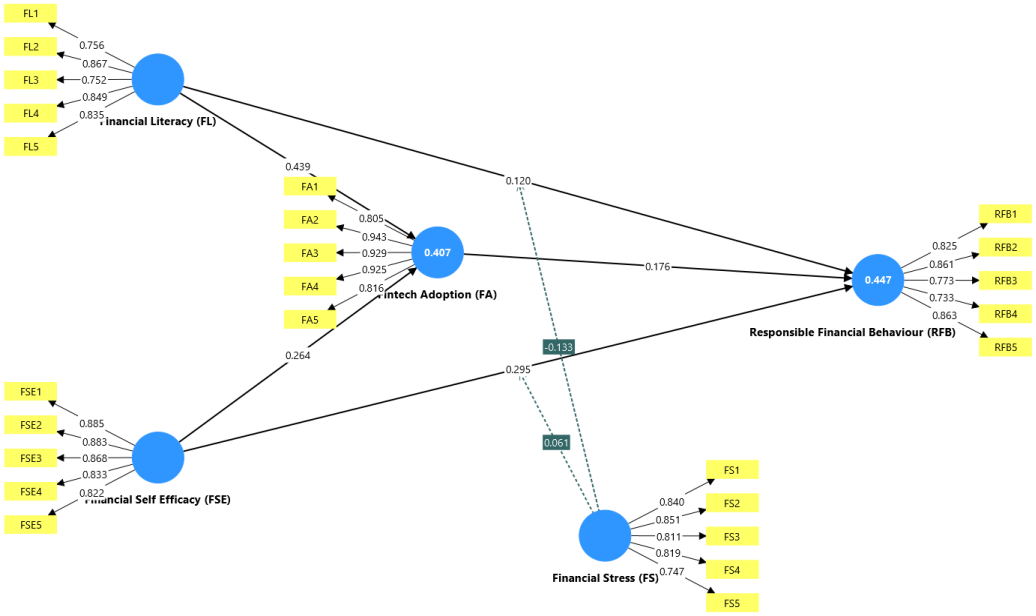

Figure 2. Measurement Model

Figure 2 illustrates the structural relationships among variables in the model. Financial literacy and financial self-efficacy both positively influence fintech adoption, with financial literacy showing a stronger effect. Fintech adoption also has a positive impact on responsible financial behavior, although the direct effects of financial literacy and financial self-efficacy on responsible financial behavior are relatively smaller. In addition, financial stress acts as a moderating variable that slightly weakens the relationships between financial literacy, financial self-efficacy, and responsible financial behavior. The coefficient of determination shows that the model explains 40.7% of the variance in fintech adoption and 44.7% in responsible financial behavior, indicating moderate explanatory power.

Table 2. Validity and Reliability

Construct	Indicator	Loading	CA	CR (rho_A)	CR (rho_C)	AVE
Financial Literacy (FL)	FL1	0.756	0.871	0.876	0.907	0.662
	FL2	0.867				
	FL3	0.752				
	FL4	0.849				
	FL5	0.835				
Financial Self-Efficacy (FSE)	FSE1	0.885	0.911	0.911	0.933	0.737
	FSE2	0.883				
	FSE3	0.868				
	FSE4	0.833				
	FSE5	0.822				
Fintech Adoption (FA)	FA1	0.805	0.930	0.936	0.948	0.784
	FA2	0.943				
	FA3	0.929				
	FA4	0.925				
	FA5	0.816				
Financial Stress (FS)	FS1	0.840	0.876	0.905	0.908	0.663
	FS2	0.851				
	FS3	0.811				
	FS4	0.819				
	FS5	0.747				
Responsible Financial Behavior (RFB)	RFB1	0.825	0.871	0.885	0.906	0.660
	RFB2	0.861				
	RFB3	0.773				
	RFB4	0.733				
	RFB5	0.863				

The measurement model's findings, including indicator loadings, validity, and reliability, are shown in Table 2. Good convergent validity is indicated by loading values above 0.7 for all indicators. Additionally, the constructions show great internal consistency, as seen by composite reliability and Cronbach's alpha values that are higher than the suggested cutoff of 0.7. Additionally, all variables' average variance extracted values are greater than 0.5, indicating sufficient convergent validity. These findings show that every construct is legitimate and dependable for further examination.

Table 3. Discriminant Validity

Variable	FL	FSE	FS	FA	RFB	FS × FL
FSE	0.704					
FS	0.365	0.555				
FA	0.665	0.584	0.399			
RFB	0.583	0.663	0.477	0.565		
FS × FL	0.513	0.404	0.110	0.496	0.407	0.793

Note: FL: Financial Literacy, FSE = Financial Self-Efficacy, FS: Financial Self-Efficacy, FA: Fintech Adoption, RFB: Responsible Financial Behavior.

Table 3 presents the discriminant validity results, indicating the degree of distinction between constructs. The correlations among variables are generally lower than the square root of the average variance extracted (diagonal values), suggesting that each construct is empirically distinct. For instance, the highest correlations, such as between financial self-efficacy and responsible financial behaviour (0.663) and between financial literacy and fintech adoption (0.665), remain below the respective diagonal value (0.793 for the interaction construct), confirming adequate discriminant validity. The results demonstrate that all variables in the model are sufficiently distinct and measure different concepts.

Table 4. Fornell-Lacker

Construct	FL	FSE	FS	FA	RFB
Financial Literacy (FL)	0.813				
Financial Self-Efficacy (FSE)	0.625	0.859			
Financial Stress (FS)	0.350	0.521	0.814		
Fintech Adoption (FA)	0.604	0.538	0.379	0.885	
Responsible Financial Behavior (RFB)	0.519	0.596	0.441	0.521	0.812

Table 4 presents the Fornell-Larcker criterion to assess discriminant validity among constructs. The diagonal values, representing the square root of the average variance extracted, are higher than the correlations with other constructs in the same row or column. For example, financial literacy (0.813), financial self-efficacy (0.859), financial stress (0.814), fintech adoption (0.885), and responsible financial behavior (0.812) all exceed their respective inter-construct correlations. This suggests that compared to other constructs, each construct shares more variance with its own indicators. As a result, the findings verify that all variables are empirically unique and that discriminant validity is well-established.

Table 5. R-Square

Variable	R-square	R-square adjusted
Fintech Adoption (FA)	0.407	0.402
Responsible Financial Behavior (RFB)	0.447	0.432

Table 5 presents the coefficient of determination (R-squared) for the endogenous variables in the model. Fintech adoption has an R-square value of 0.407 (adjusted 0.402), indicating that approximately 40.7% of its variance is explained by the independent variables in the model. Meanwhile, responsible financial behavior shows a higher R-square value of 0.447 (adjusted 0.432), meaning that 44.7% of its variance can be explained by the predictors. These values suggest that the model has moderate

explanatory power in explaining both Fintech adoption and responsible financial behavior.

Table 6. Path Coefficient and Hypothesis Testing

Hypothesis	Relationship	Original Sample	Sample Mean	Standard Deviation	t - statistics	p-values
H1	Financial Literacy → Responsible Financial Behavior	0.120	0.127	0.101	1.183	0.237
H2	Financial Self-Efficacy → Responsible Financial Behavior	0.295	0.296	0.083	3.551	0.000
H3	Financial Literacy → Fintech Adoption	0.439	0.438	0.079	5.585	0.000
H4	Financial Self-Efficacy → Fintech Adoption	0.264	0.261	0.076	3.492	0.000
H5	Fintech Adoption → Responsible Financial Behavior	0.176	0.168	0.077	2.292	0.022

The outcomes of hypothesis testing based on path coefficients are shown in Table 6. Financial self-efficacy has a positive and substantial impact on responsible financial behavior ($\beta = 0.295$; $p = 0.000$), but financial literacy has a positive but not significant influence ($\beta = 0.120$; $p = 0.237$). Fintech adoption is significantly influenced by both financial literacy and financial self-efficacy ($\beta = 0.439$ and $\beta = 0.264$; $p = 0.000$). Furthermore, responsible financial behavior is positively and significantly impacted by fintech adoption ($\beta = 0.176$; $p = 0.022$).

Table 7. Indirect and Moderating Effect

Hypothesis	Relationship	Original Sample	Sample Mean	Standard Deviation	t-statistics	p-values
H6	Financial Literacy → Fintech Adoption → Responsible Financial Behavior	0.077	0.074	0.037	2.089	0.037
H7	Financial Self-Efficacy → Fintech Adoption → Responsible Financial Behavior	0.046	0.043	0.023	1.984	0.047
H8	Financial Stress × Financial Literacy → Responsible Financial Behavior	-0.133	-0.130	0.067	1.968	0.049
H9	Financial Stress × Financial Self-Efficacy → Responsible Financial Behavior	0.061	0.064	0.069	0.887	0.375

The indirect effects and the moderation effect of the study are shown in Table 7. Through fintech adoption, financial literacy has a positive and significant indirect impact on responsible financial behavior ($\beta = 0.077$; $p = 0.037$), suggesting that fintech adoption acts as a mediation mechanism in this connection. Similarly, financial self-efficacy also shows a positive and significant indirect effect on responsible financial behavior through fintech adoption ($\beta = 0.046$; $p = 0.047$). Regarding the moderating effects, financial stress has a negative and significant interaction effect on the relationship between financial literacy and responsible financial behavior ($\beta = -0.133$; $p = 0.049$), while its interaction with financial self-efficacy shows a positive but not significant effect ($\beta = 0.061$; $p = 0.375$). These results suggest that fintech adoption plays an important role in transmitting the influence of both financial literacy and financial self-efficacy on responsible financial behavior.

DISCUSSION

The findings of this study provide important insights into the relationships among financial literacy, financial self-efficacy, fintech adoption, financial stress, and responsible financial behavior. First, financial literacy was found to have a positive but limited direct influence on responsible financial behavior. Studies by Kakinuma (2022) suggest that having knowledge about financial concepts alone is not always sufficient to translate into actual responsible financial practices. Individuals may understand financial principles but still fail to apply them consistently in daily financial decisions. This finding is consistent with prior studies, which argue that knowledge must be complemented by psychological and behavioral factors to effectively shape financial behavior.

In contrast, financial self-efficacy demonstrates a strong positive influence on responsible financial behavior. This indicates that individuals who have confidence in their ability to manage finances are more likely to engage in prudent financial practices, such as budgeting, saving, and controlling expenditures. This result aligns with previous research by Nasution (2025), emphasizing the role of self-efficacy as a key driver of behavior, where individuals with higher confidence are more proactive and disciplined in managing their financial resources.

Furthermore, both financial literacy and financial self-efficacy play significant roles in encouraging fintech adoption. This implies that individuals who are knowledgeable and confident in financial matters are more willing to utilize financial technologies. Fintech services, such as digital payments and mobile banking, are often perceived as tools that simplify financial management, and individuals with adequate knowledge and confidence are more capable of leveraging these tools effectively. This finding by Sipayung (2025) is supported by earlier studies, which highlight that technological adoption is influenced not only by accessibility but also by users' competence and confidence.

Fintech adoption itself contributes positively to responsible financial behavior. The use of fintech platforms can enhance financial management through features such as transaction tracking, budgeting tools, and easier access to financial services. A study by Bapat (2020) suggests that fintech serves as an enabling mechanism that facilitates better financial decision-making. Previous studies have similarly found that digital financial tools can improve financial discipline and promote more structured financial habits.

The moderating role of financial stress reveals a more complex dynamic. Financial stress tends to weaken the positive relationship between financial literacy and responsible financial behavior, indicating that even knowledgeable individuals may struggle to act responsibly under financial pressure. Stress can impair decision-making and reduce the ability to apply financial knowledge effectively. This finding is consistent with behavioral finance literature, which suggests that emotional and psychological conditions can interfere with rational financial behavior (Bandura et al., 1999). However, financial stress does not significantly alter the relationship between financial self-efficacy and responsible financial behavior, suggesting that confidence may serve as a more stable internal resource even under stressful conditions.

The mediation analysis highlights the important role of fintech adoption in linking both financial literacy and financial self-efficacy to responsible financial behavior. This indicates that fintech acts as a bridge through which knowledge and confidence are translated into actual behavior. Individuals who are financially literate and self-efficacious are more likely to adopt fintech, which in turn facilitates responsible financial practices. This finding is supported by previous research emphasizing the role of digital financial inclusion in enhancing financial well-being and behavior (Fan, 2021). The results underscore the importance of integrating cognitive, psychological, and technological factors in understanding responsible financial behavior.

CONCLUSION

This study demonstrates that financial literacy has a positive but limited effect on responsible financial behavior, whereas financial self-efficacy plays a more substantial role in promoting such behavior. In addition, both financial literacy and financial self-efficacy

contribute to increasing fintech adoption, which in turn enhances responsible financial behavior. Fintech adoption functions as an important mechanism that bridges individuals' financial capabilities with actual financial practices in daily life. Meanwhile, financial stress is found to weaken the relationship between financial literacy and responsible financial behavior, although it does not significantly affect the relationship between financial self-efficacy and responsible financial behavior. The implications of these findings suggest that improving responsible financial behavior requires not only financial education but also the strengthening of psychological factors, such as self-confidence, as well as the effective utilization of financial technology.

However, this study has several limitations, including the limited scope of respondents, which is dominated by young individuals, thereby restricting the generalizability of the findings. Furthermore, the use of cross-sectional data is unable to capture the dynamics of financial behavior over time. Therefore, future research is recommended to expand the characteristics of respondents by including more diverse age groups and backgrounds, as well as to employ a longitudinal approach to better understand behavioral changes over time. To provide a more thorough picture of responsible financial behavior, future research may also expand the model by adding extra variables, such as social characteristics, digital literacy, or financial inclusion.

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