

FINANCE | RESEARCH ARTICLE

Financial Literacy and Financial Resilience: The Mediating Roles of Self-Efficacy, Financial Behavior, and Financial Well-Being: Evidence from Batam City

Dewi Khornida Marheni¹, Andy Chua Eng Xian², C. Candy³

^{1,2,3} Department of Management, Faculty of Business and Management, Universitas Internasional Batam, Batam, Indonesia. Email: dewi@uib.ac.id¹, 2341426.andy@uib.edu², candy.chua@uib.ac.id³

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ABSTRACT

Managing personal finances has become increasingly challenging amid changing economic conditions, rising living costs, and growing financial uncertainty. This study examines the relationship between financial literacy and financial resilience by investigating the mediating roles of financial self-efficacy, financial behavior, and financial well-being among residents of Batam City. A quantitative cross-sectional approach was employed using data from 453 respondents, which were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results show that financial literacy has positive and significant effects on financial self-efficacy ($\beta = 0.418$, $p < 0.001$), financial behavior ($\beta = 0.415$, $p < 0.001$), and financial well-being ($\beta = 0.218$, $p < 0.001$). Financial well-being has the strongest direct effect on financial resilience ($\beta = 0.472$, $p < 0.001$). The indirect-effect analysis confirms significant mediation through financial self-efficacy ($\beta = 0.085$, $p < 0.001$) and financial behavior ($\beta = 0.132$, $p < 0.001$), as well as significant sequential mediation through financial self-efficacy and financial well-being ($\beta = 0.040$, $p = 0.002$). These findings indicate that financial literacy contributes to financial resilience through psychological, behavioral, and well-being mechanisms. The study highlights the importance of financial education that not only strengthens financial knowledge but also enhances financial confidence, promotes positive financial behavior, and improves financial well-being.

Keywords: Financial Literacy, Financial Self-Efficacy, Financial Behavior, Financial Well-Being, Financial Resilience.

JEL Code: D14, G53, I31, A13.

I. Introduction

The disruptions caused by the COVID-19 pandemic, the dynamic nature of the global economy, rising prices of daily necessities, and the increasing use of technology in financial activities have made effective personal financial management increasingly challenging. These conditions require individuals to develop the ability to maintain financial stability, adapt to financial pressures, and recover from unexpected economic difficulties. In this context, financial resilience has become an important aspect of personal financial

management because it reflects an individual's capacity to withstand and recover from financial shocks (Kumar & Sandhu, 2024).

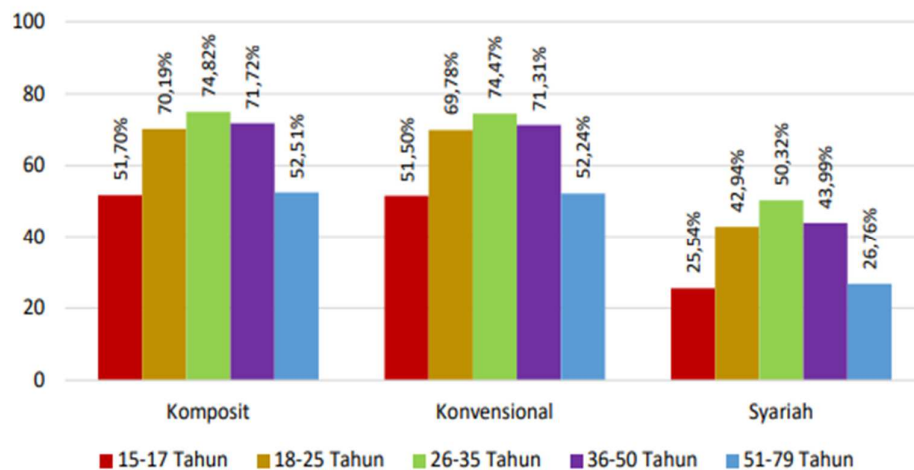


Figure 1. Financial Literacy Index by Age Group and Literacy Category in Indonesia

Source: Otoritas Jasa Keuangan (2025)

In Indonesia, financial literacy represents an important foundation for effective financial management because it enables individuals to understand financial concepts and make appropriate financial decisions in their daily lives. According to the Survei Nasional Literasi dan Inklusi Keuangan (2024), the national financial literacy index increased from 38.03% in 2019 to 65.43% in 2024 and reached 66.46% in 2025. However, this increase has not been equally distributed across age groups, indicating differences in financial management capabilities that may influence individuals' financial well-being and financial resilience. Financial literacy can be viewed through three categories: composite, conventional, and sharia literacy. The composite index provides an overall representation of financial literacy, while conventional literacy reflects an individual's understanding of conventional financial products and services, including banking and investment products. Sharia literacy reflects knowledge and understanding of financial products and services based on Sharia principles. The data by age group also indicate differences in financial literacy across age categories, with individuals aged 26–35 generally demonstrating higher levels of financial literacy than those in other age groups, while older age groups tend to exhibit lower levels of financial literacy. These differences suggest that individuals may have varying capacities to manage their finances and respond to future financial challenges. Financial literacy is associated with an individual's ability to understand financial concepts and make appropriate financial decisions in everyday life (Lusardi & Streeter, 2023). However, financial knowledge alone does not necessarily result in better financial outcomes. For example, Rahman et al. (2021) found that financial literacy does not always directly improve financial well-being, suggesting that other mechanisms may mediate this relationship. Financial self-efficacy is one potential mechanism because it reflects an individual's confidence in managing financial matters and coping with financial stress (Owusu et al., 2025).

Previous studies have shown that financial self-efficacy is associated with financial well-being, as individuals with greater confidence in managing their finances tend to engage in more positive financial behaviors and achieve better financial outcomes (Lone & Bhat, 2024; Sabri et al., 2024). Financial behavior refers to how individuals manage their financial resources through practices such as saving, controlling expenditures, and managing debt. Previous studies have shown that financial behavior is associated with financial well-being (Hamid et al., 2023; Sabri et al., 2024). In turn, financial well-being is associated with financial resilience because individuals with better financial conditions are better positioned to manage financial challenges and economic pressures (Bottazzi & Oggero, 2023). Taken together, these findings

suggest that financial literacy may contribute to financial resilience not only directly but also through psychological and behavioral mechanisms. Although financial literacy, financial self-efficacy, financial behavior, and financial well-being have been widely examined in studies of individual financial management, previous research has generally focused on these factors separately or examined their direct relationships. Limited attention has been given to how psychological and behavioral mechanisms interact within an integrated framework to explain financial resilience. In particular, relatively limited evidence is available regarding the indirect mechanisms through which financial literacy may influence financial well-being and subsequently contribute to financial resilience (Khornida Marheni et al., 2025; Lone & Bhat, 2024; Rahman et al., 2021). Research examining financial resilience among urban communities in Indonesia, particularly in Batam City, also remains limited despite the city's diverse population and dynamic economic activity. This represents an empirical gap in understanding how financial literacy is translated into financial resilience through financial self-efficacy, financial behavior, and financial well-being.

Therefore, this study aims to examine the relationship between financial literacy and financial resilience among residents of Batam City by integrating financial self-efficacy, financial behavior, and financial well-being into a comprehensive framework. Specifically, the study examines the effects of financial literacy on financial self-efficacy, financial behavior, and financial well-being; the effects of financial self-efficacy and financial behavior on financial well-being; and the effect of financial well-being on financial resilience. In addition, the study examines the mediating effects of financial self-efficacy and financial behavior on the relationship between financial literacy and financial well-being, as well as the sequential indirect pathways from financial literacy to financial resilience through financial self-efficacy and financial well-being and through financial behavior and financial well-being. This study is expected to contribute to the literature by providing an integrated explanation of how financial literacy may contribute to financial resilience through psychological, behavioral, and financial well-being mechanisms. By examining financial self-efficacy and financial behavior as mediating mechanisms and financial well-being as a subsequent pathway toward financial resilience, this study extends existing evidence on the mechanisms underlying financial resilience. Empirically, the study contributes evidence from Batam City, where research on financial resilience remains limited. Practically, the findings may provide insights for governments, educational institutions, and financial organizations in developing financial education and empowerment programs that not only improve financial knowledge but also strengthen financial self-efficacy, encourage positive financial behavior, and support financial well-being.

II. Literature Review and Hypothesis Development

2.1. Theoretical Foundation

Financial literacy, as defined by Lusardi and Mitchell (2007), refers to an individual's understanding of financial concepts and the ability to apply such knowledge in managing financial resources. In general, financial literacy enables individuals to make informed financial decisions, plan for their financial future, and manage their finances more effectively. This role is supported by Yuwono et al. (2023), who emphasize the importance of financial literacy in financial planning and decision-making. Furthermore, Candy and Vira (2024) discuss the relationship between financial literacy and saving behavior among Generation Z. The Life-Cycle Hypothesis (LCH), developed by Franco Modigliani and Richard Brumberg (1954), explains that individuals tend to manage their consumption, savings, and expenditures throughout their life cycle to maintain financial stability and prepare for future economic uncertainty. Through the concept of consumption smoothing, individuals engage in financial planning and build financial reserves through precautionary savings to cope with potential declines in income or unexpected increases in expenditures (Hamid et al., 2023). In this study, financial literacy, financial behavior, financial self-efficacy, and financial well-being are viewed as important factors that help individuals manage their financial resources more effectively. Individuals with adequate financial knowledge, confidence in managing financial matters, and healthy financial habits are more likely to

develop financial resilience and maintain long-term financial stability. Social Cognitive Theory (SCT), introduced by Bandura (1997), explains how individual behavior is shaped by the interaction among personal, behavioral, and environmental factors. A key concept in this theory is self-efficacy, which refers to an individual's belief in their ability to perform actions necessary to achieve specific goals. In the financial context, financial self-efficacy refers to an individual's confidence in their ability to manage financial resources and cope with financial challenges. Previous studies indicate that individuals with higher levels of financial self-efficacy are more likely to apply their financial knowledge effectively, resulting in better financial well-being (Lone & Bhat, 2024).

2.2. Financial Literacy and Financial Self-Efficacy

Financial literacy refers to an individual's knowledge and ability to make appropriate financial decisions, including budgeting, spending, saving, and financial planning (Mireku et al., 2023). Financial literacy is expected to enhance financial self-efficacy because individuals who understand financial concepts may feel more capable of managing their finances, evaluating financial alternatives, and addressing financial problems. From the perspective of Social Cognitive Theory, self-efficacy refers to an individual's belief in their ability to perform a particular task effectively, while financial self-efficacy applies this concept to financial activities. Thus, financial knowledge may strengthen individuals' perceived control and confidence in financial decision-making (Bandura, 1997; Marsela Wulansari, 2023). Previous studies generally indicate a positive relationship between financial literacy and financial self-efficacy (Kuutol et al., 2024; Lone & Bhat, 2024; Lusardi & Streeter, 2023; Owusu et al., 2025; Rahman et al., 2021; Sabri et al., 2024). However, financial knowledge may not always translate into greater confidence without practical financial experience and adequate access to financial resources. Therefore, this study examines whether financial literacy contributes to higher levels of financial self-efficacy. Based on the theoretical arguments and previous empirical findings, the following hypothesis is proposed:

H1 : Financial Literacy has a positive influence on Financial Self-Efficacy.

2.3. Financial Self-Efficacy and Financial Well-Being

Financial self-efficacy reflects an individual's confidence in their ability to manage financial resources and make effective financial decisions to achieve financial goals (Suryadi & Allyah, 2023). From the perspective of Social Cognitive Theory, individuals with stronger self-efficacy are more likely to persist in managing challenges and engage in behaviors necessary to achieve desired outcomes (Bandura, 1997). In the financial context, greater confidence may encourage individuals to manage their finances more effectively, cope with financial stress, and maintain greater control over their financial situation. Previous studies have found a positive relationship between financial self-efficacy and financial well-being (Al Rahahleh, 2023; Bonie Elisan et al., 2025; Kuutol et al., 2024; Sabri et al., 2024). However, financial self-efficacy may not automatically result in better financial well-being because financial outcomes can also depend on individuals' financial circumstances and actual financial behavior. Nevertheless, greater confidence in managing financial matters is expected to support better financial well-being. Based on the theoretical arguments and previous empirical evidence, the following hypothesis is proposed:

H2 : Financial Self-Efficacy has a positive influence on Financial Well-Being.

2.4. Financial Self-Efficacy as a Mediator between Financial Literacy and Financial Well-Being

Financial literacy may contribute to financial well-being through financial self-efficacy because financial knowledge alone may not be sufficient to produce favorable financial outcomes. From the

perspective of Social Cognitive Theory, financial self-efficacy represents a psychological mechanism through which individuals' knowledge and capabilities can be translated into confidence in performing financial activities. Individuals with greater financial knowledge may therefore become more confident in managing financial resources, making financial decisions, and addressing financial difficulties, which may subsequently contribute to better financial well-being. Previous studies support the role of financial self-efficacy in linking financial literacy to financial well-being (Bonie Elisan et al., 2025; Bottazzi & Oggero, 2023; Hamid et al., 2023; Kuutol et al., 2024; Spohn, 2024; Suade et al., 2024). However, the effect of financial literacy may depend on individuals' ability and confidence to apply their financial knowledge in practice. Therefore, financial self-efficacy is expected to function as a psychological pathway through which financial literacy contributes to financial well-being. Based on this theoretical rationale and previous empirical evidence, the following hypothesis is proposed:

H3 : Financial Self-Efficacy mediates the influence of Financial Literacy on Financial Well-Being.

2.5. Financial Literacy and Financial Behavior

Adequate financial literacy encourages individuals to manage their finances more wisely, including controlling expenditures, developing saving habits, and avoiding excessive consumption. According to Xu et al. (2022), financial literacy helps individuals manage household finances more effectively. Ninan et al. (2021) also found that financial literacy encourages saving habits and improves expenditure planning. This finding is further supported by Mireku et al. (2023), who demonstrated that financial literacy is an important factor influencing financial behavior, with individuals who have higher levels of financial literacy tending to exhibit more rational and purposeful financial behavior. Furthermore, previous research has shown that financial literacy has a positive influence on financial behavior (Kuutol et al., 2024; Prabhakaran & Mynavathi, 2025; Rodriguez et al., 2024). Evidence from various studies indicates that financial literacy can help individuals develop more positive financial habits, as higher levels of financial knowledge are generally associated with improvements in financial management practices. Based on these findings, the following hypothesis is proposed:

H4 : Financial Literacy has a positive and significant effect on Financial Behavior.

2.6. Financial Behavior and Financial Well-Being

Financial behavior reflects how individuals manage their financial resources through practices such as saving, controlling expenditures, managing financial risks, and planning for future needs. From the perspective of the Life-Cycle Hypothesis, appropriate financial behavior enables individuals to balance current consumption with future financial needs and maintain adequate financial resources over time. Individuals who consistently engage in positive financial behaviors may therefore be better able to control their finances, maintain financial stability, and reduce financial pressure. Previous studies indicate that financial behavior is positively associated with financial well-being (Choung et al., 2023; Hamid et al., 2023; Kuutol et al., 2024; Mamilla et al., 2025; Rahman et al., 2021; Sabri et al., 2024). However, the contribution of financial behavior to financial well-being may depend on the consistency with which individuals apply these practices in their daily financial management. Therefore, positive financial behavior is expected to contribute to better financial well-being. Based on these arguments and previous empirical findings, the following hypothesis is proposed:

H5 : Financial Behavior has a positive and significant effect on Financial Well-Being.

2.7. Financial Behavior as a Mediator between Financial Literacy and Financial Well-Being

Zhang and Chatterjee (2023), Tohar and Akron (2025), and Sabri et al. (2022) demonstrated that financial literacy has a positive effect on financial well-being, with financial behavior serving as an important mediating mechanism. This finding is supported by Prabhakaran and Mynavathi (2025), who suggest that financial knowledge becomes more meaningful when it is applied to everyday financial activities, such as planning expenditures and developing saving habits. Previous research also indicates that financial behavior can serve as a mediating variable that links financial literacy to financial well-being (Bai, 2023; Chavali et al., 2021; Hamid et al., 2023; Kuutol et al., 2024; Mamilla et al., 2025). Overall, these findings suggest that financial knowledge is important, but its benefits may depend on how individuals apply that knowledge in managing their financial resources. In other words, financial literacy may contribute to better financial well-being when it is translated into positive financial behaviors. Based on these findings, the following hypothesis is proposed:

H6 : Financial Behavior mediates the influence of Financial Literacy on Financial Well-Being.

2.8. Financial Literacy and Financial Well-Being

Financial literacy represents the knowledge and skills required to make informed financial decisions and manage financial resources effectively (Lusardi & Messy, 2023). From the perspective of Financial Literacy Theory, greater financial knowledge and skills can improve individuals' ability to evaluate financial alternatives, plan for future needs, and make appropriate financial decisions, which may contribute to better financial well-being. Individuals with higher levels of financial literacy may therefore be better able to manage their finances, cope with changing economic conditions, and maintain financial stability. Previous studies generally indicate a positive association between financial literacy and financial well-being (Hamid et al., 2023; Kuutol et al., 2024; Rahman et al., 2021; Sabri et al., 2024). Several studies have also shown that financial literacy is associated with greater financial stability, including an increased sense of financial security and satisfaction (Anghel & Pochea, 2025; Lusardi & Streeter, 2023; Mamilla et al., 2025; Owusu et al., 2025). Taken together, these findings indicate that financial literacy provides a cognitive foundation that enables individuals to manage their financial resources effectively and maintain better financial well-being. Therefore, the following hypothesis is proposed:

H7 : Financial Literacy has a positive and significant influence on Financial Well-Being.

2.9. Financial Well-Being and Financial Resilience

Recent literature defines financial resilience as an individual's ability to withstand, adapt to, and recover from financial shocks, emphasizing its dynamic and multidimensional nature (Wu et al., 2026). The OECD (2022) states that financial resilience reflects how well individuals can cope with changing economic conditions through sound financial planning and management, including saving, controlling expenditures, and anticipating financial risks. According to Hamid et al. (2023), individuals with higher levels of financial well-being tend to be more resilient to economic shocks because they are more likely to have adequate financial planning and emergency funds. This finding is consistent with Spohn (2024) and Bottazzi and Oggero (2023), who argue that financial well-being provides an important foundation for building sustainable financial resilience. Furthermore, individuals with stable financial conditions are better able to cope with financial stress and adapt to economic changes (Kuutol et al., 2024; Owusu et al., 2025). This relationship indicates that financial well-being can strengthen financial resilience by enabling individuals to feel better prepared to face economic risks and uncertainties. Therefore, individuals with greater financial well-being are expected to have a greater capacity to withstand financial shocks and recover from financial difficulties. Based on these arguments, the following hypothesis is proposed:

H8 : Financial Well-Being has a positive and significant effect on Financial Resilience.

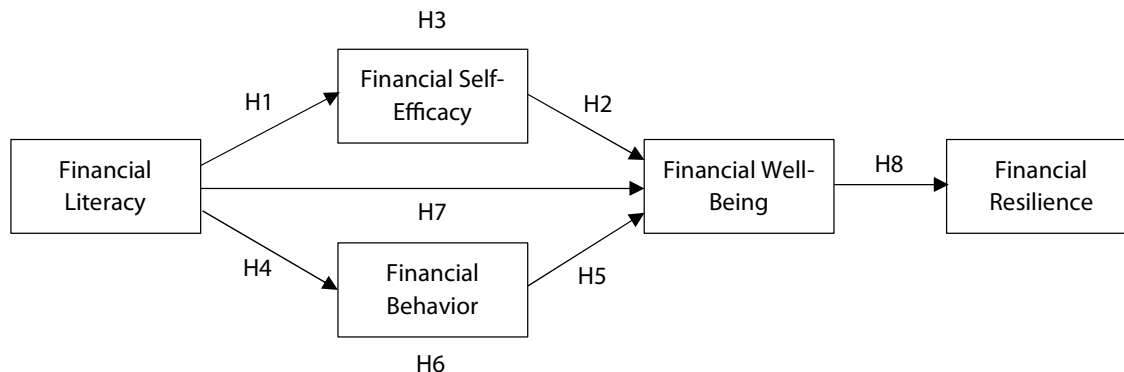


Figure 2. Conceptual Framework

III. Research Method

3.1. Population and Sampling Method

The target population of this study consisted of residents of Batam City from Generations X, Y, and Z who had experience managing their personal finances. Batam City was selected as the research context because of its dynamic economic activity, high population mobility, and increasing use of digital financial services. These characteristics make Batam City a relevant context for examining financial resilience among individuals with diverse financial and socioeconomic backgrounds. This study employed purposive sampling to select respondents who met the predetermined eligibility criteria. Purposive sampling was used because respondents were selected based on specific characteristics relevant to the objectives of the study (Creswell & Creswell, 2023). Respondents were required to be residents of Batam City, belong to Generation X, Y, or Z, and have experience managing their personal finances. These criteria were applied to ensure that respondents had relevant experience with the financial concepts examined in this study. The sample size was determined by considering the requirements of Partial Least Squares Structural Equation Modeling (PLS-SEM). Following Hair et al. (2021), the 10-times rule was used as an initial guideline for determining the minimum sample size based on the largest number of structural paths directed toward a single endogenous construct in the proposed model. In this study, financial well-being is directly predicted by financial literacy, financial self-efficacy, and financial behavior. Accordingly, the 10-times rule resulted in a minimum guideline of 30 respondents. However, a substantially larger sample was targeted to obtain more stable estimates and reduce the potential influence of incomplete or unusable responses. A total of 453 valid responses were obtained and included in the analysis.

3.2. Data Collection Method

Data were collected using an online questionnaire distributed through Google Forms to individuals residing in Batam City who met the predetermined eligibility criteria. Eligible respondents were recruited through university groups, personal contacts via WhatsApp, WhatsApp groups, Instagram groups, and direct approaches to individuals who met the eligibility criteria. The use of an online questionnaire facilitated data collection and enabled the researchers to reach participants from different age groups in a practical and efficient manner. All measurement items were assessed using a five-point Likert scale, with response options ranging from 1 (strongly disagree) to 5 (strongly agree). Financial literacy was measured using 16 indicators,

financial self-efficacy using 6 indicators, financial behavior using 5 indicators, and financial well-being using 9 indicators adapted from previous research (Rai et al., 2025). These instruments were used to assess respondents' financial knowledge, confidence in managing financial matters, financial management behaviors, and perceptions of their overall financial well-being. Financial resilience was measured using 8 indicators adapted from Kumar and Sandhu (2024). The measurement items, which were originally developed in English, were translated into Indonesian by the researcher to facilitate respondents' understanding. The translated items were subsequently reviewed by the researcher's academic supervisor to assess the clarity, appropriateness, and consistency of the wording with the original meaning. Revisions were made where necessary based on the supervisor's feedback to ensure that the translated items remained conceptually consistent with the original instruments. Financial resilience measures an individual's ability to withstand and recover from financial difficulties and uncertainty through financial planning, expenditure management, saving behavior, and preparedness for unexpected financial situations. All measurement indicators used in this study were adapted from previous studies and had been previously validated and tested for reliability. The instruments were adapted by modifying the wording where necessary without altering the original meaning of each indicator to ensure clarity for respondents from different generations in Batam City. Before the data were analyzed, the measurement model was evaluated for validity and reliability to confirm that all indicators appropriately measured their respective constructs.

3.3. Data Analysis Method

The Partial Least Squares Structural Equation Modeling (PLS-SEM) method was selected because it is capable of analyzing complex relationships among latent constructs, including direct and indirect relationships through mediating variables. It is also suitable for research focused on prediction and theory development (Hair et al., 2021). PLS-SEM was employed in this study because it is well suited to the characteristics of the data collected in social research and enables researchers to analyze multiple constructs and indicators simultaneously within a single model. The analysis was conducted in two stages. First, the measurement model (outer model) was assessed to determine the validity and reliability of the research instruments. Second, the structural model (inner model) was evaluated to examine the relationships among the constructs in the proposed model. Convergent validity was assessed using outer loading and Average Variance Extracted (AVE) values. An outer loading value above 0.70 and an AVE value greater than 0.50 are generally considered acceptable (Hair et al., 2021; Kwong & Wong, 2013). Internal consistency reliability was assessed using Cronbach's alpha and composite reliability, with a commonly accepted threshold of 0.70. Discriminant validity was then assessed using the Heterotrait-Monotrait Ratio (HTMT) to determine whether each construct was sufficiently distinct from the other constructs in the model. Once the measurement indicators were confirmed to be valid and reliable, the analysis proceeded to the structural model (inner model). The coefficient of determination (R^2) was evaluated to assess the proportion of variance in the endogenous constructs explained by the model. The effect size (f^2) was also assessed to determine the magnitude of the effect of each exogenous construct on the endogenous constructs. Bootstrapping in SmartPLS 4 was used to examine both direct and indirect effects and determine whether the proposed hypotheses were supported. A hypothesis was considered supported when the t-statistic was greater than 1.96 and the p-value was less than 0.05 at the 5% significance level (Hair et al., 2021). This analysis enabled the study to assess both the direct relationships among the constructs and the mediation mechanisms within the proposed model.

Table 1. Sample Characteristics (N = 453)

Measurement	N	%
Gender		
Male	237	52.3
Female	216	47.7
Generation		

Generation X (Born 1965–1980)	133	29.4
Generation Y (Born 1981–1996)	127	28.0
Generation Z (Born 1997–2012)	193	42.6
Education Level		
High School / Vocational High School	162	35.8
Diploma III (Associate Degree)	57	12.6
Bachelor's Degree	196	43.3
Master's Degree	36	7.9
Doctoral Degree	2	0.4
Occupation		
Self-Employed	83	18.3
Private Employee	142	31.3
Civil Servant	89	19.6
Student	139	30.7
Monthly Income		
Below IDR 5.000.000	185	40.8
Between IDR 5.000.000 and IDR 15.000.000	190	41.9
Above IDR 15.000.000	78	17.2

Based on Table 1, the respondents were slightly dominated by males (52.3%), while Generation Z represented the largest generational group (42.6%). The relatively large proportion of Generation Z respondents reflects the participation of younger individuals in the study and is consistent with the increasing use of digital technology and digital financial services among younger generations (BPS, 2020; APJII, 2023). As digital natives, Generation Z individuals generally demonstrate a high level of familiarity with technology and digital platforms, including digital financial services (Aseng et al., 2020). In terms of educational attainment, most respondents held a bachelor's degree (43.3%), indicating that a substantial proportion of the sample had an educational background that could potentially support their understanding of financial management. Regarding occupation, the respondents were predominantly private-sector employees (31.3%) and students (30.7%), reflecting the relatively large representation of individuals in the productive-age population within the sample. In terms of monthly income, the largest proportion of respondents earned between IDR 5,000,000 and IDR 15,000,000 (41.9%), followed by those earning below IDR 5,000,000 (40.8%). Therefore, the sample largely represents respondents with lower- to middle-income levels in Batam City.

IV. Result and Discussion

4.1. Analysis Result

The data collection process yielded 453 completed questionnaires. All 453 questionnaires were returned and met the predetermined research criteria, resulting in a 100% response rate among the distributed questionnaires. Following the data screening process, no incomplete responses or responses that failed to meet the eligibility criteria were identified. Therefore, all 453 responses were considered valid and included in the subsequent analysis.

a. Measurement Model (Outer Model)

The measurement model (outer model) was assessed to evaluate the validity and reliability of the constructs used in this study. Construct validity was evaluated through convergent validity and discriminant validity. Convergent validity was assessed using outer loading and Average Variance Extracted (AVE) values. An outer loading value above 0.60 was considered acceptable, while an AVE value greater than 0.50 indicates that a construct explains more than 50% of the variance in its indicators (Hair et al., 2021; Kwong & Wong, 2013; Fornell & Larcker, 1981). Internal consistency reliability was assessed using Cronbach's alpha and composite reliability, with values above 0.70 considered acceptable (Hair et al., 2021). Discriminant validity

was assessed using the Heterotrait-Monotrait Ratio (HTMT). An HTMT value below 0.90 indicates that the constructs are empirically distinct from one another, thereby supporting discriminant validity (Henseler et al., 2015).

1) Convergent Validity and Reliability

Table 2. Validity and Reliability Results

Variable	Outer Loading	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability
FL1	0.745	0.551	0.946	0.951
FL2	0.771			
FL3	0.753			
FL4	0.753			
FL5	0.796			
FL6	0.771			
FL7	0.722			
FL8	0.696			
FL9	0.690			
FL10	0.706			
FL11	0.717			
FL12	0.736			
FL13	0.800			
FL14	0.746			
FL15	0.723			
FL16	0.740			
FSE1	0.893	0.763	0.938	0.951
FSE2	0.884			
FSE3	0.871			
FSE4	0.867			
FSE5	0.876			
FSE6	0.851			
FB1	0.844	0.752	0.918	0.938
FB2	0.871			
FB3	0.874			
FB4	0.874			
FB5	0.875			
FWB1	0.845	0.725	0.953	0.960
FWB2	0.856			
FWB3	0.836			
FWB4	0.851			
FWB5	0.854			
FWB6	0.861			
FWB7	0.878			
FWB8	0.857			
FWB9	0.828			
FR1	0.852	0.711	0.942	0.952
FR2	0.827			
FR3	0.846			
FR4	0.832			
FR5	0.860			
FR6	0.845			
FR7	0.823			
FR8	0.859			

Table 2 presents the results of the convergent validity and reliability assessments. All indicators recorded outer loading values above 0.60, with values ranging from 0.690 to 0.893. These results indicate that all indicators met the minimum criterion for convergent validity. Although FL8 (0.696) and FL9 (0.690) had loading values slightly below 0.70, both remained above the minimum threshold of 0.60 and were retained in the model. In addition, the AVE values ranged from 0.551 to 0.763, exceeding the recommended minimum value of 0.50. This indicates that each construct explained more than 50% of the variance in its respective indicators and therefore demonstrated acceptable convergent validity. The reliability results also indicate that all constructs met the recommended reliability criteria. Cronbach's alpha values ranged from 0.918 to 0.953, while composite reliability values ranged from 0.938 to 0.960. All values exceeded the minimum threshold of 0.70, indicating satisfactory internal consistency reliability. Overall, the results demonstrate that all constructs in the measurement model satisfied the required criteria for convergent validity and reliability and were therefore suitable for further structural model analysis.

2) Heterotrait–Monotrait Ratio (HTMT)

Table 3. HTMT Results

Construct	FB	FL	FR	FSE	FWB
FB	—				
FL	0.442	—			
FR	0.424	0.509	—		
FSE	0.426	0.438	0.441	—	
FWB	0.522	0.452	0.496	0.441	—

As shown in Table 3, all HTMT values were below the recommended threshold, indicating that the constructs were empirically distinct from one another and that the discriminant validity requirements were satisfied. The HTMT values ranged from 0.424 to 0.522, indicating relatively low associations among the constructs and confirming that the values remained well within the acceptable range. According to Henseler et al. (2015), an HTMT value below 0.90 indicates adequate discriminant validity, while a stricter threshold of 0.85 is often applied to ensure sufficient distinction between constructs. Therefore, all constructs in this study can be empirically distinguished, with no indication of substantial overlap among the variables. Overall, the HTMT results provide evidence that discriminant validity was established for the measurement model.

b. Inner Model

The inner model assessment was conducted to evaluate the explanatory power of the structural model and the relationships among the latent constructs. The coefficient of determination (R^2) was examined to assess the model's explanatory power for the endogenous constructs, while the effect size (f^2) was evaluated to determine the magnitude of the effects of the exogenous constructs on the endogenous constructs.

1) R-Square (R^2)

Table 4. R-Square Results

Endogenous Construct	R-Square (R^2)	R-Square Adjusted
FB	0.173	0.171
FR	0.223	0.222
FSE	0.175	0.173
FWB	0.336	0.332

As presented in Table 4, the R^2 values indicate varying levels of explanatory power across the endogenous constructs. Financial Well-Being (FWB) has the highest R^2 value of 0.336, followed by Financial

Resilience (FR) at 0.223, Financial Self-Efficacy (FSE) at 0.175, and Financial Behavior (FB) at 0.173. These results indicate that the proposed model explains 33.6% of the variance in FWB, 22.3% in FR, 17.5% in FSE, and 17.3% in FB, while the remaining variance is explained by factors outside the model. Based on Hair et al. (2021), the R^2 values can be interpreted as reflecting relatively limited to moderate explanatory power. The highest explanatory power is observed for FWB, for which the model explains approximately one-third of the variance. Meanwhile, the relatively lower R^2 values for FR, FSE, and FB indicate that other factors not included in the proposed model may also contribute to variations in these constructs. Overall, the R^2 results indicate that the structural model provides meaningful but limited explanatory power for the endogenous constructs.

2) F-Square (Effect Size)

Table 5. F-Square Results

Structural Path	f^2	Category
FL → FB	0.209	Medium
FL → FSE	0.212	Medium
FB → FWB	0.117	Small
FSE → FWB	0.047	Small
FWB → FR	0.287	Medium

As presented in Table 5, the effect sizes (f^2) of the structural paths range from small to medium. The strongest effect is observed for the relationship between Financial Well-Being and Financial Resilience, with an f^2 value of 0.287, indicating a medium effect. This suggests that Financial Well-Being makes a relatively substantial contribution to explaining the variance in Financial Resilience compared with the other structural relationships in the model. Financial Literacy also demonstrates medium effect sizes on Financial Behavior ($f^2 = 0.209$) and Financial Self-Efficacy ($f^2 = 0.212$), indicating that Financial Literacy contributes meaningfully to both constructs. In contrast, the effects of Financial Behavior on Financial Well-Being ($f^2 = 0.117$) and Financial Self-Efficacy on Financial Well-Being ($f^2 = 0.047$) are categorized as small. Overall, the results indicate that the structural relationships vary in effect size, with Financial Well-Being showing the largest contribution to Financial Resilience and Financial Literacy demonstrating moderate effects on Financial Behavior and Financial Self-Efficacy.

c. Hypothesis Testing Results

The hypotheses were tested using path coefficients obtained from the PLS-SEM bootstrapping procedure. The analysis examined the original sample (O), sample mean (M), standard deviation (STDEV), t-statistics, and p-values to determine the direction and statistical significance of each hypothesized relationship. A positive path coefficient indicates a positive relationship between constructs, whereas a negative path coefficient indicates an inverse relationship. A p-value below 0.05 was used as the criterion for statistical significance (Hair et al., 2021). In addition to direct effects, the study examined indirect effects to assess whether the proposed mediating variables contributed to the relationships among the constructs. Following the mediation assessment approach described by Chin (1998), mediation was evaluated based on the significance of the indirect effects through the proposed mediator variables. This analysis provides insights into both the direct relationships and the indirect pathways linking the constructs in the proposed research model.

1) Path Coefficients (Direct Effects)

Table 6. Direct Effects

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values	Decision
FL → FB	0.415	0.419	0.060	6.977	0.000	Supported
FL → FSE	0.418	0.418	0.055	7.588		
FB → FWB	0.318	0.317	0.047	6.774		
FSE → FWB	0.202	0.200	0.047	4.338		
FL → FWB	0.218	0.218	0.045	4.832		
FWB → FR	0.472	0.470	0.049	9.569		

Table 6 shows that all proposed direct relationships are positive and statistically significant ($p < 0.001$). Financial Literacy has positive and significant effects on Financial Behavior, Financial Self-Efficacy, and Financial Well-Being. In addition, both Financial Behavior and Financial Self-Efficacy have positive and significant effects on Financial Well-Being. Financial Literacy also has a positive and significant direct effect on Financial Well-Being. The strongest direct relationship is observed between Financial Well-Being and Financial Resilience ($\beta = 0.472$), indicating that higher levels of Financial Well-Being are associated with higher levels of Financial Resilience. The results also show relatively strong relationships between Financial Literacy and Financial Self-Efficacy ($\beta = 0.418$) and between Financial Literacy and Financial Behavior ($\beta = 0.415$). Overall, all hypothesized direct relationships are supported by the empirical results. However, because this study employed a cross-sectional research design, the findings should be interpreted as statistical associations rather than evidence of causal relationships.

2) Specific Indirect Effects

Table 7. Specific Indirect Effects

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values	Decision
FB → FWB → FR	0.150	0.149	0.027	5.206	0.000	Supported
FL → FB → FWB → FR	0.062	0.063	0.016	3.560	0.000	
FL → FWB → FR	0.103	0.103	0.027	3.799	0.000	
FSE → FWB → FR	0.095	0.094	0.026	3.782	0.000	
FL → FSE → FWB → FR	0.040	0.040	0.013	3.041	0.002	
FL → FB → FWB	0.132	0.133	0.027	4.527	0.000	
FL → FSE → FWB	0.085	0.084	0.023	3.733	0.000	

The specific indirect-effect analysis shows that all tested indirect pathways are positive and statistically significant. Financial Behavior significantly mediates the relationship between Financial Literacy and Financial Well-Being ($\beta = 0.132$, $p < 0.001$), while Financial Self-Efficacy also significantly mediates this relationship ($\beta = 0.085$, $p < 0.001$). The results further indicate that Financial Well-Being significantly mediates the relationships between Financial Behavior and Financial Resilience ($\beta = 0.150$, $p < 0.001$), Financial Literacy and Financial Resilience ($\beta = 0.103$, $p < 0.001$), and Financial Self-Efficacy and Financial Resilience ($\beta = 0.095$, $p < 0.001$). In addition, the sequential mediation pathways from Financial Literacy to Financial Resilience through Financial Behavior and Financial Well-Being ($\beta = 0.062$, $p < 0.001$) and through Financial Self-Efficacy

and Financial Well-Being ($\beta = 0.040$, $p = 0.002$) are also statistically significant. These findings indicate that psychological, behavioral, and well-being mechanisms play important roles in linking Financial Literacy with Financial Well-Being and Financial Resilience. In particular, the significant sequential indirect effects suggest that Financial Literacy may contribute to Financial Resilience through a series of interconnected mechanisms involving Financial Self-Efficacy or Financial Behavior, followed by Financial Well-Being. However, these findings should be interpreted as indirect associations rather than causal effects because the study uses a cross-sectional research design.

4.2. Discussion

a. Financial Literacy and Financial Self-Efficacy

The findings reveal a positive and statistically significant relationship between Financial Literacy and Financial Self-Efficacy ($\beta = 0.418$, $p < 0.001$). This result is consistent with previous studies that have reported a positive relationship between financial literacy and financial self-efficacy (Kuutol et al., 2024; Lone & Bhat, 2024; Lusardi & Streeter, 2023; Marsela Wulansari, 2023; Owusu et al., 2025; Rahman et al., 2021; Sabri et al., 2024). The finding suggests that individuals with greater financial knowledge tend to have greater confidence in their ability to manage financial decisions and responsibilities. The effect size of Financial Literacy on Financial Self-Efficacy is medium ($f^2 = 0.212$), indicating that Financial Literacy is a meaningful predictor of Financial Self-Efficacy but does not fully determine it. This interpretation is consistent with the R^2 value of 0.175, which indicates that the model explains 17.5% of the variance in Financial Self-Efficacy, while the remaining variance may be associated with factors not included in the model. Thus, financial knowledge may contribute to individuals' confidence in managing financial matters, while their level of confidence may also be shaped by financial experience, skills, personal circumstances, and other contextual factors. This finding is consistent with Social Cognitive Theory (SCT) (Bandura, 1997), particularly its emphasis on the role of personal factors, knowledge, and beliefs in shaping perceived capability. From this perspective, Financial Literacy may strengthen individuals' confidence in handling financial matters by providing them with the knowledge needed to understand and evaluate financial decisions. However, Financial Literacy should be regarded as one contributing factor rather than the sole determinant of Financial Self-Efficacy.

b. Financial Self-Efficacy and Financial Well-Being

The findings indicate a positive and statistically significant relationship between Financial Self-Efficacy and Financial Well-Being ($\beta = 0.202$, $p < 0.001$). This finding is consistent with previous studies reporting that individuals with higher levels of financial self-efficacy tend to demonstrate stronger financial management capabilities, greater financial stability, and better financial well-being (Al Rahahleh, 2023; Owusu et al., 2025; Rahman et al., 2021). These findings suggest that individuals who are more confident in their ability to manage financial matters may be better positioned to make informed financial decisions, control expenditures, and maintain their financial condition. However, the present finding should be interpreted with caution. Although the relationship between Financial Self-Efficacy and Financial Well-Being is statistically significant, its effect size is small ($f^2 = 0.047$). This indicates that Financial Self-Efficacy makes a relatively limited contribution to Financial Well-Being within the proposed model. Therefore, the statistical significance of the relationship should not be interpreted as evidence that Financial Self-Efficacy is a dominant determinant of Financial Well-Being. Rather, financial confidence should be viewed as one of several factors associated with individuals' financial conditions and overall financial well-being. The finding is consistent with Social Cognitive Theory (SCT) (Bandura, 1997), which emphasizes self-efficacy as an individual's belief in their ability to perform actions and manage challenges effectively. In the financial context, individuals with greater Financial Self-Efficacy may be more willing and capable of managing their finances and responding to financial difficulties. This interpretation is also supported by Suryadi and Allyah (2023). Nevertheless, the small effect size indicates that Financial Self-Efficacy alone does not determine Financial Well-Being, which may also depend on other individual and contextual factors.

c. Financial Self-Efficacy as a Mediator between Financial Literacy and Financial Well-Being

Financial Self-Efficacy significantly mediates the relationship between Financial Literacy and Financial Well-Being ($\beta = 0.085$, $p < 0.001$), indicating that financial knowledge is associated with financial well-being partly through individuals' confidence in managing financial matters. However, the indirect effect is smaller than the direct effect of Financial Literacy on Financial Well-Being ($\beta = 0.218$, $p < 0.001$). This pattern suggests that Financial Self-Efficacy functions as one mechanism linking Financial Literacy to Financial Well-Being rather than fully explaining the relationship. Financial knowledge may therefore contribute to better financial well-being through individuals' confidence in applying their knowledge, as well as through other pathways not examined in this specific mediation relationship. This mediating mechanism can be understood through Social Cognitive Theory (SCT) (Bandura, 1997), which emphasizes that individuals' beliefs about their capabilities influence how they approach tasks, make decisions, and manage challenges. In the financial context, Financial Literacy provides individuals with knowledge and understanding of financial concepts and alternatives, whereas Financial Self-Efficacy reflects their perceived capability to apply that knowledge when making financial decisions. Thus, financial knowledge may be more effectively translated into positive financial outcomes when individuals also have confidence in their ability to apply that knowledge. This interpretation is supported by previous studies emphasizing the role of Financial Self-Efficacy in translating financial knowledge into financial practices and outcomes (Bonie Elisan et al., 2025; Bottazzi & Oggero, 2023; Hamid et al., 2023; Kuutol et al., 2024; Lone & Bhat, 2024; Spohn, 2024; Suade et al., 2024). However, the mediation result should be interpreted within the scope of the proposed model. The significant indirect effect provides evidence that Financial Self-Efficacy represents a significant mediating pathway between Financial Literacy and Financial Well-Being. Nevertheless, its relatively smaller coefficient indicates that this pathway makes a more limited contribution compared with the direct relationship between Financial Literacy and Financial Well-Being. Given the cross-sectional design of the study, the finding should be interpreted as a significant indirect association rather than definitive evidence of a causal mechanism.

d. Financial Literacy and Financial Behavior

Financial Literacy has a positive and statistically significant relationship with Financial Behavior ($\beta = 0.415$, $p < 0.001$), with a medium effect size ($f^2 = 0.209$). This finding indicates that individuals with greater financial knowledge tend to demonstrate more appropriate financial practices, including financial planning, saving, expenditure management, and informed financial decision-making. This result is consistent with previous studies reporting that financial literacy contributes to responsible financial management and financial decision-making (Hamid et al., 2023; Mireku et al., 2023; Ninan et al., 2021; Prabhakaran & Mynavathi, 2025; Rodriguez et al., 2024; Xu et al., 2022; Yuwono et al., 2023). However, the R^2 value of 0.173 indicates that the model explains only 17.3% of the variance in Financial Behavior, suggesting that other factors not included in the model also contribute to individuals' financial practices. This relationship can be understood from the perspective of the Life-Cycle Hypothesis (LCH) proposed by Franco Modigliani and Richard Brumberg (1954). LCH suggests that individuals allocate their financial resources between consumption and saving according to their current circumstances and future needs. Within this framework, financial literacy may support appropriate financial behavior by enabling individuals to evaluate financial alternatives, control expenditures, plan their finances, and balance present consumption with future financial objectives. Nevertheless, the findings do not imply that higher financial literacy automatically results in better financial behavior. The medium effect size indicates that Financial Literacy makes a meaningful contribution to Financial Behavior, while the relatively low R^2 value indicates that a substantial proportion of the variance remains unexplained. Overall, the findings support the relevance of LCH in understanding financial behavior while indicating that Financial Literacy is an important contributing factor rather than the sole determinant of individuals' financial practices.

e. Financial Behavior and Financial Well-Being

Financial Behavior reflects how individuals manage their financial resources through expenditure control, saving, budgeting, and financial planning. In this study, Financial Behavior has a positive and statistically significant relationship with Financial Well-Being ($\beta = 0.318$, $p < 0.001$). This finding indicates that individuals who engage in more appropriate financial behaviors tend to experience better financial well-being. However, the effect size is relatively small ($f^2 = 0.117$), suggesting that although Financial Behavior has a statistically significant relationship with Financial Well-Being, its contribution within the proposed model is relatively limited. Thus, sound financial practices may support financial well-being but do not fully explain differences in individuals' financial conditions. This finding is consistent with previous studies emphasizing the role of expenditure control, saving, financial risk management, and other responsible financial practices in supporting favorable financial outcomes (Choung et al., 2023; Hamid et al., 2023; Kuutol et al., 2024; Mamilla et al., 2025; Rahman et al., 2021; Sabri et al., 2024). These findings suggest that the consistency and effectiveness of individuals' financial practices may influence the extent to which such practices are reflected in their overall financial well-being. The relationship can also be understood through the Life-Cycle Hypothesis (LCH) proposed by Franco Modigliani and Richard Brumberg (1954), which emphasizes the allocation of resources between current consumption and future needs. From this perspective, controlling expenditures, maintaining savings, and planning for future financial needs can help individuals balance present consumption with future financial security. Accordingly, appropriate Financial Behavior may contribute to Financial Well-Being by supporting more sustainable financial resource management. Overall, the findings are consistent with the principles of LCH while indicating that Financial Behavior represents one contributing factor rather than the sole determinant of Financial Well-Being.

f. Financial Behavior as a Mediator between Financial Literacy and Financial Well-Being

Financial Behavior represents a pathway through which Financial Literacy is associated with Financial Well-Being. The indirect effect is positive and statistically significant ($\beta = 0.132$, $p < 0.001$), indicating that financial knowledge may contribute to financial well-being when translated into appropriate financial practices, such as budgeting, saving, expenditure control, and financial planning. This finding is consistent with Zhang and Chatterjee (2023), Tohar and Akron (2025), and Sabri et al. (2022), who identify Financial Behavior as an important mechanism linking Financial Literacy with Financial Well-Being. Further support is provided by Prabhakaran and Mynavathi (2025), who emphasize the importance of financial practices in translating financial knowledge into favorable financial outcomes. However, the mediation effect should be interpreted cautiously. The direct effect of Financial Literacy on Financial Well-Being remains positive and statistically significant ($\beta = 0.218$, $p < 0.001$), indicating that Financial Behavior does not fully account for the relationship between Financial Literacy and Financial Well-Being. The effect size of Financial Literacy on Financial Behavior is medium ($f^2 = 0.209$), whereas the effect size of Financial Behavior on Financial Well-Being is small ($f^2 = 0.117$). In addition, the R^2 values of 0.173 for Financial Behavior and 0.336 for Financial Well-Being indicate that a substantial proportion of the variance in these constructs remains unexplained by the proposed model. Therefore, Financial Behavior represents an important mediating pathway, but it is not the sole mechanism through which Financial Literacy is associated with Financial Well-Being. The mediating relationship can be further understood through the Life-Cycle Hypothesis (LCH) proposed by Franco Modigliani and Richard Brumberg (1954), which emphasizes the allocation of financial resources between current consumption and future needs. In this context, Financial Literacy provides individuals with knowledge that can inform financial decisions, while Financial Behavior reflects the application of that knowledge through spending management, saving, budgeting, and financial planning. Hamid et al. (2023) and Kuutol et al. (2024) similarly emphasize the importance of appropriate financial practices in supporting longer-term financial outcomes. Therefore, the findings are consistent with the principles of LCH and suggest that Financial Literacy may contribute to Financial Well-Being partly through Financial Behavior, while other individual and contextual factors may also play important roles.

g. Financial Literacy and Financial Well-Being

Financial Literacy has a positive and statistically significant relationship with Financial Well-Being ($\beta = 0.218$, $p < 0.001$), indicating that greater financial knowledge is associated with better financial outcomes. However, the relationship has a small effect size ($f^2 = 0.045$), suggesting that although Financial Literacy is significantly associated with Financial Well-Being, its contribution within the proposed model is relatively limited. This finding is consistent with Hamid et al. (2023), Rahman et al. (2021), and Sabri et al. (2024), who associate financial literacy with more effective financial management and greater financial stability. Similarly, Anghel and Pochea (2025), Lusardi and Streeter (2023), and Mamilla et al. (2025) report positive associations between financial literacy and financial well-being. The relationship can be understood from the perspective of financial literacy as a cognitive foundation for evaluating financial alternatives, planning finances, and making informed financial decisions. Individuals with greater financial literacy may be better equipped to understand financial risks, control expenditures, and prepare for future financial needs. This perspective is consistent with Lusardi and Mitchell (2007), who emphasize the importance of applying financial knowledge to everyday financial decisions, as well as Yuwono et al. (2023), who highlight the role of financial literacy in financial planning and decision-making. Nevertheless, the significant relationship should not be interpreted as evidence that financial literacy automatically results in better financial well-being. The R^2 value of 0.336 indicates that the model explains 33.6% of the variance in Financial Well-Being, while a substantial proportion remains unexplained. Thus, although Financial Literacy provides an important cognitive foundation for managing financial resources, its small effect size suggests that it represents only one contributing factor to Financial Well-Being. Other financial, behavioral, psychological, and contextual factors may also influence individuals' financial well-being.

h. Financial Well-Being and Financial Resilience

The significant relationship between Financial Well-Being and Financial Resilience indicates that individuals' financial conditions are associated with their capacity to cope with financial difficulties. The path coefficient is relatively strong ($\beta = 0.472$, $p < 0.001$), with a medium effect size ($f^2 = 0.287$), making this relationship the strongest among the structural paths examined in the model. This finding suggests that greater financial well-being may provide individuals with greater capacity to absorb unexpected expenses and respond to economic uncertainty. However, the strength of this relationship should be considered within the explanatory capacity of the model rather than interpreted as evidence that Financial Well-Being alone determines Financial Resilience. This result is broadly supported by Spohn (2024), Hamid et al. (2023), and Bottazzi and Oggero (2023), who associate financial well-being with preparedness for economic shocks and longer-term financial resilience. Owusu et al. (2025) and Kuutol et al. (2024) similarly emphasize the importance of financial stability in enabling individuals to adapt to changing economic conditions. The OECD (2022) also relates financial resilience to individuals' capacity to manage and adapt to financial disruptions. Nevertheless, the present finding extends these perspectives by showing that Financial Well-Being has the strongest effect size among the structural relationships examined in the proposed model. This suggests that maintaining adequate financial conditions may be particularly relevant to individuals' capacity to withstand financial disruptions. The relationship can be further understood through the Life-Cycle Hypothesis (LCH) proposed by Franco Modigliani and Richard Brumberg (1954), which emphasizes the management of consumption, savings, and financial resources across the life cycle. Financial Well-Being may reflect the extent to which individuals are able to balance current financial needs with future financial requirements, thereby providing a foundation for greater financial resilience. However, the R^2 value of 0.223 indicates that the model explains 22.3% of the variance in Financial Resilience, while the remaining 77.7% may be associated with factors not included in the model. Therefore, although Financial Well-Being represents an important contributor to Financial Resilience, other financial, behavioral, psychological, and contextual factors may also shape individuals' ability to withstand and recover from financial difficulties.

V. Conclusion

Overall, the findings provide statistical support for all proposed hypotheses. Financial Literacy was positively and significantly associated with Financial Self-Efficacy, Financial Behavior, and Financial Well-Being, while Financial Self-Efficacy and Financial Behavior were positively associated with Financial Well-Being. Financial Well-Being demonstrated the strongest direct relationship with Financial Resilience ($\beta = 0.472$, $p < 0.001$). The mediation results further indicate that Financial Self-Efficacy and Financial Behavior represent significant pathways through which Financial Literacy is associated with Financial Well-Being. In addition, the sequential mediation results indicate significant indirect relationships between Financial Literacy and Financial Resilience through Financial Self-Efficacy and Financial Well-Being, as well as through Financial Behavior and Financial Well-Being. These findings suggest that Financial Resilience is associated with interconnected cognitive, psychological, behavioral, and financial well-being mechanisms rather than with Financial Literacy alone. The findings provide empirical support for the relevance of the Life-Cycle Hypothesis (LCH) and Social Cognitive Theory (SCT) in explaining the relationships examined in this study. Social Cognitive Theory helps explain the role of Financial Self-Efficacy in linking financial knowledge with individuals' confidence in managing financial matters, while the Life-Cycle Hypothesis provides a theoretical basis for understanding financial behavior, financial well-being, and the management of financial resources over time. However, the R^2 values of the endogenous constructs range from 0.173 to 0.336, indicating limited to moderate explanatory power. Therefore, although the proposed relationships are statistically supported, the findings should not be interpreted as indicating that the variables included in the model fully explain Financial Well-Being or Financial Resilience.

The findings highlight the importance of developing financial education and intervention programs that not only improve individuals' financial knowledge but also strengthen their confidence in managing financial resources and encourage responsible financial behavior. Government agencies, academic institutions, and financial institutions can contribute to such efforts by providing programs that integrate financial knowledge, self-efficacy development, and practical financial management skills. Such initiatives may help individuals achieve better financial well-being and strengthen their capacity to cope with future economic challenges. Several limitations should be acknowledged. First, the cross-sectional research design limits the ability of the study to capture changes in individuals' financial conditions over time and to establish causal relationships among the variables. Second, the data were collected through self-reported questionnaires, which may be subject to response bias and differences in respondents' perceptions or interpretations. Third, the study focused exclusively on residents of Batam City, which may limit the generalizability of the findings to other regions with different economic, social, and demographic characteristics. Future research should consider longitudinal designs to examine changes in these relationships over time, include respondents from a broader range of geographical areas, and investigate additional factors that may contribute to Financial Well-Being and Financial Resilience, such as financial inclusion, financial anxiety, income level, social influences, and other psychological factors. Examining these additional variables may provide a more comprehensive understanding of the mechanisms underlying Financial Well-Being and Financial Resilience.

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