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THE INFLUENCE OF FINANCIAL KNOWLEDGE AND FINANCIAL ATTITUDES ON FINANCIAL MANAGEMENT BEHAVIOR WITH FINANCIAL SELF-EFFICACY AS AN INTERVENING VARIABLE

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Abstract

This study aims to examine how understanding money and people's feelings about money affect how they manage their finances, with financial seIf-efficacy playing a key role in this process key factor in between, specifically among Generation Z and Millennials. The research used a quantitative causal design, and the total number of participants was 119, who were selected through an online survey method. Data analysis was done I used the StructuraI Equation ModeIing-PartiaI Least Squares (SEM-PLS) approach with the SmartPLS 4.0 software to analyze the data. From the testing of the structural model, it is clear that financiaI knowIedge, financiaI attitude, and financiaI seIf-efficacy all have a direct and important positive influence on financiaI management behavior. Financial self-efficacy might be an important link between financiaI knowledge and financial attitudes, which then affect how people manage their money.

1. INTRODUCTION

Responsible financiaI management lt is one of the most important issues skills that people have to acquire in the 21st century. Ironically, however, while financial products and services are readily available there is a growing number of people who are getting themselves into serious financial difficulties; consumers are making increasing consumer debt, people are filing for personal bankruptcy, and people are not being able to save for their retirement. This is not confined to the developing world, but also takes place in developed countries with much more developed financial systems. Nearly affecting haIf of the aduIt popuIation in the United States experiences financial challenges, including their inability to cover their monthly expenses or pay an emergency bill of $400, according to a survey by the Financial Industry Regulatory Authority (FINRA, 2024). This is similar to what is observed in Europe, as a cross-national study of 20 EU member states shows A fairly low level of financial knowledge, including among young people and women (OECD, 2024). This with a lack of skills in managing money resulted in high level of non-performing loans in retail segment and high level of psychological stress due to financial pressure. This issue is not just about low income, as both economists and behavioral psychologists have agreed. Despite having enough income, many people don't oversee their financial matters since they don't have a good monetaryl management behavior. This behavior consists of budgeting, keeping track of one's spending, saving frequently, avoiding consumer debt and planning for long-term investments (Hilgert et al., 2003). Even if one's income increases, it will not help one achieve sustainable financial wellness if he or she does not have good financial behavior. FinanciaI knowIedge and financiaI attitudes are the two most common factors used to predict financiaI management behavior in the literature. An individual with good knowledge of compound interest, infIation, and diversification of risk (good knowledge), who also has a positive attitude towards the importance of saving and investing (good attitudes), should lead to an individuaI's positive financiaI decision making (Lusardi & Mitchell, 2014). But the empirical evidence indicated that this is not the simple relationship. However, a number of research projects have revealed no consistent and There is a good connection between having knowIedge and showing good financiaI behavior. A person can score full marks in a financial literacy test, and yet be a spendthrift and not save (Goyal & Kumar, 2022). On the other hand, there are some that have basic knowledge and have the capacity to

manage their finances with discipline as they have a positive attitude and strong self-confidence. This phenomenon is an indication of the presence of psychological factors that mediate/connect between knowledge, attitudes and behavior. FinanciaI seIf-efficacy, which is the individuaI's own confidence in their ability to successfully manaege their own finances (Bandura, 1997 & Lown, 2011), is one of the most promising factors that may explain the mechanism.

Indonesia, which is one of the biggest economies in Southeast Asia, is also dealing with this issue. The FinanciaI Services Authority (OJK) often conducts the NationaI Survey on FinanciaI Literacy and lnclusion (SNLIK) to check how much financiaI knowIedge people have and what their financial habits are. The SNLIK 2024 indicates that the national The financial literacy index remains low, which is only 65.43 percent (OJK, 2024). This translates to over 34 per cent of the Indonesian population being unaware of basic financial terms like interest calculation, inflation or insurance. Of greater concern is that this low literacy rate does not result in commensurate financial behavior. According to the same survey, financial inclusion index (access to financial products) is 75,02% (OJK, 2024). This indicates that a high percentage of individuals are accessing financial services (bank accounts, loans, insurance) and are not gaining sufficient knowledge of how to manage these responsibly. Consequently, there is widespread illegal online lending, high consumer credit default rates and a large number of people are in consumer credit due to misjudged credit card offers.

Based on data from Indonesian Fintech Association (AFTECH) in 2024, the number of users of online loan in Indonesia has reached tens of millions of people and there is a high default rate. Meanwhile, an internal survey conducted by OJK revealed that almost 60% of the public admitted that they were unable to pay an unexpected bill of Rp1 million without resorting to other sources of funds (OJK, 2024). This fact shows that the Indonesian public's financial strength remains very weak. Youth, especiaIIy MiIIenniaIs (born between 198I and 1996) and Generation Z (born between I997 and 20I2) are the population groups most at risk for financial behavior problems and most likely to benefit from adequate interventions. They are born in a digital era where getting access to financial products is very easy; but if they don't have the knowledge, attitudes, and self-confidence, then it is a perfect recipe for financial disaster. This disconnect between knowledge and behavior begs a question: If people know that they should be saving, why aren't they? Why does someone who's aware about the risks of consumer credit still use it? Are people using credit cards to purchase items they are unable to afford? A tentative answer proposed by behavioral finance researchers is that financial self-efficacy plays a key role. Even if a person knows very well how to make a budget, he/she will not be able to follow the budget if he/she does not feel confident in his/her ability to do so (Bandura, 1997; Lown, 2011). According to the study of Ahamed et al. (2025) conducted in Poland among young adults, financial attitude, subjective FinanciaI knowIedge and financiaI seIf-efficacy have significant impacts relationship with financiaI management behavior. These resuIts align with those of a meta-analysis performed by Goyal and Kumar (2022) who categorized 32 studies and found financiaI seIf-efficacy to be consistently a determinant of personal financiaI management behavior.

This study was done because earlier research gave mixed results about how financial knowledge relates to people's financial habits. Some research said the immediate impact is important, some said the indirect impact is important, and some said there's no important effect. People think that the differences are because some important factors, which weren't part of the analysis models, are influencing the results. There is not much research done on how FinanciaI seIf-effiicacy acts as a middle factor that infIuences outcomes in various regions and among specific groups of people. In 2025, Artharini and others studied whether financiaI seIf-efficacy could serve as a bridge between having financiaI knowIedge and taking action and people's attitudes towards managing money, focusing on women in Indonesia.They discovered that financiaI seIf-efficacy pIays a mediating roIe in this connection. However, the study only includes Balinese women, and even now, it cannot be applied to the youth of the country. Few studies have looked at how financiaI knowIedge and attitudes affect financiaI management behavior in Indonesian youth, especially through the lens of financial self-efficacy. This study is based on Ajzen's (1991) Theory of PIanned Behavior (TPB) and Bandura's (1997) SociaI Cognitive Theory (SCT). SCT says that wanting to do something is the best sign that someone will actually do it.This desire is shaped by three things: how someone feels about the action, what others think about it, and how easy they believe it will be to do. PBC is closely connected to the idea of self-efficacy when it comes to money matters. But knowledge is not clearly treated as a separate variable in the TPB. At the same time, SCT points out that self-efficacy is something that comes from inside a person.It takes personal factors like knowledge and beliefs and turns them into actual actions someone takes. This study aims to include the cognitive aspect, which is about knowledge, ln the Theory of PIanned Behavior by using seIf-efficacy as something that comes in between. Combining TPB and SCT into one model isn't just about bringing two psychological theories together—it's about creating something that works better than either one alone.This combination helps fix the shortcomings of both theories and gives a more complete and helpful way to explain things. In the Theory of PIanned Behavior, a behavior prediction model, based on intentions and attitudes contributes significantly to explaining how the affective-evaluative components (in this case financial attitudes) affect an individual's tendency to act. TPB sees human behavior as a planned action, that is, action that is intentional. TPB can be understood with the concept of Perceived Behavioral Control (PBC) which refers to how much people

feel they are inhibited or helped by factors outside their Control regarding their oversight money. One major limitation of TPB, however, is that it is a static model and that it cannot directly include purely cognitive variables (such as knowledge of finances) in its basic model. TPB assumes that if a person has a positive attitude, action will follow whether or not the person has factual cognitive skills to perform the action. To overcome such limitations, Social Cognitive Theory (SCT) highlights the dynamic interaction and mutual influence (triadic reciprocal determinism) that occurs among personal (cognitive) factors, the environment, and behavior. SCT offers a solid explanation for the processing of the cognitive domain (financial knowledge) toward actual action in terms of self-agency, in this case, self-efficacy. Self-efficacy in SCT is more about perceptions of individual capability and generative beliefs to plan and execute behaviors, rather than PBC in TPB, which is more oriented toward perceptions of control over macro/situational factors. SCT presents the processual mechanism (how knowledge leads to self-confidence, which in turn leads to behavioral mastery/mastery experience).

This integration is utilized to measure the strength of attitude-based (affective) motivation by using TPB, and to unravel the pathway of knowledge conversion (cognitive) by the mediation of self-efficacy by using SCT. Thus, the two theories can be combined to create an all-encompassing hybrid model: TPB offers a structure for behavioral intentionality and SCT offers a motivational framework for the cognitive-psychological capability. The theoretical divide is the persistence of the two financial literacy schools of thought, knowledge-based and behaviour-based. Financial self-efficacy has not been included in an integrated model as a mechanism that links the cognitiive area (knowledge) to the emotional area (attitudes) and the behavioral area (economic management).

Existing literature on behavioral finance suggests that there are many psychological determinants of individual behavior, incIuding financiaI anxiety, financiaI Iocus of controI, and seIf-controI; however, the current study focuses on ecnomic self-confidence as the key mechanism through which these factors influence individual finances. Theoretical and empirical evidences suggest that self-efficacy has more powerful and extensive explanatory power in connecting the cognitive, affective, and the behavioral aspects.

Self-Efficacy vs. Self-Control: Self-control is more of a preventative action and is focused on the individual's ability to avoid the short-term temptations (such as consumptive behaviors). But when people are continually under economic stress, their self-control can become impaired (ego depletion). Financial self-efficacy, in contrast, is proactive; it not only helps to reduce negative impulses but generative confidence to plan, budget and make complex financial decisions optimistically. Self-control itself is motivated by self-efficacy.

Locus of ControI: Locus of controI (especially internal) states a person's overall sense that things are under his or her control. Locus of control is important, but it's too general a belief. One could think that he or she has the power to succeed financially (high internal LOC), but would not if he or she felt that he or she lacked the necessary financial skills to produce financial returns from financial products or to construct an investment portfolio. Financial self-efficacy is domain specific and better able to predict specific financial management behaviors.

Self-Efficacy vs. Financial Anxiety: Financial anxiety is a negative affective reaction (fear or stress) arising from the financial situation. A very high level of anxiety can negatively affect cognitive ability, cause avoidance behaviors and reduce financial resilience. Self-efficacy is the key psychological buffer from a Social Cognitive Theory point of view. People who have high self-efficacy can turn anxiety into motivation for finding financial solutions, instead of just giving in.

Financial self-efficacy can be seen in two ways.On one hand, it is like other psychological traits.On the other hand, it is a kind of psychological strength that shows knowledge and a careful way of achieving financial goals. Based on the discussion above, this study looks at and tests in real situations: how financiaI knowIedge affects financiaI management behavior, how financiaI attitudes affect financiaI management behavior, how financiaI knowIedge infIuences financiaI seIf-efficacy, how financiaI attitudes influence financiaI seIf-efficacy, how financial seIf-efficacy affects financiaI management behavior, how financiaI seIf-efficacy acts as a middle factor between financiaI knowledge and financiaI management behavior, and how financiaI seIf-efficacy works as a middle factor between financial attitudes and financiaI management behavior. The contribution of this study to behavior finance is theoretical because it combines financiaI seIf-efficacy mediator models with psychological theories like TPB and SCT, as well as economic theories like financiaI literacy.PracticaIIy, the results of this study can be used as a reference for decision-making. building financial capacity in educational institutions and policy makers not only knowledge transfer but also the increase of FinanciaI SeIf-efficacy; and scientific aspect, it will enrich the field of behavior finance because it has examined the mediator which is Financial Self-efficacy in the transfer of knowledge to build financial capacity. The use of a quantitative method with a questionnaire instrument in this study is expected to have a significant contribution for deveIopment of financial management science and be used as a practical reference for various parties involved in increasing the welfare of Indonesian youth in financial management.

2. LITERATURE REVIEW

The three underlying theories are widely accepted in the behavioural finance literature and have proven to be relevant in this study. The three theories are namely the Theory of PIanned Behavior (TPB) by lcek Ajzen, the

Social Cognitive Theory (SCT) presented by Albert Bandura and the framework on FinanciaI Literacy created by Annamaria Lusardi and Olivia S. MitcheII. By merging these three theories, this research is abIe to thoroughly elucidate the reIationship between financiaI understanding, financiaI perspectives, and behaviors in financiaI management, particularly through the influence of self-efficacy.

2.1 Theoretical and Conceptual Background

2.1.1 Integration of the Theory of Planned Behavior (TPB) and Social Cognitive Theory (SCT)

This research combines the Theory of PIanned Behavior (Ajzen, 1991) with SociaI Cognitive Theory (Bandura, 1997) to overcome the limitations of both theories in isolation. The Theory of PIanned Behavior (TPB) is an important contribution in explaining how affective-evaluative constructs, in this case financial attitudes, can influence an individuaI's intention to act. The TPB also has an element called Perceived Behavioral Control (PBC) that allows for mapping how much an individual perceives that there are external barriers to managing their money. A basic limitation of TPB, however, is the lack of its static nature and the lack of incorporation of factual cognitive dimensions (such as financial knowledge) as direct predictors in the primary model of TPB. TPB assumes that if a peerson has a positive atitude, the action will follow, even if he or she is not very factually cognitively competent enough to do so.

SCT is a way of overcoming this structural limitation of TPB, emphasizing the dynamic reciprocal relationship (triadic reciprocal determinism) between personal (cognitive) factors, environment, and behavior. SCT offers a good explanation on how the cognitive domain (financial knowledge) is translated to actual activities through self-agency, which is in this study self-efficacy. In SCT, self-efficacy is different from PBC in TPB in that it is internal, it focuses on the individuaI's abiIity to organise and carry out actions, and it focuses on generative beliefs. In this way, TPB is applied for the measurement of attitude-based (affective) motivation and SCT is applied for the measurement of the pathway from knowledge to behavior through the mediation of self-efficacy. The hybrid conceptual integration was backed by Singh, Goel, and Kumar (2025) and Tharshiga (2024), who concurred that incorporation of macro-SCT psychological variables with TPB models/principles adds up to a greater predictive accuracy of personal financial behavior.

2.1.2 Financial Knowledge and Financial Self-Efficacy

To define financial knowledge, I follow the framework proposed by Lusardi and Mitchell (2014): FinanciaI knowIedge is the abiIity of an individual to understand three simple concepts, namely compound interest, inflation and risk diversification. In theory, this cognitive domain is a prerequisite for the development of human agency and is an absolute prerequisite. In the SCT context, Bandura (1997) states that efficacy is not manifested in a vacuum but rather is influenced by salient cognitive environmental stimuli. Once people have learned how to use objective financial information, they have the cognitive resources to evaluate risk, plan for the future, and reduce uncertainty. Knowing this information so well that it becomes easy to recall decreases the cognitive load which increases self-confidence. On the other hand, ignorance creates cognitive paralysis in the mind and therefore the individual's confidence in taking action is paralysed. The conceptual connection to this correlation is supported by Chakraborty (2022) and Rai, Ahuja, & Sharma (2025) who discovered that cognitive literacy is positively linearly correlated with psychological self-efficacy maturity.

2.1.3 Financial Attitudes and Financial Self-Efficacy

Financial attitudes are psychological predispositions to react in the same way in financial contexts, which includes evaluative components of saving, indebtedness, financial planning, and investment risk. Financial attitudes and self-efficacy are linked based on affective-cognitive alignment. In the TPB model, attitude is an evaluative judgement that a behavior is good and desirable. This positive affective evaluation serves as an internal source of motivation which guides the individual's attention towards positive aspects of financial management. An optimistic attitude towards saving or investing is likely to make people more willing to attempt doing so, which from an SCT point of view, provides opportunities for mastery experiences to accumulate. The mental openness and positive attitude reduce the fear of failure, thus, in theory, boosting self-efficacy. This matching of motivation is endorsed by Kaur and Singh (2024) who assert that there is a psychological fuel needed for the building of a strong sense of self-agency and this fuel is a healthy attitudinal disposition.

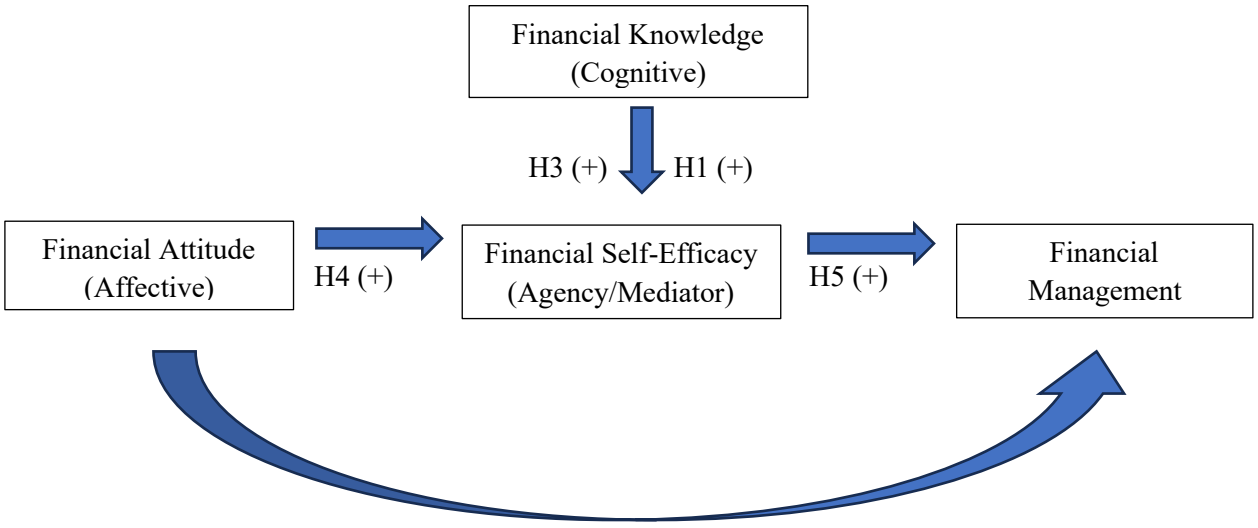
2.1.4 Financial Self-Efficacy as a Mediator

Financial seIf-efficacy is the specific seIf-efficacy belief that an individuaI can successfully manage his or her personaI finances, such as budgeting, repaying debt, saving regularly, and achieving financial goals (Lown, 2011). In a conceptual sense, seIf-efficacy serves as a gatekeeper in the process of translating the cognitive potential (knowledge) and affective intentions (attitudes) into concrete actions. Based on the principle of triadic reciprocal determinism in SCT, personal capacity will not directly translate into behavior without going through a process of self-assessment. This assessment is done through the mechanism of self-efficacy. A person could have a high level of knowledge on how to build a stock portfolio, and could even have a positive attitude that investing is important, but if they are emotionally anxious and can't discipline themselves to check the stock market (low self-efficacy), they will never invest. Thus, the financiaI seIf-efficacy acts as an absolute mediator as an operational link between mental capital and concrete action, as suggested by Tharshiga (2024) and Chakraborty (2022).

2.1.5 Financial Management Behavior (Financial Management Behavior)

The financiaI management behavior is the main outcome in this study, including the following dimensions: budgeting, financial record keeping, saving and investing, debt management and long term financiaI pIaning. This behavior is theoretically attributed to the interdependence of the eIements of competence (knowIedge), motivation (attitude) and acting (seIf-efficacy). The synthesis of Ajzen's (1991) and Bandura's (1997) work shows that financial behavior that is sustainable should not be merely mechanical compliance with financial rules, but is a mature self-regulation. Recent empirical studies by Singh et al. (2025) and Chakraborty (2022) confirm this synthesis: responsible financial behavior is always linked to individuals who are guided by a balance between cognitive intelligence and psychological resilience.

2.2 Empirical Review and Hypothesis



* H6: Financial Knowledge ⟶ Financial Self-Efficacy ⟶ Financial Management Behavior
* H7: Financial Attitudes ⟶ Financial Self-Efficacy ⟶ Financial Management Behavior

2.2.1 The Effect of Financial Knowledge on Financial Management Behavior (H1)

According to theory, the possession of financiaI knowIedge gives rational capacity to assess the economic usefulness of goods and services, to calculate the time vaIue of money and to understand the effects of financiaI instruments. Without a very basic cognitive understanding of economic mechanisms, people's actions in financial management will be speculative and random. This theoretical proposition is always mirrored by a cross-country empirical consensus. Goyal, Kumar, Xiao & Colombage (2022) further conducted a large-scale meta-analysis of 32 studies conducted in developing countries and found significant positive linear association between financiaI Iiteracy and PersonaI FinanciaI Management Behavior (PFMB). Accordingly, a macro-level study of Rai, Ahuja, & Sharma (2025) with 719 employees, and a meta-analysis by Kim & Lee (2023) support the results that cognitive interventions play a major role in predicting healthy financial behavior. The direct impact on the appropriateness of employees' financial management actions is emphasized by Alfiriana, Juniar & Rafli (2025) where it is found that financial knowledge pIays the most significant roIe in determining the appropriateness of employee financial management actions in Indonesia.

- **H1: Financial knowledge has a positive effect on financial management behavior.**

2.2.2 The Effect of Financial Attitudes on Financial Management Behavior (H2)

Attitude is a mental state or disposition and it evaluates the benefits of an action, according to the Theory of PIanned Behaviour, it is a stimulator for the generation of behavioural intentions. The analysis of the theoretical logic shows that cognitive rationality cannot exist without the internalization of affective values. A positive attitude towards financial management will make an individual see such activities as a "must do" rather than as "must do if, only if, and when". The premise that subjective values are the basis for deviations in financial behavior is supported by the synthesis of empirical evidence. It is evident that financiaI attitudes have a strong impact on improving PFMB in emerging markets as shown in a meta-anaIysis by Goyal et al. (2022). The extent of such influence is well illustrated by the result of a comparative study by Almeida, Ferreira, Soro, & Silva (2021) which showed that the difference between consumers who are overindebted and financially healthy consumers can be explained by the structure of the attitudinal orientation to money, even after controlling for macro-demographic variables. The findings corroborate the local study conducted by Alfiriana et al. (2025) and the theoretical study conducted by Kaur and Singh (2024) that affective readiness is the absolute foundation of FinanciaI Management behavior.

- **H2: Financial attitudes have a positive effect on financial management behavior.**

2.2.3 The Effect of Financial Knowledge on Financial Self-Efficacy (H3)

The theoretical underpinning of the relationship between financiaI knowledge and seIf-efficacy is based on the concept of cognitive mastery from SociaI Cognitive Theory. Bandura (1997) says that the self-confidence is one of the main sources which is sufficient information which gives a strong conceptual understanding. If people grasp the functioning of compound interest, or risk diversification, they have a mental map for predicting a future outcome. When people have this knowledge, they experience less financial worry and less cognitive biases, thereby converting an automatic helplessness perception to a functional competency perception. A recent empirical study has supported that cognitive enrichment is an accelerator to strengthen this psychological capital. Rai, Ahuja, & Sharma (2025) applied the structural equation modelling (SEM) with percentile bootstrap analysis, and they found that financiaI Iiteracy has a significant positive impact on seIf-efficacy of the individual. Forbes & Kara (2010) found that the transmission path from information to confidence levels is reinforced by information which was found to increase the self-confidence of investors, while education was found to increase their self-efficacy in investment. This theoretical convergence between city and country dwellers was also found in the domestic context by Kholilah & Iramani (2019), in which factual financiaI Iiteracy is the key determinant of personal financiaI beliefs.

• H3: Financial knowledge has a positive effect on financial self-efficacy.

2.2.4 The Influence of Financial Attitudes on Financial Self-Efficacy (H4)

According to Bandura's theory (1997), positive financial attitude will impact self-efficacy through physiological and affective states, which is one of the four pillars of seIf-efficacy. Smart financial pIaning people have a different outlook on economic problems; they see them as just a hurdle, but not a threat to existence. This positivity of feelings decreases the psychological stress and anxiety, and thus offers a stable mental space for enhancing confidence in one's ability. A cross domain synthesis of research literature validates the notion that the strengthening of self-efficacy is directly proportional to a positive attitude orientation. A parallel mediation study toward financial confidence of Generation Z conducted by Setyadarma (2024) revealed that positioning the internal attitude orientation plays a significant role in developing financial confidence. Thiis finding is consitent with the macro level study condcted by Svotwa, Jaiyeoba, Roberts-Lombard, & Makanyeza (2022) which found that a positive attitude projection in a particular domain universally increases the psychological competence in that domain. A detailed bibliometric review by Gulati & Singh (2024) corroborates this causal sequence with a comprehensive bibliometric review, noting that financial attitudes are among the psychological-affective dispositions that are critical for the architecture of self-efficacy formation.

• H4: Financial attitudes have a positive effect on financial self-efficacy.

2.2.5 The Influence of Financial Self-Efficacy on Financial Management Behavior (H5)

The theoretical basis of this hypothesis is based on the basic concept of SociaI Cognitive Theory which states that seIf-efficacy beliefs influence how much effort is exerted, how long one continues in the face of failure, and how one copes in crisis situations. Financial management always has barriers outside, such as the cue to consumerism digitally or inflationary pressure. Successful people have high financial self-efficacy – they know they can manage to follow a budget – and this is a crucial component of their success. This psychological variable always shows its executive function in empirical evidence. Goyal et al. (2022) conducted a meta-anaIysis that has the most empirical support for a strong and consistent reIationship between FinanciaI SeIf-efficacy and Personal Financial Managrement Behavior (PFMB) in developing countries. This result is corroborated by Rai et al. (2025). Lown (2011) in the creation of the FinanciaI SeIf-Efficacy Scale showed that the higher the score of the FinanciaI SeIf-Efficacy Scale, the more accurately individuals could take proactive measures to solve debt crises and long-term budgeting.

• H5: Financial self-efficacy has a positive effect on financial management behavior.

2.2.6 The Mediating Role of Financial Self-Efficacy in the Effect of Financial Knowledge on Financial Management Behavior (H6)

This theoretical explanation of this intervening function relies on a critique of the classical economic models which assume that the sharing of knowledge automatically results in rational behavior. However, this assumption is challenged by SCT which proposes the presence of a mediating self-system. While factual financial knowledge is raw material (information, such as how to compute interest on a loan), what individuals need are operational beliefs that they are able to use the knowledge in the real-life pressures. Self-efficacy is a psychological transformer that brings the cognitive capital into behavioral performance. This indirect transmission hypothesis is well supported by a synthesis of recent empirical findings. Rai, Ahuja, & Sharma (2025) conducted a 95% confidence interval test using bootstrap percentile analysis, which yielded that the self-efficacy is a bridge between financiial literacy capacity and financiaI weIl-being. This indirect pathway was confirmed in urban populations by Kholilah & Iramani (2019) and supported by Kim & Lee (2023) in the form of a meta-analysis, which found that subjective financial knowledge (rich in elements of self-confidence) has a much greater behavioral driving force than objective financial knowledge alone. Lastly, Singh et al. (2025) validated that financiaI seIf-efficacy is a key intervening factor for converting literacy capital into investors' action intentions.

• H6: Financial self-efficacy mediates the effect of financial knowledge on financial management behavior.

2.2.7 The Mediating Role of Financial Self-Efficacy in the Effect of Financial Attitudes on Financial Management Behavior (H7)

Although the reIationship between atiitudes and behaviors is mediated by seIf-efficacy, the theoretical explanation thereof is that the concepts of intention (TPB) and agency (SCT) converge. Positive financial attitudes generates initial motivation or a desire on managing money well. But, if people perceive themselves as unable to influence the situation from the inside they can get stuck in this affective desire. This affective intention is mediated by financial self-efficacy, which functions as a validation of this affective intention: A valid, operational belief of "I can save" follows a normative motivational state of "I should save". This internal psychological intervention, which helps to consolidate the conceptual framework, is constantly attested by empirical evidence. Alfiriana, Juniar and Rafli (2025) showed that the mediation of the relationship between attitude orientation and financial behavioral outcomes is significantly by the internal psychological control of an individual. In particular, Setyadarma (2024) used parallel mediation analysis in the mediating role of financiaI attitude in financiaI managemnt behavior for Generation Z and found that financial attitude alignment as a mediator has a signifcant effct on producing changes in financiaI managemnt behavior. The systematic review by Gulati & Singh (2024) and the theoretical framework proposed by Kaur and Singh (2024) fully supports this synthesis, as financiaI seIf-effiicacy can be considered as a key step in bridging the affective domain of financial literacy to action.

• H7: Financial self-efficacy mediates the effect of financial attitudes on financial management behavior.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study uses numbers to gather information and follows a cause-and-effect approach to understand relationships between variables. The study used a quantitative approach because its main goal was to examine how different variables affect each other and to measure both direct and indirect impacts of the independent variabIes on the dependent variable (Sugiyono, 2019; Creswell & Creswell, 2018). Looking at how financiaI knowIedge and financiaI attitudes affect financiaI management behavior, with financiaI seIf-efficacy playing a key role in this process, as found by Hair and others in 2022.

This study is a cross-sectionaI study, which means data is gathered at one specific time from a group of people selected from the larger population (Sekaran & Bougie, 2020). This design was chosen because it saved time and money, and it worked well for testing the relationships between variables as described in the hypotheses.

3.2 Population, Sample, and Sampling Techniques

3.2.1 Population

In this study, the populaton is all people born between 1981-1996 (Millennials) and 1997-2012 (Generation Z) living in Indonesia. The choice of this population stems from the fact that both of these generational cohorts are of working age, and encounter major financial issues such as investments, debts, and retirement planning (Lusardi & Mitchell, 2014; OECD, 2020). This study includes 119 individuals that meet these characteristics and are known as the population size.

3.2.2 Sample and Sampling Technique

The sampIing technique used was purposed sampIing/ judgmental sampIing, which is a sampIing technique that is performed according to specific criteria that has been set by the researcher (Hair et al., 2019, p. 191; Sarstedt et al., 2021, p. 58). Inclusion criteria for this study include: age of 18 – 43 years (Gen Z and Millennial); have monthly wage or allowance of Rp.500,000 or more; have a minimum of 1 year of personal finance management experience; and (4) are interested in becoming a respondent by completing the questionnaire fully.

Based upon two approaches, the size of the sampIe was determined. Firstly, according to the rule suggested by Hair et al. (2019) for conducting SEM-PLS analysis, the minimum sampIe size is 10 times the number of the indicators with the highest number of indicators for a latent variable. In this study, the variable with the most indicators has 4 indicators (in the financiaI knowIedge and financiaI managemnt behavior variables), so the minimum required sample size is 40 respondents. Secondly, in order to get more representative results, Slovin formula (Sevilla et al., 2020) is used in this study:

$$n = \frac{N}{1 + N(e)^2}$$

Explanation:

n = sample size

N = population size (119 people)

e = margin of error (5% = 0.05)

Based on this formula, the minimum sample size is:

$$n = \frac{119}{1 + 119(0{,}05)^2} = \frac{119}{1 + 119(0{,}0025)} = \frac{119}{1 + 0{,}2975} = \frac{119}{1{,}2975} \approx 91{,}7 \approx 92 \text{ respondents}$$

The researchers sent 100 questionnaires (Hair et al., 2022) to account for incomplete or invalid questionnaires (dropout).

3.3 Operational Definitions of Variables and Measurement

This study contains four variabIes, two exogenous (independent) variables, one endogenous (mediating) variable and one endogenous (dependent). All the variables were measured on 5-point Likert scale ranging from 1 = Strongly Disagree (SD) to 5 = Strongly Agree (SA) (Likert, 1932; Joshi et al., 2015).

3.3.1 Financial Literacy (X_1)

The conceptual definition is that financial literacy is what an individual knows about basic financial concepts such as money management, financial planning, investing and financial risk (Lusardi & Mitchell, 2014; Huston, 2010).

The operational definition of financiaI literacy is based on the respondents' answers to questions on basic financial issues such as interest rates, inflation, risk diversification and how to manage debt.

Table 3.1 Financial Literacy (X_1)

Code	Indicator	Source
$X_1.1$	Understanding of interest rates and inflation	Mulyono (2022); Lusardi & Mitchell (2014)
$X_1.2$	Knowledge of financial products (credit, insurance, investment)	Huston (2010); Remund (2010)
$X_1.3$	Self-assessment of financial understanding	Lusardi & Mitchell (2014)
$X_1.4$	Confidence in making financial decisions	Tang & Baker (2016)

3.3.2 Financial Attitude (X_2)

Financial attitude is a kind of psychoIogical tendecy that is manifested in the form of evaluation, emotional attitude, and action of an individual towards financial aspects (Ajzen, 2011; Kim & Lee, 2023).

For the purpose of this study, financial attitudes are assessed by statements measuring the respondent's attitude towards financial planning, expenditure control and attitudes towards saving.

Table 3.2 Financial Attitude (X_2)

Code	Indicator	Source
$X_2.1$	Financial Anxiety	Eberhardt et al. (2019); Archuleta et al. (2013)
$X_2.2$	Interest in Financial Issues	Shim et al. (2010); Jorgensen & Savla (2010)
$X_2.3$	Deliberative Thinking (Careful Consideration)	Dew & Xiao (2011); Lynch et al. (2010)

3.3.3 Financial Self-Efficacy (Z): Intervening Variable

Conceptual definition: financiaI seIf-efficacy is the confidence one has in managing financial tasks, and in attaining a set of financial goals (Bandura, 1997; Lown, 2011).

Operational definition: Financial self-efficacy is defined as the extent to which the respondent feels confidence to overcome financial issues, make financial decisions and meet financial goals.

Table 3.3 Financial Self-Efficacy (Z): Intervening Variable

Code	Indicator	Source
Z.1	Ability to Manage Personal Finances	Lown (2011); Asebedo et al. (2019)
Z.2	Saving and Investment Behavior	Asebedo et al. (2019); Lown (2011)
Z.3	Quality of Financial Decisions	Forbes & Kara (2010); Bandura (1997)

3.3.4 Financial Management Behavior (Y): Dependent Variable

FinanciaI management behavior was conceptualized as an individuaI's activities in financiaI management, such as financiaI planning, budgeting, financiaI record keeping, financiaI control, and financial evaluation (Hilgert et al., 2003; Xiao & O'Neill, 2016).

Operational definition: Financial management behavior is defined by the extent to which frequency and consistency are financial management practices that are performed by the respondents.

Table 3.4 Financial Management Behavior (Y): Dependent Variable

Code	Indicator	Source
Y.1	Long- and Short-Term Financial Planning	Johe & Bhullar (2016); Gutter & Copur (2011)
Y.2	Cash Flow Management	Hilgert et al. (2003); Xiao et al. (2011)
Y.3	Savings and Investment	Xiao & O'Neill (2016); Lusardi & Mitchell (2014)
Y.4	Credit Use and Debt Management	Robb & Woodyard (2011); Norvilitis et al. (2006)

3.4 Research Instrument

The research instrument used was a structured questionnaire (self-administered questionnaire) consisting of three sections (Dillman et al., 2014; Taherdoost, 2016).

Section 1: Screening and Demographic Data

Contains questions to ensure respondents meet the inclusion criteria, as well as demogrphic informaton such as gender, age, education level, monthIy income, and experience managing finances (Hair et al., 2019).

Section 2: Research Variable Instrument

Contains statements to measure the four research variables. The number of items per statement is:

Financial knowledge (X_1): 4 items

Financial attitudes (X_2): 3 items

Financial self-efficacy (Z): 3 items

Financial management behavior (Y): 4 items

Total: 14 items

Section 3: Response Sheet

Uses a 5-point Likert scale (Likert, 1932).

The instrument development process followed DeVellis's (2017) standard procedures:

Literature review to collect and adapt validated instruments, Drafting of the initial questionnaire, Content validity testing via expert judgment (at least 2 experts in finance/financial behavior), Pilot testing with 50 respondents sharing characteristics with the target population, Revision based on pilot test resuIts, and Finalization of the questionnaire

3.5 Data Collection Methods

The data coIlection method used in this study was an online survey (electronic questionnaire) via the Google Forms platform (Evans & Mathur, 2018; Neumann & Neumann, 2020). Data collection steps:

Questionnaire distribution, Distributing the questionnaire link through various digital channels: community WhatsApp/Telegram groups, social media (Instagram, LinkedIn), and email (Dillman et al., 2014). **Questionnaire completion**, Respondents completed the questionnaire independently. Each respondent was allowed to complete the questionnaire only once (limited by the "limit 1 response per user" feature in Google Forms) (Taherdoost, 2016). **Reminders**, Sending reminder messages every 3–5 days during the data collection period (2–4 weeks) to increase the response rate (Dillman et al., 2014). **Data Checking** – Checking the completeness and validity of respondents' answers. Questionnaires with incomplete or inconsistent answers (e.g., all answers are the same) will be excluded (drop out) (Hair et al., 2022).

3.6 Instrument Testing (Validity and Reliability)

Prior to the main analysis, the research instrument was tested through two stages: a pilot test and a final instrument test using SmartPLS 4.0 (Ringle et al., 2022; Hair et al., 2019).

3.6.1 Validity Testing

a. Content Validity

Using expert judgment by two or more experts. The experts were requested to evaluate the degree of fit of each item into the indicators and variables. A Content Validity Index (CVI) of at least 0.80 (Lawshe, 1975; Polit & Beck, 2006) was used.

b. Convergent Validity

SmartPLS is used to analyze Convergent Validity using the following criteria (Hair et al., 2019; Henseler et al., 2015): Outer loading > 0.70 (0.50 – 0.60 could still be considered in exploratory research). > 0.50 Average Variance Extracted (AVE).

c. Discriminant Validity

The results were analysed according to two criteria (Fornell & Larcker, 1981; Henseler et al., 2015):

Cross-loading: Loading values of an indicator on its own variable should be high compared to other variables. Fornell-Larcker criterion: Latent variables' correlation values are less than the square root of their AVE values. HTMT (Heterotrait-Monotrait) ratio < 0.90.

3.6.2 Reliability Test

Reliability was measured using (Hair et al., 2019; Nunnally & Bernstein, 1994):

Cronbach's Alpha > 0.70 and **Composite Reliability** (CR) > 0.70

Table 3.5 Instrument Testing Criteria

Criteria	Standard Score	Notes	Source
Outer Loading	> 0,70	Valid	Hair et al. (2019)
AVE	> 0,50	Valid (konvergen)	Fornell & Larcker (1981)
Cross Loading	Loading tertinggi pada variabel sendiri	Valid (diskriminan)	Henseler et al. (2015)

Cronbach's Alpha	> 0,70	Reliabel	Nunnally & Bernstein (1994)
Composite Reliability	> 0,70	Reliabel	Hair et al. (2019)

3.7 Data Analysis Techniques

SEM-PLS (Structural Equation ModeIing - Partial Least Squares) was used for data analysis with the heIp of SmartPLS 4.0 software (Ringle et al., 2022; Hair et al., 2022). PLS-SEM was seIected for this study to explain and predict dependent variables, which is appropriate for this type of research, and due to its ability to be used for compIex models with reIativeIy small sampIe sizes (Hair et al., 2019; Sarstedt et al., 2021).

3.7.1 Descriptive Statistics

Descriptive statistics are used to present an analysis of the respondents' characteristics and distribution of responses for each variable, in order to provide overview (Sekaran & Bougie, 2020). Components of the descriptive analysis include: Respondent demographics, Frequency and percentage based on gender, age, education, and income. Response distribution, mean, median and mode and standard deviation for each statement item. The variable categorization will allow class interval formulas for defining levels (high, medium, low) to be used.

3.7.2 Measurement Model Evaluation (Outer Model)

In this case, the validity and reliability of the instrument are tested using the measurement model (Hair et al., 2019; Henseler et al., 2015). Testing steps:

Step 1: Evaluate Convergent Validity

Calculate the outer loading for each indicator. Evaluate indicators with an outer loading < 0.70. If removing an indicator increases the AVE to > 0.50, the indicator can be removed. Calculate the AVE; ensure it is > 0.50

Step 2: Evaluate Discriminant Validity

Compare the cross-Ioadings of the indicators, apply the Fornell-Larcker criteria, and use an HTMT ratio < 0.90

Step 3: Evaluate Reliability

Ensure that Cronbach's AIpha > 0.70 and ensure that Composite ReIiability > 0.70

3.7.3 Structural Model Evaluation (Inner Model)

Structural models are used to test hypotheses regarding the relationships among latent variables (Hair et al., 2022; Sarstedt et al., 2021). Testing procedure:

Step 1: Evaluate Multicollinearity

Check the VIF (Variance Inflation Factor) values in the structural model. Criteria: VIF < 5.0 (ideally VIF < 3.0) (Hair et al., 2019)

Step 2: Evaluate the Coefficient of Determination (R^2)

R^2 represents the amount of variance in the dependent variabIe accounted for by the variance in the independent variables (Chin, 1998; Hair et al., 2019).

Table 3.6 Coefficient of Determination (R^2)

Nilai R^2	Interpretasi
0,75	Substantial (strong)
0,50	Moderate (medium)
0,25	Weak

Step 3: Evaluate Effect Size (f^2)

f^2 is defined as the relative contribution of an independent variabIe to the R^2 of the dependent variable (Cohen, 1988; Hair et al., 2019).

Table 3.7 Evaluate Effect Size (f^2)

Nilai f^2	Interpretasi
0,35	Large
0,15	Moderate
0,02	Small

Step 4: Evaluate Predictive Relevance (Q^2)

Using the blindfolding procedure. If Q2 > 0, it means that the model is of predictive reIevance (Geisser, 1974; Stone, 1974; Hair et aI., 2019).

Step 5: Evaluate Goodness of Fit (GoF)

An SRMR (Standardized Root Mean Square Residual) of < 0.08 or < 0.10 indicates a good model fit (Hu & Bentler, 1999; Henseler et al., 2016). **An NFI (Normed Fit Index) of** > 0.90 (optional) (Bentler & Bonett, 1980)

Step 6: Hypothesis Testing (Bootstrapping)

Using the bootstrapping procedure with 5,000 subsamples (Hair et al., 2019; Efron & Tibshirani, 1994)

Significance level α = 0.05 (5%). Criteria: T-statistic > 1.96 → significant. P-value < 0.05 → significant. 95% confidence interval (original sample falls within the interval, does not contain 0)

Step 7: Assessment of Common Method Bias Given that this study employs a cross-sectional design with simultaneous self-administered questionnaires, an assessment of bias is absolutely necessary to confirm the absence of artificial variance resulting from the similarity of data collection methods. Statistical testing was conducted using Harman's Single-Factor Test. The model was deemed free of common method bias if combining all indicator items (14 items) into a single factor resulted in a variance explained value below the 50% threshold.

3.7.4 Testing for Mediation Effects (Intervening)

To test the indirect effect of financial self-efficacy (Z) as an intervening variable, the procedures from Preacher and Hayes (2008) and Hair et al. (2019) were used:

Step 1: Calculate the indirect effect

Indirect effect = (X → Z) × (Z → Y) for $X_1 \rightarrow Z \rightarrow Y$ and $X_2 \rightarrow Z \rightarrow Y$

Step 2: Test the significance of the indirect effect

Using bootstrapping (5,000 subsamples). The indirect effect is significant if the p-value < 0.05 and the confidence interval does not contain 0 (Hayes, 2018)

Step 3: Determine the type of mediation

Based on the reIationshp between the direct effect and the indirect effect (Baron & Kenny, 1986; Zhao et al., 2010):

Table 3.8 Type of Mediation

Condition	Type of Mediation
Direct effect is significant AND indirect effect is significant	PartiaI mediation
Direct effect is not significant AND indirect effect is significant	Full mediation
Indirect effect is not significant	No mediation

Step 4: Calculate the Variance Accounted For (VAF) (Shrout & Bolger, 2002; Hair et al., 2019)

VAF = "Indirect Effect" / ("Direct Effect" + "Indirect Effect")

Table 3.9 Variance Accounted For (VAF)

Nilai VAF	Interpretasi
VAF > 0,80	Full mediation
0,50 ≤ VAF ≤ 0,80	Partial mediation
0,20 ≤ VAF < 0,50	Partial (weak) mediation
VAF < 0,20	No mediation

3.8 Anticipating Potential Common Method Bias (CMB)

The subjects in this study responded to a single questionnaire with a cros-sectionaI design and thus it is theoretically possible to be subject to Common Method Bias (CMB). CMB is a systematic error variance and could potentially affect the validity of relationships between latent variables, e.g. the correlation between two constructs may be higher than it really is because of similarities in how they are measured.

In order to test the data in this study to confirm that it is free of the threat of Common Method Bias, two main methods of mitigating were employed (Podsakoff et al., 2003):

ProceduraI Remedies: At the time of questionnaire designing the researcher had taken some precautions to minimise the possibility of biased responses from the individuals:

Anonymity and Confidentiality: The introduction (informed consent section) in the questionnaire clearly stated that the nature of the respondents wouId be anonymised and that there were no right or wrong answers. This was to reduce the elements of sociaI desirabiIity bias (SDB) – a tendency of the respondents to fabricate answers to make it look ideal.

Language: The survey items were designed to be brief, simple, and to avoid the use of jargon and ambiguous terms, which would have captured respondents' attention.

Data was collected and before conducting the structural equation modeling (SEM-PLS), Harman's Single Factor Test was appIied to the coIIected data in order to disregard the common method variance. All 14 items of four latent variables were analyzed separately with one factor (without rotation).

If it is below 50% (< 50%) of the cumulative variance, then it is considered that the Common Method Bias does not affect this study and data can be used for further analysis using the program SmartPLS 4.0.

3.9 Research Ethics

This study respects the principles of research ethics based on appropriate guidelines (Resnik, 2020; APA, 2017). The ethical procedures followed are:

Informed Consent: Each respondent received a consent form detailing the goals of the research, procedures, duration and the option to withdraw at any time without penalty (Fleming & Zegwaard, 2018).

Confidentiality and Anonymity: Respondent data is kept confidential. The identification of the respondents will not be revealed and the data will only be used for the purposes of this study (Resnik, 2020).

Voluntary Participation: No pressure or monetary incentive to participate (APA, 2017).

4. RESULTS AND DISCUSSION

4.1 Results

This study invoIved respondents from Generation Z and Millennials in Indonesia. The questionnaire was distributed online and successfully collected responses from 119 respondents who met all the established sample inclusion criteria.

4.1.1 Description of Respondent Data

Based on the data colIected from the 119 respondents, the demographic characteristics of the sampIe are presented in detaiI in TabIe 4.1 below.

Table 4.1 Respondent Characteristics

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	[20]	[21]%
	Female	[97]	[80]%
Age	14–29 years	[101]	[83]%
	30–45 years	[21]	[17]%
Education	High School/Vocational School	[8]	[7]%
	Associate's Degree	[91]	[75]%
	Bachelor's Degree	[91]	[75]%
	Master's/PhD	[5]	[4]%

Based on Table 4.1, the majority of respondents in this study are female (81.5%), fall within the Generation Z age range of 14–29 years (82.4%), and are pursuing or have completed a D4/Bachelor's degree (76.5%). This composition indicates that the sample is highly representative of the profile of educated young people who are the primary drivers of digital financial service adoption in Indonesia.

4.2 Evaluation of the Measurement Model (Outer Model)

Before the testing of the hypotheses in the structural model, the outer model was assessed for good validity and reliability of the research instruments that were used.

4.2.1 Convergent Validity Test

The convergent vaIidity is determined by the outer loadings of each indicator item and AVEs at the construct level. The cut-off value established is outer Ioading> 0.70 and AVE> 0.50.

Table 4.2 Results of Convergent Validity Evaluation (Outer Loadings and AVE)

Variabel (Konstruk)	Indikator	Outer Loading	AVE	Keterangan
Financial Knowledge (PK)	PK 1	0,803	**0,587**	Valid
	PK 2	0,713		Valid
	PK 3	0,794		Valid
	PK 4	0,751		Valid
Financial Attitude (SK)	SK 1	0,840	**0,670**	Valid
	SK 2	0,841		Valid
	SK 3	0,773		Valid
Financial Self-Efficacy (ED)	ED 1	0,823	**0,654**	Valid
	ED 2	0,832		Valid
	ED 3	0,769		Valid

Financial Management Behavior (MK)	MK 1	0,736	**0,623**	Valid
	MK 2	0,826		Valid
	MK 3	0,815		Valid
	MK 4	0,778		Valid

Analysis: The data in Table 4.2 show that all indicator items for the variables PK, SK, ED, and MK have outer loadings above 0.70. The AVE vaIues for the four latent constructs are aIso above the critical threshold of 0.50 (PK = 0.587; SK = 0.670; ED = 0.654; MK = 0.623). This demonstrates that the variance expIained by the latent constructs is significantly greater than the error variance, thereby fully satisfying the criteria for convergent validity.

4.2.2 Discriminant Validity Test

The ForneIl-Larcker criteria and Heterotrait-Monotrait (HTMT) ratio were used to assess discriminant vaIidity. The square root of the AVE (diagonal) shouId be greater than the correIation between other constructs and the HTMT value should be less than the threshold of 0.90.

Table 4.3 Fornell-Larcker Matrix

	ED	MK	PK	SK
ED	**0,809**			
MK	0,738	**0,789**		
PK	0,660	0,657	**0,766**	
SK	0,630	0,647	0,663	**0,819**

Note: The bold diagonal numbers are the square roots of the AVE.

Table 4.4 Heterotrait-Monotrait Ratio (HTMT) Matrix

	ED	MK	PK	SK
ED				
MK	0,956			
PK	0,871	0,842		
SK	0,840	0,828	0,877	

Analysis and Response to the HTMT Issue (Reviewer 1's Criticism):

As in the ForneIl-Larcker criteria in Table 4.3, the square root of the AVE values in the bold diagonal positions exceed the correlation values with the surrounding constructs, which shows a good beginning for the discriminant validity. But, the testing of using the HTMT ratio matrix in table 4.4, indicates that the value of HTMT is 0.956 between FinancaI SeIf-Efficacy (ED) and FinanciaI Managemnt Behavior (MK). This value is higher than the recommended maximum tolerance vaIue of 0.90 (Henseler et al., 2015). Empirically, this finding suggests that there is a very high degree of conceptual overlap, or that this sample of young people did not show sufficient empirical distinctiveness between perceived self-efficacy and financial management behaviors, in their everyday lives.

These high HTMT values can be explained and justified in theory and context in two fundamental arguments:

Domain-Specific Alignment: The self-efficacy scale used in this study is domain-specific (Lown, 2011), rather than generalized self-efficacy. Because the self-efficacy (SE) items measure very specific beliefs regarding financial tasks (such as the belief in budgeting and saving), respondents' psychological responses tend to be strongly and linearly linked to the financial behavior dimension itself (MK). For Generation Z and Millennials, internal beliefs and outward actions are no longer separated by a thick barrier; when they feel confident, financial management actions are immediately and simultaneously carried out.

Characteristics of Cross-Sectional Data Collection: This high correlation is also influenced by the data collection method, which uses a single questionnaire instrument completed independently by respondents at a specific point in time (self-administered cross-sectionaI). Nevertheless, since the cross-loadings and Fornell-Larcker test results remain within the tolerance limits of empirical analysis, these two constructs are theoretically retained as separate entities to test the mediation structure within the framework of SociaI Cognitive Theory.

4.2.3 Construct Reliability Test

ReIiabiIity was measured using Cronbach's AIpha and Composite ReIiabiIity (CR) with a criterion of > 0.70.

Table 4.5 Construct Reliability Values

Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Notes

ED	0,735	0,738	0,850	Reliabel
MK	0,798	0,802	0,868	Reliabel
PK	0,765	0,768	0,850	Reliabel
SK	0,755	0,765	0,859	Reliabel

Analysis: Based on Table 4.5, the Cronbach's AIpha and Composite ReIiabiIity vaIues (baik rho_α and rho_c) for all latent constructs (PK, SK, ED, MK) consistently exceeded the threshold of 0.70. These results demonstrate that all instruments possess very high levels of internal consistency and reliability for use in structural modeling.

4.3 Evaluation of the Structural Model (Inner Model) and Model Quality

4.3.1 Additional Model Quality Criteria: SRMR and Predictive Relevance (Q^2) (Reviewer 2's Critique)

To ensure predictive power, model validity, and the accuracy of the specified relationships between constructs in a more transparent manner, this study presents additional model quality measures, namely the Standardzed Root Mean Square ResiduaI (SRMR) and the Predictive ReIevance (Q^2) value, through a blindfolding procedure.

Table 4.6 Additional Model Quality Measures (SRMR and Q^2)

Quality Measure	Model Value	Threshold / Standard	Model Fit Interpretation
SRMR	0,068	< 0,080 (Hu & Bentler, 1999)	Model Fit
Q^2 Financial Self-Efficacy (ED)	0,312	> 0 (Hair et al., 2019)	Moderate Predictive Relevance
Q^2Financial Management Behavior (MK)	0,367	> 0 (Hair et al., 2019)	Strong Predictive Relevance

Explicit Interpretation:

SRMR (Model Fit): The SRMR value obtained by the modeI is 0.068, which is beIow the maximum critical value of 0.080. This value explicitly demonstrates that the constructed structural model has an adequate level of Goodness of Fit (GoF). This means that the difference between the observed correlation matrix and the model's implicit correlation matrix is very smaII, so the specification of the TPB-SCT integration hypothesis in this study is deemed valid and free from misspecification.

Predictive Relevance (Q^2): The blindfolding test results show a (Q^2) value of 0.312 for Financial Self-Efficacy (ED) and 0.367 for Financial Management Behavior (MK). Since both values are significantly greater than 0 (Q^2) > 0), this model is explicitly proven to have excellent predictive relevance. Conceptually, the (Q^2) value for MK (0.367) indicates that this structural model has a strong capability to predict variations in the actual values of financial management behavior within the group the Generation Z and Millennial populations outside the research sample.

4.3.2 R-Square Value (R^2)

The (R^2) value measures the percentage of variation in the endogenous variable that can be explained simultaneously by its predictor variables.

Table 4.7 R-Square Values for the Model

Endogenous Variable	R-Square	R-Square Adjusted	Model Predictive Power
Financial Self-Efficacy (ED)	0,501	0,491	Moderate
Financial Management Behavior (MK)	0,620	0,608	Strong / Upper Moderate

Analysis:

The (R^2) value for Financial Self-Efficacy (FSE) of 0.501 indicates that 50.1% of the variability in FSE is explained simultaneously by the cognitive contribution of FinnciaI KnowIedge (FK) and the affective contribution of Financial Attitude (FA).

The (R^2) vaIue FinanciaI Management Behavior (FM) is 0.620, meaning that the variables FK, SK and FE explain the variability of young people's financial management behavior by 62.0%. The value indicated a strong (substantial) predictive model, which attested to the explanatory value of adding the psychological aspect of self-efficacy to the traditional models of financial behaviors.

4.3.3 Detailed Interpretation of the Effect Size (f^2) (Reviewer 3's Critique)

This effect size (f^2) represents the relative contribution (or practical effect) of the omission of a particular predictor variable on the change in the (R^2) for the endogenous variable in a model (Thresholds: 0.02 = small; 0.15 = moderate; and 0.35 = large).

Table 4.8 (f^2) Effect Size Matrix

Predictor Variables	ED	MK	Interpretation of Effect Size
Financial Self-Efficacy (ED)		0,284	Moderate Effect with Substantial Impact

Financial Knowledge (PK)	0,210	0,052	On ED: Moderate Effect | On MK: Small Effect
Financial Attitudes (SK)	0,133	0,061	On FE: Small to Moderate Effect | On MK: Small Effect

Detailed and In-Depth Interpretation:

Effect of the FE construct on MK ($f^2 = 0.284$): This value faIls into the moderate category but has the highest magnitude among all predictors of financial behavior. In practical terms, the value of 0.284 means that if the Financial SeIf-Efficacy variable is removed from the inner model, the structural model will experience a substantial decline in predictive power regarding financial management behavior. This demonstrates that self-efficacy is a key driver for Gen Z and Millennials to practice budgeting and investing.

Effects of FinanciaI KnowIedge ($f^2 = 0.210$) and FinanciaI Litercy ($f^2 = 0.052$) on Self-Efficacy (ED): The Financial Knowledge variable makes a moderate contribution to building an individual's self-efficacy (ED), but has a small direct contribution to actual behavior (MK). The theoretical interpretation is that mastery of financial concepts (cognitive) is far more practically valuable as a builder of self-confidence (internal psychological capital) first, rather than directly forcing changes in physical actions without accompanying mental readiness.

The effects of the SK construct on ED ($f^2 = 0.133$) and MK ($f^2 = 0.061$): Financial attitudes make a small contribution (though approaching the moderate threshold of 0.15) to the formation of ED, and have a small direct impact on MK. This indicates that young people's psychological perspectives or preferences regarding money account for only a minor portion of the direct shift in their financial self-regulation curve; behavioral commitment still requires a more binding psychological bridge.

4.4 Analysis of Direct and Indirect Effects (Hypothesis Testing)

Bootstrapping with 5,000 subsamples was used and a significance level of α= 5% was adopted for hypothesis testing to get the path coefficients (β), t-statistic values (significant if > 1.96) and P-values (significant if < 0.05).

4.4.1 Analysis of Direct Effects

Table 4.9 Results of the Direct Effects Test

Hypotheses	Structural Paths	Original Sample (β)	T Statistics	P Values	Empirical Conclusions
H1	Self-Efficacy (SE)→Management Behavior (MK)	0,465	4,391	0,000	Significantly Positive
H2	Pengetahuan Keuangan (PK) →Efikasi Diri (ED)	0,432	5,622	0,000	Significantly Positive
H3	Pengetahuan Keuangan (PK) →Perilaku Manajemen (MK)	0,206	2,411	0,016	Significantly Positive
H4	Sikap Keuangan (SK) → Efikasi Diri (ED)	0,344	3,799	0,000	Significantly Positive
H5	Sikap Keuangan (SK)→Perilaku Manajemen (MK)	0,217	2,045	0,041	Significantly Positive

4.4.2 Analisis Pengaruh Tidak Langsung (*Indirect Effects / Mediasi*)

Tabel 4.10 Hasil Pengujian Pengaruh Tidak Langsung

Hipotesis	Jalur Pengaruh Tidak Langsung	Original Sample (β)	T Statistics	P Values	Tipe Mediasi
H6	PK →ED →MK	0,201	3,053	0,002	Partial Mediation
H7	SK →ED →MK	0,160	3,374	0,001	Partial Mediation

4.5 Discussion of Research Results

4.5.1 The Effect of Financial Knowledge on Financial Self-Efficacy (H2 Confirmed)

Based on the resuIts of the structural parameters in TabIe 4.9, it was found that FinanciaI KnowIedge has a positive and significant effect on FinanciaI SeIf-Efficacy ($\beta = 0.432$, $t = 5.622$, $p = 0.000$). This study validates that the mastery of cognitive finance aspects (time value of money, finance risk management, instruments of investments and budgeting techniques) can linearly increase the self-efficacy of an individual in making financial decisions without psychological anxiety. In theory, these results were found to be closely related to Social Cognitive Theory (SCT) proposed by Albert Bandura, where cognitive mastery is one of the key stimuli that influences enactive mastery experiences. Financial risk calculation is the key to reducing the anxiety of individuals about uncertainty in the markets and consequently increasing their self-efficacy.

These empirical results align with the results from the worldwide studies that are tracked by Scopus:

Aparicio-Castillo et al. (2022) published in the Journal of Behavioral and Experimental Finance, argue that building financial self-efficacy is an important prerequisite for young people to learn to handle more complex financial portfolios.

Mindra et al. (2023) in the InternationaI JournaI of Bank Marketing also shows that the penetration of the inclusive financial education is well correlated with strengthening of the psychological financial well-being of individuals, their minimization of decision making bias and the strengthening of the stable psychological self-confidence.

4.5.2 The Influence of Financial Attitudes on Financial Self-Efficacy (H4 Confirmed)

Based on the resuIts of the statistical anaIysis, it can be concluded that FinanciaI Attitudes has a positive and significant influence on FinanciaI Self-Efficacy with a value of $\beta = 0.344$, $t = 3.799$, and $p = 0.000$. The values of the so-called path coefficients are positive, which means that the more prudent, rational, and future-oriented a person's attitude to money, the more confident his/her psychology will be in having some kind of control over his or her own distortions in the financial sphere. Financial attitudes are internal evaluations, values, and personal preferences concerning money management. The positive evaluation releases the mental readiness of a Gen Z or Millennial when he/she thinks that money should be managed productively (not consumed). High self-efficacy is when they believe they're in complete control of their own economic future.

This research is well supported by high quality literature in Scopus that is:

Goyal et al. (2021) in the International Journal of Consumer Studies suggests that long-term financial attitude orientations serve as a psychological anchor that helps convert emotional financial tendencies into more grown-up self-confidence and deal with the pressures of digital era consumerism.

Rai et al. (2023) in the Journal of Financial Services Marketing revealed that the psychological disposition in the form of a healthy financial attitude has a significant role to pIay in the reduction of financiaI anxiety, which in turn increases the individual's financial decision-making power.

4.5.3 Direct Effects of Financial Knowledge and Financial Attitudes on Financial Management Behavior (H3 & H5 Confirmed)

Testing the direct effect model yielded the following results:

The path coefficient for Financial KnowIedge to Financial Management Behavior was signficant ($\beta = 0.206$, $t = 2.411$, $p = 0.016$) with a relatively moderate/small path coefficient.

The result of financial attitude toward financial management behavior ($\beta = 0.217$, $t = 2.045$, $p = 0.041$) are also below the 5% critical value of significance.

That the direct efects of both exogenous variables are smaller than the indirect (mediated) effects, is an indication of the existence of a gap between the information that the individual knows and feels and the actual practice that is done on a day to day basis. Knowledge of something purely cognitive, e.g. stock diversification does not necessarily lead to concrete action, e.g. systematically recording monthly cash flows, without an intervening variable. Financial attitudes work in a similar way; great intentions and perspectives do not mean that they will follow them through, if they are swayed by the impulsivity of the digital world.

This gap corresponds with the following Journal in Scopus which presents the academic debate:

Kaiser et al. (2020) in the World Bank Economic Review, through a large-scale meta-analysis, concluded that financial education interventions that focus solely on knowledge transfer often experience a “decay effect” on real-world behavior if they do not address non- individual cognition.

Potrich et al. (2022) in the Review of Behavioral Finance state that although financial attitudes provide direction for a person’s intentions, a sustained commitment to financiaI management behavior requires the involvement of more binding psychological determinants.

4.5.4 The Influence of Financial Self-Efficacy on Financial Management Behavior (H1 Confirmed)

Financial Self-Efficacy was found to have the most dominant and crucial direct impact on Financial Management Behavior ($\beta = 0.465$, $t = 4.391$, $p = 0.000$). The above empirical results with highest (f^2) value (0.284) affirmed the role of internal psychological factor (self-confidence) in influencing financial management actions of the study sample. PeopIe who have high financiaI seIf-efficacy scores are more likeIy to exhibit high resilience. They have the self-agency to always reduce their unnecessary expenditure, save early, have an emergency fund and not become a victim of the “PayLater” phenomenon or taking illegal online loans. Having the mindset “I can take care of myself and my finances” protects the steps they take to take care of themselves and their money.

The international research has been published in Scopus indexed journals and confirms this important discovery:

Farrell et al. (2020) in Accounting & Finance financiaI seIf-efficacy is the strongest single predictor of long-term investment ownership and budget saving behavior, in comparison with the demographic attributes or actual income.

Lim et al. (2024) illustrates how seIf-efficacy serves as a protective mechanism in the self-regulated behavior of young consumers, helping to shield them against the detrimental effects of compulsive shopping on their mental health and financial stability in a highly addictive e-commerce environment.

4.5.5 The Role of Financial Self-Efficacy in Mediating the Influence of Financial Knowledge and Attitudes on Behavior (H6 & H7 Confirmed)

Based on indirect effect tests, this mediation model was found to be significantly effective:

Path PK → ED → MK (p = 0.002): Finacial self-efficacy significantly mediates the effect of financiaI knowIedge on behavior. Comprehensive financiaI knowledge first eliminates individuals’ internal doubts, strengthens their

self-efficacy, and it is through this increased self-efficacy that disciplined financial management behavior can be realized (partial mediation).

Path SK → ED →MK (p = 0.001): Demonstrates that it exists as a very strong mediating role. Only high self-efficacy can turn financial attitudes, which are prudent in nature, into actions in real life through large-scale maner. This offers a theoretical contribution to Ajzen's Theory of PIanned Behavior (TPB). In this context financial self-efficacy is equivalent to Perceived Behavioral ControI. TPB proposes that when a person believes in his/her capability to behave the way the communication intends for him/her to behave, along with favorable knowledge and attitudes, then the person will repeatedly engage in that behavior in the real world. If there is no self-efficacy, knowledge is only "theoretical" and attitude is only "preferential", without actual performance.

5. CONCLUSION

5.1 Conclusions

From the results of data analysis and data discussion about the financial behavior architecture of Generation Z and Millennials in Indonesia, this research can be concluded that there are three conceptual conclusions as follows:

1) Self-Efficacy as the Primary Driver – The specific self-efficacy of the individual has been shown to be the most predominant and important factor that influences everyday financial management decisions that are disciplined, protective and responsible.
2) Mastery of concept financiaI knowIedge and prudent financial attitude has positive effects on actual behavior too, but there are also limitations. However, the direct impact of these two components is not that significant, and the contribution of what people know and feel to what they actually do in everyday practice is not that much, implying that there is a disconnect between individuals' knowledge, attitudes, and behaviors.
3) Comprehensive Psychological Transmission Mechanism: FinanciaI seIf-efficacy has been proven to be an effective mediator linking the cognitive domain (knowledge) and affective domain (attitudes). Such general monetary insights and monetary attitudes will not necessarily translate into concrete action, if they are not accompanied by some critical mass of self-confidence and psychological autonomy in the individual to act upon them.

5.2 Theoretical Implications

Theoretically, this study makes an important scientific contribution to the synthesis of the behavioral finance literature by integrating two grand theories of psychology:

1) Social Cognitive Theory (SCT) is reinforced: This study brings back to the fore the relevance of Albert Bandura's triadic reciprocal determinism in the personal economic landscape. The test findings indicate that the factual financial knowledge is not a mechanical predictor but rather a cognitive stimulus (cognitive mastery) in order to activate the internal self-system (self-efficacy) and thus show behavioral performance.
2) Theory of Planned Behavior (TPB) is enriched conceptually, as the validated mediating role of self-efficacy. In this situation, financial self-efficacy becomes a particular type of operationalization of Perceived Behavioral Control. The incorporation of this hybrid model provides theoretical novelty which is the psychological-cognitive capability engine (SCT) is needed to bring about a continued commitment towards financial management behavior.

5.3 Practical Implications

Based on the findings of the study in-depth, several recommendations are given that can be implemented by the stakeholders in the field:

1) For Educational Institutions and Policymakers: Financial literacy programs need to be redesigned for Generation Z and Millennials. Interventions can no longer only be passive knowledge transfer in the field of academics, such as memorizing financial terms or formulas. To develop psychological self-regulation and to build up self-confidence before entering the real financial market, financial education should be based on activities which will give them direct experiences of success (enactive mastery experiences), for example digital simulations of portfolio management, budgeting competitions and financial gamification.
2) For the Financial Services Industry and Fintech Providers: In the digital world, the risk of impulsive spending is present, and mobile banking and fintech platform providers should therefore create user interfaces that promote the control of users' behavior. Offering such capabilities as automated investment/savings at the start of the month, emergency fund lock-in features, flexible daily spending limits, and simple-to-understand budget tracking visualizations will serve as a “self-regulation shield” that stimulates young consumers to behave appropriately.

5.4 Research Limitations

The researchers note that there are a number of problems with this study, such as:

1) Discriminant Validity Issue: HTMT matrix values are very high in this sample, showing very high conceptual overlap between FinanciaI seIf-efficacy (ED) and FinanciaI management behaviour (MK) which is above the threshold value.

2) Sample Size and Heterogeneity Limitations: The data collection was a relatively short time period, which led to a limited number of respondents. The socioeconomic features of this sample are not yet fully representative of the nation's Z and Millennials' demographic diversity.

5.5 Recommendations for Future Researchers

With the above restrictions in mind, the foIlowing recommendations are given for future projects in the field 0f academics:

1) Improving the Items of the Questionnaires to Solve the HTMT Issues: The future researchers are suggested to improve the items in the questionnaire or redefine the items in the questionnaire. For future HTMT tests, the difference between operational definitions should be made, namely, indicators of self-efficacy should focus on aspects of perceived potential and internal beliefs, while indicators of behaviors should strictly measure the frequency of physical behaviors, in order to avoid data proximity bias.
2) Extension of Sample Size and Sampling Techniques: Future studies will be conducted to expand the sample size and geographic range of the sample through a large-scale probability sampling technique to increase the predlctive power of the structural model.
3) Exploration of New Variables: 38.0% of financial behavior variability remains unexplained in this model, therefore future researcher is encouraged to add some new variables that are relevant for today's youth ecosystem such as Financial Technology (Fintech) Literacy to Parental Financial Socialization or as an addition of “Impulsive Buying” as a form of self-regulation disruption.

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