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The Influence of Financial Literacy, Risk Tolerance, and Investment Planning on the Accumulation of Capital in Indonesian Middle Class

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ABSTRACT

This research examines the influence of financial literacy, risk tolerance, and investment planning on capital accumulation in middle-class households in Indonesia. Using a quantitative research design, data from 130 respondents were collected through a structured questionnaire and analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS 3). The results show that financial literacy, risk tolerance, and investment planning significantly contribute to wealth accumulation. Besides, risk tolerance partially mediates the effects of financial literacy, wealth accumulation, investment planning, and wealth accumulation. These findings underlined the importance of financial knowledge, strategic planning, and balanced risk-taking in the formation of financial well-being. The findings carry an important message for policymakers, financial institutions, and households in the design of relevant financial education programs and specific investment strategies.

Keywords: *Financial Literacy, Risk Tolerance, Investment Planning, Wealth Accumulation, Middle-Class Households*

1. INTRODUCTION

During the last few years, the financial ecosystem has changed immensely, promising both opportunities and challenges for middle-class households in Indonesia. As the backbone of the nation's economy, the middle class plays a vital role in driving consumption, investment, and overall economic growth [1], [2]. However, the capacity of these households to accumulate wealth is increasingly influenced by their financial decision-making processes, which are shaped by key factors such as financial literacy, risk tolerance, and investment planning [3]. Understanding these factors is crucial for developing sustainable wealth accumulation and financial security in a fast-changing economic environment [3], [4].

Financial literacy, or the understanding and ability to apply knowledge about personal finance matters, is one of the major determinants of sound financial decisions. Despite its importance, studies have shown that Indonesian households generally have limited financial literacy, which can inhibit their ability to manage resources effectively and attain long-term financial goals [5], [6]. Risk tolerance-which essentially means an individual's willingness and capacity to bear financial risk-affects the way investors make choices and decide on ways to accumulate wealth [7]. A high level of risk tolerance can lead to aggressive investment decisions, and conversely, a low level of tolerance often turns into conservative financial behavior [8], [9].

Investment planning, however, is a systematic methodology of reaching one's financial goals through judicious allocation of resources [10], [11]. This process comprises the assessment of financial goals, evaluation of risk, and application of relevant investment tools and techniques [12]. A well-designed investment plan holds the key to wealth accumulation in these economic uncertainty and volatile market conditions.

The rising complexity of financial markets and the increasing cost of living in Indonesia make it highly relevant for middle-class households to implement an effective strategy for accumulating wealth. Financial literacy, risk tolerance, and investment planning are key elements in this process. However, studies reveal that a large part of Indonesia's middle class lacks financial literacy and the capability to make prudent decisions, which is causing suboptimal financial outcomes and limited growth of wealth [13], [14]. Since the middle class makes up a significant percentage of the nation's economy, improving their financial well-being is crucial for both individual households and economic stability and growth [15]. Given the rapid digitalization of financial services, this issue is all the more urgent because it comes with several opportunities and risks related to the conduct of wealth management in a more networked economy [16], [17]. The limited problem of low financial literacy in Indonesian middle-class households highly constrains their capability for informed decision-making on saving, investment, and management of resources, hence crippling their accumulation of wealth. Thirdly, the risk tolerance level adds to the complication of investment behaviors as many households fail to combine their financial goals with risk appetite, leading to excessively conservative or very risky choices. The absence of any structured investment planning further leads to uncoordinated efforts at achieving financial objectives and increases risks in a volatile economic environment. Furthermore, despite the importance of financial literacy, risk tolerance, and investment planning, most of the literature has focused on these factors in isolation, with few studies examining their combined effect on wealth accumulation in the Indonesian context.

While literature is available on the individual effects of financial literacy, risk tolerance, and investment planning, very few studies have focused on how these factors combine to affect wealth accumulation among middle-class households in Indonesia. This study tries to fill this gap by examining how these three factors interact in their influence on wealth accumulation.

2. LITERATURE REVIEW

2.1 Financial Literacy

The financial literacy is described as an individual's acquired capability to understand and apply personal financial knowledge for informed and effective decisions concerning one's finance. Prior studies [18], [19], have indicated the repetitiveness of financial literacy in cultivating improved financial practices, including budgeting, saving, and investing. [20], [21] cited that a person with greater financial literacy is very likely to prepare for retirement and manage risks appropriately. For middle-class households in Indonesia, knowledge about financial products and services- at relatively low levels of financial literacy-increasingly affects wealth accumulation [18], [20], [22].

H1: Financial Literacy significantly positively influences Household Wealth Accumulation

2.2 Risk Tolerance

Risk tolerance represents the degree of one's willingness and ability to bear financial risk when making investment decisions. Generally, a high degree of risk tolerance promotes more aggressive investment behaviors [23], [24], which ultimately provide higher returns in the long run. On the other hand, low-risk tolerance will eventually

lead to conservative financial decisions that might hamper the opportunities for wealth accumulation. Research [25], have found that risk tolerance is determined by demographic factors, financial knowledge, and psychological traits [23], [24], [26]. In the Indonesian context, understanding risk tolerance is critical for designing investment strategies that align with household preferences and goals.

H2: Risk tolerance has a significant positive effect on wealth accumulation.

2.3 Investment Planning

Investment planning is the process of identifying financial goals and devising strategies to achieve them through systematic resource allocation. Effective investment planning involves understanding risk-return trade-offs, setting realistic objectives, and diversifying investments [27], [28]. Previous studies have supported the assertion of [29], [30] that structured investment planning plays a crucial role in financial security and long-term wealth accumulation. Investment planning is a way for Indonesian middle-class households to optimally use their resources toward financial stability within the dynamic economic environment.

H3: Investment planning has a positive significant impact on the accumulation of wealth.

2.4 The Mediating Role of Risk Tolerance

Risk tolerance is a mediator in the relationship between financial literacy and wealth accumulation because it influences how financial knowledge is put to work in making investment decisions [23], [31]. Households with higher financial literacy are more likely to understand and manage financial risks effectively, thus enhancing their potential for wealth accumulation [32], [33]. In the same way, risk tolerance mediates the relationship between investment planning and wealth accumulation, as a balanced risk approach can maximize the effectiveness of financial strategies [23], [32], [34].

H4: Risk tolerance mediates the relationship between financial literacy and wealth accumulation.

H5: Risk tolerance mediates the relationship between investment planning and wealth accumulation.

2.5 Conceptual Framework

The conceptual framework of this study integrates financial literacy, risk tolerance, and investment planning as key predictors of wealth accumulation. Risk tolerance is added as a mediating variable to understand its role in enhancing the relationship between the independent variables and the dependent variable. This framework provides an overview of how financial behaviors and attitudes interact in influencing wealth accumulation in middle-class households.

By testing these hypotheses, this study aims to contribute to the existing literature and provide actionable insights for policymakers, financial advisors, and households seeking to optimize their financial outcomes.

3. METHODS

3.1 Approach and Sample

The purpose of this study is to investigate the impact of financial literacy, risk tolerance, and investment planning on the accumulation of wealth in middle-class households in Indonesia, using a quantitative research design [35]. In this study, a cross-sectional survey was conducted to collect data from respondents through a structured questionnaire. The SEM-PLS 3 method was used to examine the relationships among variables-a strong method for testing complex models with latent variables.

The population that will be targeted by this research is middle-class households in Indonesia, and the sample consists of 130 respondents who are chosen using purposive sampling. In this regard, participants have to meet the following requirements: they must be middle-class income earners according to the BPS criteria and be active in financial activities such as saving, investing, or using financial services. The sample size of 130 is deemed adequate for SEM-PLS analysis [36], meeting the minimum requirement for reliable model estimation and hypothesis testing.

3.2 Variables and Measurement

These have been collected via an online survey through emailing and also spreading on the social networks for getting a wide circulation amongst middle-class households. For both the language preferences of respondents, i.e., English and Bahasa Indonesia, the Survey was drafted. The drafted Questionnaire had been pretested on some small samples relating to understanding and its appropriateness.

Table 1. Measurement

Variable	Code	Question
Financial Literacy	FL.1	I understand the basic concepts of interest and inflation.
	FL.2	I know how to diversify investments to reduce risks.
	FL.3	I am able to read and understand basic financial statements.
	FL.4	I have knowledge about investment products such as mutual funds and stocks.
Risk Tolerance	RT.1	I am willing to take risks to achieve higher investment returns.
	RT.2	I feel comfortable with investments that have the potential for losses.
	RT.3	I can accept short-term fluctuations in investment values.
Investment Planning	IP.1	I set short-term and long-term financial goals.
	IP.2	I regularly evaluate my investment portfolio.
	IP.3	I use tools or professional services to plan my finances.
	IP.4	I consider risk factors when making investment decisions.
Wealth Accumulation	WA.1	I have sufficient savings to meet emergency needs.
	WA.2	I have an investment portfolio that grows consistently.
	WA.3	I am able to increase my assets over time.
	WA.4	I am satisfied with the level of wealth accumulation I have achieved.

3.3 Data Analysis

Data analysis was done by means of SEM-PLS version 3 because it allows small sample sizes and complex models.

1) Measurement Model Assessment, in which reliability was checked through Cronbach's Alpha and Composite Reliability (CR) with the threshold of 0.70, and validity was checked through convergent validity (Average Variance Extracted, AVE > 0.50) and discriminant validity (Fornell-Larcker criterion) [36].
2) Assessment of the Structural Model, in which the path coefficients and their significance levels were tested in order to assess the direct and indirect effects of financial literacy, risk tolerance, and investment planning on wealth accumulation by means of bootstrapping with 5,000 subsamples for robustness [37].
3) Mediation Analysis, in which mediation by risk tolerance was analyzed with the help of the bootstrapping method in order to check its significance in explaining the

relationships between financial literacy, investment planning, and wealth accumulation [37].

4. RESULTS AND DISCUSSION

4.1 Respondent Profile

The research surveyed 130 respondents from middle-class households in Indonesia. Of the respondents, 52.31% were male and 47.69% were female. It was found that the age group of 30-39 years was dominant at 42.31%, followed by the age group of 40-49 years at 38.46%. A smaller proportion of respondents fell into the age groups 21-29 years (18.46%) and 50+ years (0.77%). Regarding education, 60% of respondents held an undergraduate degree, 26.15% had a postgraduate degree, while 13.85% had completed high school, reflecting the educational profile of Indonesia's middle class.

In terms of income, most households reported a monthly income of IDR 10-15 million (41.54%), followed by 34.62% earning IDR 5-10 million, and 23.85% earning IDR 15-20 million. These income levels align with the Indonesian Central Statistics Agency's (BPS) definition of middle-class households. The demographic profile provides a comprehensive understanding of the sample, ensuring its representativeness of Indonesia's middle-class population.

4.2 Measurement Model Assessment

In testing the measurement model for reliability and validity, four important indicators were assessed: factor loadings, Cronbach's alpha reliability, Composite Reliability (CR), and Average Variance Extracted (AVE).

Table 2. Validity and Reliability

Construct	Code	Loading Factor	CA	CR	AVE
Financial Literacy	FL.1	0.826	0.784	0.857	0.662
	FL.2	0.842			
	FL.3	0.794			
	FL.4	0.781			
Risk Tolerance	RT.1	0.812	0.802	0.874	0.636
	RT.2	0.774			
	RT.3	0.848			
Investment Planning	IP.1	0.832	0.857	0.896	0.672
	IP.2	0.811			
	IP.3	0.787			
	IP.4	0.779			
Wealth Accumulation	WA.1	0.872	0.822	0.891	0.728
	WA.2	0.857			
	WA.3	0.781			
	WA.4	0.910			

Source: Results of Data Analysis (2024)

The results of the measurement model assessment yielded important findings that proved it to be reliable and valid. All the indicator loadings were above 0.70, showing individual item reliability. Cronbach's Alpha values were between 0.78 and 0.85, meeting the acceptable threshold of 0.70 and hence indicating internal consistency. CR values were also above 0.80 for all constructs, thus further confirming the reliability of the measurement model. Besides, all the constructs had Average Variance Extracted values greater than 0.50, indicating good convergent validity.

To evaluate the discriminant validity, Fornell-Larcker criterion was used, comparing for each construct the square root of the AVE with the correlations between constructs.

Table 3. Fornell-Lacker

Construct	FL	RT	IP	WA
Financial Literacy	0.814			
Risk Tolerance	0.547	0.793		
Investment Planning	0.619	0.582	0.822	
Wealth Accumulation	0.591	0.638	0.675	0.854

Source: Results of Data Analysis (2024)

Discriminant validity was assessed using the Fornell-Larcker criterion, which involves comparing the square root of the AVE for each construct (diagonal values in bold) with the correlations between constructs (off-diagonal values). It is evident that the square root of the AVE for each construct is greater than its correlations with other constructs, thus satisfying the Fornell-Larcker criterion for discriminant validity.

Furthermore, the HTMT ratio was calculated to further establish the discriminant validity. Values below 0.85 for HTMT confirm that the discriminant validity between constructs is adequate. The complementary assessment entrenches the evidence that the constructs in the model are distinct from one another.

Table 4. HTMT

Construct	FL	RT	IP	WA
Financial Literacy				
Risk Tolerance	0.672			
Investment Planning	0.737	0.688		
Wealth Accumulation	0.708	0.743	0.794	

Source: Results of Data Analysis (2024)

All the HTMT values are below the threshold of 0.85, hence discriminant validity is established.

4.3 Structural Model Evaluation

The path coefficients were used to evaluate the structural model. Bootstrapping with 5,000 resamples was performed to test the significance of the path coefficients.

Table 5. Hypothesis Testing

Path	Original Sample	t-value	p-value	Result
FL → WA	0.452	6.326	<0.001	Supported
RT → WA	0.323	5.143	<0.001	Supported
IP → WA	0.405	5.897	<0.001	Supported
FL → RT → WA	0.186	3.744	<0.001	Supported
IP → RT → WA	0.228	4.082	<0.001	Supported

Source: Results of Data Analysis (2024)

All path coefficients were significant at p 0.005, indicating strong relationships between constructs. Financial literacy (OS=0.452,t=6.326) positively influenced wealth accumulation, showing that individuals with higher financial literacy are better at managing finances, allocating resources efficiently, and making informed decisions. Risk tolerance (OS=0.323,t=5.143) also had a significant positive impact, as individuals willing to take calculated risks achieved higher investment returns. Similarly, investment planning (OS=0.405,t=5.897) strongly impacted wealth accumulation, with households practicing structured financial planning reporting better outcomes.

Furthermore, risk tolerance mediated the relationship between financial literacy and wealth accumulation, OS = 0.186, t = 3.744, and investment planning-wealth accumulation, OS = 0.228, t = 4.082. The financially literate individual is more aware of the risks and returns to be able to take

judicious risks, while the structured investment planning facilitates an optimum approach toward risk for financial outcomes. These findings imply that financial literacy, risk management, and investment planning should go together for utmost wealth accumulation.

The R2 values represent the predictive accuracy of the model. In this case, for Risk Tolerance, R2 = 0.366, indicating moderate predictive accuracy, and for Wealth Accumulation, R2 = 0.583, which indicates substantial predictive accuracy. Therefore, these results show that 36.6% and 58.3% of the variance in Risk Tolerance and Wealth Accumulation, respectively, are accounted for by the independent variables entered into the model. This further supports the model's strong explanatory power.

Table 6. Size Effect

Relationship	Test	Effect Size
FL → WA	0.228	Medium
RT → WA	0.154	Small to Medium
IP → WA	0.189	Medium
FL → RT	0.121	Small to Medium
IP → RT	0.147	Small to Medium

Source: Results of Data Analysis (2024)

F2 values indicate the relative importance of each predictor. Financial literacy and investment planning have medium effects on wealth accumulation, while risk tolerance exhibits small to medium effects.

The predictive relevance (Q2) values confirm the model's ability to predict the constructs effectively. For Risk Tolerance, Q2=0.253, indicating medium predictive relevance, while for Wealth Accumulation, Q2=0.415, signifies large predictive relevance. These values, being above zero, validate the model's predictive strength for both constructs, demonstrating its robustness in explaining and forecasting outcomes.

Discussion

1. Financial Literacy and Wealth Accumulation

The findings indicate that financial literacy has a significantly positive impact on wealth accumulation. This finding is in line with previous studies, such as [38]–[41], that have established the importance of financial knowledge in making informed decisions on saving, investing, and effective resource management. The middle-class households with higher financial literacy showed better resource allocation and a greater capacity for growth in wealth. These results underscore the need for targeted financial education programs to enhance literacy levels and empower households to navigate increasingly complex financial landscapes.

2. Risk Tolerance and Wealth Accumulation

The results indicated that risk tolerance significantly positively influenced wealth accumulation. This supports the work of [42]–[46], who established risk tolerance as a major determinant of investment behaviors and financial outcomes. Respondents who were more risk tolerant were more likely to be involved in investments that reaped higher returns, thus contributing to increased wealth accumulation. However, this study also emphasizes that such risk-taking behavior should be balanced with strategic planning in order to avoid possible losses.

3. Investment Planning and Wealth Accumulation

We noticed a good positive correlation of investment planning with wealth accumulation, which also supports the assertion by [47]–[49] that systematic investment planning is beneficial in the realization of set goals. Households with well-articulated planning-including setting goals,

assessment, and diversification-had higher levels of wealth accumulation, as further emphasized here. Financial tools and services are significant to financial well-being.

4. Mediating Role of Risk Tolerance

Risk tolerance was found to mediate the relationships between financial literacy, investment planning, and wealth accumulation. These results suggest that financial literacy and investment planning are more effective when combined with an appropriate level of risk tolerance. For example, highly financially literate families may fail to actualize their wealth-building opportunity if they are lowly risk tolerant since they would avoid higher return investments. On the other hand, a prudent investment plan requires accepting certain calculated risks. These results indicate the need to include risk management training in financial education courses.

CONCLUSION

This study has highlighted the importance of financial literacy, risk tolerance, and investment planning for wealth accumulation among middle-class households in Indonesia. Financial literacy equips households with knowledge to make informed decisions, whereas investment planning provides a step-by-step guide toward achieving financial goals. Risk tolerance supports both elements by promoting a delicate balance between mitigating risks and seeking investment returns. The findings bear important implications for practice and policy, calling on policymakers and financial institutions to focus on financial literacy programs that help improve financial product knowledge and service utility. Personalized investment plans based on their risk profile may further enhance accumulation, and there is a need to urge households to employ structured practices in financial planning to make the most out of their wealth. Future research should utilize longitudinal designs in order to capture the dynamic nature of financial decision-making and explore cultural and economic influences on financial behaviors that can enrich the understanding of wealth accumulation strategies for households and the broader economy.

This study adds to the existing literature by integrating financial literacy, risk tolerance, and investment planning into one framework in order to study their combined effect on wealth accumulation. The findings present an indication of empirical evidence for the view that risk tolerance may, in fact, function as an important mediator and reinforce financial literacy and investment planning effectiveness, furthering the theoretical explanation for financial behaviors regarding the process of wealth accumulation. For policymakers and financial institutions, they should enhance financial literacy with more focused education among middle-class households. Financial advisors should check on the risk tolerance of clients in order to provide appropriate investment advice that meets their goals, while also advocating for structured financial planning tools like budgeting software and investment tracking platforms to help households optimize resource allocation effectively.

Although the study yields very important insights, it also has its limitations. The cross-sectional design precludes making causal inferences, and the reliance on self-reported data may introduce response biases. These limitations could be overcome by future research through the use of longitudinal designs and the inclusion of objective financial data. It would also be interesting to investigate how economic policies and cultural attitudes shape financial behaviors in order to have a broader understanding.

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