



## **CRAFTING INVESTMENT AWARENESS AMONG YOUTH: A STUDY OF MODERATED INFLUENCES ON BEHAVIORAL DYNAMICS**

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### **ABSTRACT**

*This study examines the factors that influence young people's investment awareness with a Structural Equation Modeling (SEM) approach based on Partial Least Squares (PLS) and the foundation of Behavioral Finance Theory. Financial literacy, spending patterns, and saving behavior are analyzed as independent variables, with self-control as a moderating variable. Data were obtained through an online survey of undergraduate students at several universities in Surakarta. The results of the SmartPLS analysis show that financial literacy, spending patterns, and saving behavior have a positive and significant effect on investment awareness. Self-control is also shown to moderate the relationship, where individuals with higher self-control tend to have better investment awareness. The findings confirm the importance of financial education and strengthening self-control in improving young people's investment readiness. The implications of this study include recommendations for policymakers and educational institutions to develop comprehensive financial literacy programs.*

*Keywords: Investment Awareness, Financial Literacy, Spending Pattern, Saving Behavior, Self-Control*

### **ABSTRAK**

Penelitian ini menguji faktor-faktor yang memengaruhi kesadaran investasi generasi muda dengan pendekatan Structural Equation Modeling (SEM) berbasis Partial Least Squares (PLS) dan landasan Behavioral Finance Theory. Literasi keuangan, pola pengeluaran, dan perilaku menabung dianalisis sebagai variabel independen, dengan kontrol diri sebagai variabel moderasi. Data diperoleh melalui survei online terhadap mahasiswa sarjana di beberapa universitas di Surakarta. Hasil analisis menggunakan SmartPLS menunjukkan bahwa literasi keuangan, pola pengeluaran, dan perilaku menabung berpengaruh positif dan signifikan terhadap kesadaran investasi. Kontrol diri juga terbukti memoderasi hubungan tersebut, di mana individu dengan pengendalian diri lebih tinggi cenderung memiliki kesadaran investasi yang lebih baik. Temuan ini menegaskan pentingnya edukasi keuangan dan penguatan kontrol diri dalam meningkatkan kesiapan investasi generasi muda. Implikasi penelitian ini mencakup rekomendasi bagi pembuat kebijakan dan institusi pendidikan untuk mengembangkan program literasi keuangan yang komprehensif.

**Kata kunci:** Kesadaran Investasi, Literasi Keuangan, Pola Pengeluaran, Kebiasaan Menabung, Pengendalian Diri

### **1. INTRODUCTION**

Investment awareness is defined as an in-depth understanding of investment instruments, risks, and potential returns, which forms the basis for developing a risk profile



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and personal financial goals (Taufik & Rusmana, 2023). Despite easier access to financial information, data shows that investors with high investment awareness tend to make more rational decisions and are not influenced by market trends or short-term emotions (Pagliaro et al., 2021). However, low financial literacy among the younger generation is still an obstacle. Where a survey by Bank OCBC NISP with NielsenIQ revealed that 78% of Indonesia's younger generation do not fully understand the risks and benefits of investment products, so only 22% of them really understand the products they own (Abigail, 2022).

In Indonesia, especially in the Central Java region, the level of financial literacy is still far from ideal. Data from the 2022 National Survey on Financial Literacy and Inclusion (SNLIK) shows that financial literacy in Central Java only reached 51.69%, although financial inclusion reached 85.97% (OJK, 2023). This indicates a gap between financial access and understanding, which has an impact on the low participation of smart investments. Surakarta City (Solo), as an economic and educational center in Central Java, shows significant growth in the number of young investors. At the end of March 2023, there were 216,660 capital market investors in Greater Solo, with the addition of around 2,555 new investors per month, of which 50-60% were young people (Hartawan, 2023).

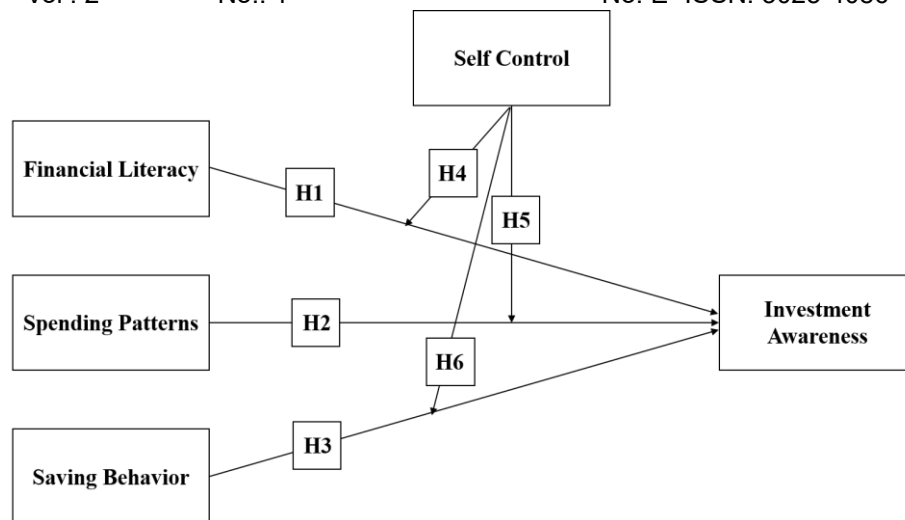
This condition encourages various educational institutions in Surakarta, such as UIN Raden Mas Said Surakarta, Universitas Muhammadiyah Surakarta (UMS), and Universitas Sebelas Maret (UNS), to integrate financial education programs to increase investment awareness. For example, FEBI UIN Raden Mas Said students through the Sharia Investment Gallery have recorded stock investments worth Rp9,600,721,985 in the last three years, while UMS won the Best Investment Gallery 2023 award with a transaction value of Rp3.3 billion (Aditya, 2025; Fardi, 2024; UNS, 2023)

In addition to cognitive factors such as financial literacy, investment behavior is also influenced by spending patterns and saving behavior. Studies show that individuals with disciplined spending management and good saving habits have a higher tendency to realize the importance of investment (Pratiwi & Puspawati, 2022). However, investment decisions are not solely rational; psychological factors such as self-control also play an important role. Behavioral Finance Theory suggests that cognitive biases and emotions, such as overconfidence and impulsivity, can interfere with the investment decision-making process (Olsen, 1998). Therefore, this study not only examines the influence of financial literacy, spending patterns, and saving behavior on investment awareness but also evaluates the moderating role of self-control in the relationship.

The research questions raised are: (1) To what extent do financial literacy, spending patterns, and saving behavior affect investment awareness among university students in Surakarta? (2) How does self-control moderate the relationship between these factors and investment awareness? By using the Partial Least Squares-based Structural Equation Modeling (PLS-SEM) approach, this research is expected to make theoretical and practical contributions to improving the readiness of the younger generation to face the challenges of modern financial markets (Ali et al., 2022).

## **2. THEORETICAL FRAMEWORK AND HYPOTHESIS**

Figure 1 shows the research framework depicting the dependent variable (Investment Awareness), independent variables (Financial Literacy, Spending Patterns, and Saving Behavior), and moderating variable (Self-Control). The relationships in the figure are included to estimate the theoretical study framework.



Source : Research Conceptual Framework, processed (2025)

**Figure 1. Theoretical Framework**

### Hypothesis

H1: Financial literacy has a positive and significant effect on investment awareness.

H2: Spending patterns have a positive and significant effect on investment awareness.

H3: Saving behavior has a positive and significant effect on investment awareness.

H4: Self-control moderates the relationship between financial literacy and investment awareness positively.

H5: Self-control positively moderates the relationship between spending patterns and investment awareness.

H6: Self-control moderates the relationship between saving behavior and investment awareness positively

### 3. RESEARCH METHODS

This study uses quantitative methods to test the relationship model between variables that influence investment awareness in the younger generation. This approach is used to identify the influence of financial literacy, spending patterns, and saving behavior on investment awareness and the moderating role of self-control in the relationship.

#### Data Collection Techniques

Data were collected through purposive sampling with an online questionnaire via Google Forms. The questionnaire was structured based on variable indicators and measured on a 1-5 Likert scale (Ammer & Aldhyani, 2022). Respondents were undergraduate students from UIN Raden Mas Said Surakarta, UMS, and UNS who have invested (stocks, mutual funds, bonds, deposits, gold, crypto assets, etc.) and have received investment education. Data security is guaranteed through an explanation of the purpose and confidentiality of the data.

#### Operational Definitions of Variables

**Table 1. Operational Definitions and Indicators of Variables**

Variabel	Definisi	Indikator
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Investment Awareness (IA)	Investment awareness refers to an individual's understanding of the importance of investing, knowledge of investment instruments, and readiness to allocate funds to assets that have the potential to generate profits in the future (Ali et al., 2022).	<ol style="list-style-type: none"> <li>1. Investment knowledge</li> <li>2. Investment choice</li> <li>3. Attitude towards investment risk</li> <li>4. Investment decision-making style</li> </ol> <p>(Ramanujam, 2018)</p>
Financial Literacy (FL)	Financial literacy is an individual's ability to understand basic financial concepts, budget management, financial planning, and understanding of the risks and benefits of investing (Ali et al., 2022).	<ol style="list-style-type: none"> <li>1. Financial knowledge</li> <li>2. Financial behavior</li> <li>3. Financial attitude</li> </ol> <p>(Swiecka et al., 2020)</p>
Spending Patterns (SP)	Spending patterns describe how a person allocates their income to various needs and wants. This includes routine spending and discretionary spending (Ammer & Aldhyani, 2022).	<ol style="list-style-type: none"> <li>1. Type of Expenditure</li> <li>2. Spending Category</li> <li>3. Financial Commitment</li> </ol> <p>(Ganong &amp; Noel, 2019)</p>
Saving Behavior (SB)	Saving behavior includes an individual's habit of setting aside a portion of their income to be deposited in a savings or investment account (Ammer & Aldhyani, 2022).	<ol style="list-style-type: none"> <li>1. Perception of future needs</li> <li>2. Savings decision</li> <li>3. Frugality action</li> </ol> <p>(Wärneryd, 1999) dalam (Christianto &amp; Asandimitra, 2023)</p>
Self-Control (SC)	Self-control is the ability to control impulses and make wise decisions related to finance (Ali et al., 2022).	<ol style="list-style-type: none"> <li>1. Impulse spending control</li> <li>2. Attitude towards financial management</li> <li>3. Application of self-control strategies</li> </ol> <p>(Mawad et al., 2022)</p>

Source : Journal Article

**Sample Collection Techniques**



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The sample in this study will be taken from undergraduate students at UIN Raden Mas Said Surakarta, Universitas Muhammadiyah Surakarta, and Universitas Sebelas Maret. To determine the number of samples, this study uses the sample size guide from Hair et al. (2022) which suggests a sample size between 5 to 10 times the number of indicators. With a total of 5 variables that have 4 to 3 indicators per variable, the recommended sample size is in the range of 80 to 160 respondents.

**Data Analysis Techniques**

Data analysis in this study used statistical variance-based structural equation modeling or Partial Least Square (PLS) method with SmartPLS 3.2.9 software consisting of a measurement model (outer model) and structural model (inner model). The measurement model is tested through convergent validity with a loading factor ( $\geq 0.70$ ) and AVE ( $\geq 0.50$ ) (Fornell & Larcker, 1981; Hair et al., 2014), as well as discriminant validity with the Fornell-Larcker method, cross-loading, and HTMT ( $\geq 0.90$ ) (Henseler et al., 2015). Reliability was tested using Cronbach's Alpha and Composite Reliability, which should be more than 0.70 (Chin, 1998; Nunnally, 1975). The structural model was tested with R-Square ( $\geq 0.75$  strong,  $\geq 0.50$  moderate,  $\geq 0.25$  weak) (Hair et al., 2011), as well as f-Square to see the effect of variables in the model ( $\geq 0.35$  large,  $\geq 0.15$  moderate,  $\geq 0.02$  small) (Wassertheil, 1970). To test moderation variables, Path Coefficient Analysis is used, with significant results if the t-statistic  $\geq 1.96$  and p-values  $< 0.05$  (Hair et al., 2014).

**4. RESULT AND DISCUSSION**

**Measurement Model Data Analysis**

In general, the measurement test results show that the instruments used in the study have met the minimum standards set, thus providing a strong basis for further structural model testing. This measurement test involves several aspects, namely convergent validity, discriminant validity, and reliability.

**Table 2. Cross-loading Factors**

Abbreviation	FL	$\alpha$	CR	AVE
Investment Awareness		0.952	0.961	0.778
IAR1	0.882			
IAR2	0.879			
IAR3	0.883			
IAR5	0.879			
IAR6	0.869			
IAR7	0.890			
IAR8	0.890			
Financial Literacy		0.895	0.920	0.656
FTR1	0.811			
FTR2	0.807			



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Abbreviation	FL	$\alpha$	CR	AVE
FTR3	0.806			
FTR4	0.819			
FTR5	0.807			
FTR6	0.811			
Spending Patterns		0.898	0.922	0.662
SPT1	0.830			
SPT2	0.812			
SPT3	0.802			
SPT4	0.807			
SPT5	0.807			
SPT6	0.825			
Saving Behavior		0.912	0.932	0.694
SBH1	0.835			
SBH2	0.835			
SBH3	0.839			
SBH4	0.848			
SBH5	0.802			
SBH6	0.840			
Self Control		0.927	0.942	0.731
SCR1	0.855			
SCR2	0.873			
SCR3	0.846			
SCR4	0.845			
SCR5	0.854			
SCR6	0.858			

Source : SmartPLS 3.2.9 Processed Results

Discriminant validity analysis through cross-loading shows that each indicator has the highest load on the construct it measures compared to other constructs. Hence, the measurement model has good differentiation between variables. Furthermore, evaluation using Fornell-Larcker and HTMT confirmed discriminant validity, where the square root AVE value is higher than the correlation between constructs and HTMT is below the 0.90



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limit (Henseler et al., 2015). These results ensure that each construct measures the right variable without overlapping concepts.

**Table 3. Fornell-Larcker Criterion and HTMT**

Fornell-Larcker Criterion						HTMT				
	FTR	IAR	SBH	SCR	SPT	FTR	IAR	SBH	SCR	SPT
FTR	0.810									
IAR	0.559	0.882				0.602				
SBH	0.063	0.481	0.833			0.087	0.511			
SCR	0.149	0.337	0.036	0.855		0.164	0.354	0.070		
SPT	-0.067	0.389	-0.078	0.048	0.814	0.089	0.415	0.111	0.069	

Source: Self Proceed on SmartPls 4

**Structural Model Data Analysis**

In structural model analysis, the initial stage is to evaluate how well the model can explain the variance in the dependent variable as a whole. From testing the coefficient of determination in Table 5, the R Square value of 0.787 (with an Adjusted R Square of 0.780) indicates that the independent variables in the model can explain about 78% of the variance in Investment Awareness, which reflects very good predictive power (Hair et al., 2011).

**Table 5. R Square**

	R Square	R Square Adjusted
Investment Awareness	0.787	0.780

Source : SmartPLS 3.2.9 Processed Results

F Square analysis shows that Financial Literacy (1.224), Spending Patterns (0.896), and Saving Behavior (0.974) have a large effect on Investment Awareness ( $\geq 0.35$ , considered large according to Wassertheil (1970). Meanwhile, Self Control (0.242) shows a medium effect. This result confirms that the main variables contribute significantly to the variance of Investment Awareness.

**Table 6. F Squares**

Investment Awareness	
Financial Literacy	1,224
Investment Awareness	
Saving Behavior	0,974
Self Control	0,242
Spending Patterns	0,896

Source : SmartPLS 3.2.9 Processed Results

Structural model analysis shows that Financial Literacy ( $\beta = 0.531$ ), Spending Patterns ( $\beta = 0.451$ ), and Saving Behavior ( $\beta = 0.461$ ) have a significant effect on Investment Awareness ( $p < 0.001$ ). In addition, Self Control significantly moderates the relationship between independent variables and Investment Awareness ( $\beta$  interaction: 0.072-0.089;  $t > 1.96$ ;  $p < 0.05$ ). These results confirm the strength of the model as well as





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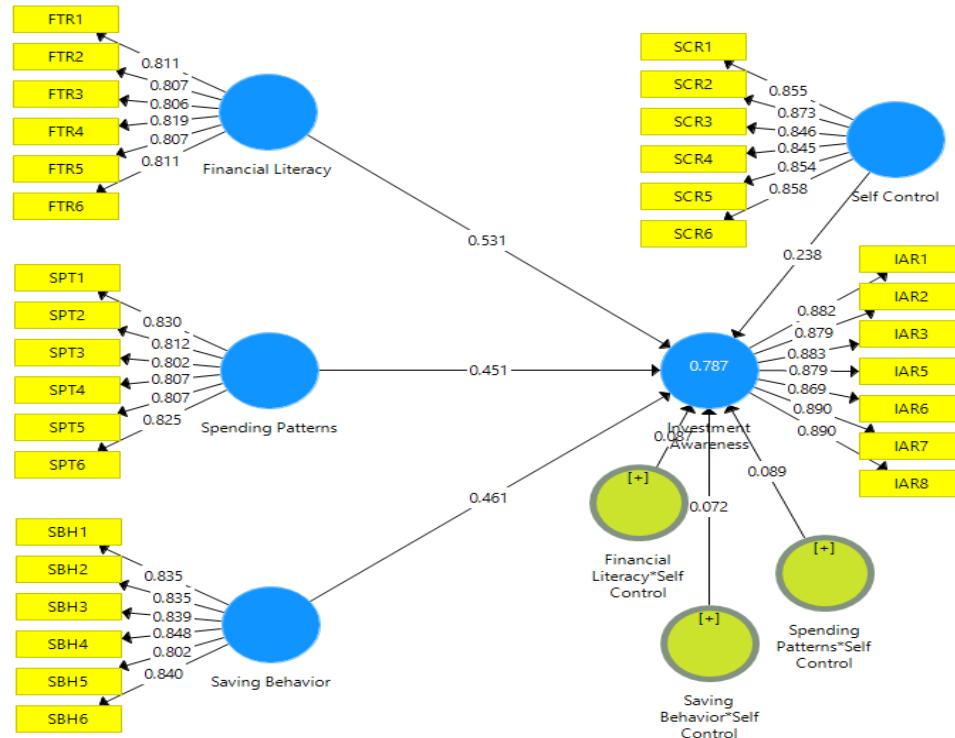
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the important role of self-control in strengthening the relationship between variables (Hair et al., 2014; Henseler et al., 2015).



Source : SmartPLS 3.2.9 Processed Results

**Figure 2. Structural and Measurement Models**

**Table 7. Structural Model Results**

	Hypothesis	Beta ( $\beta$ )	T-Value	P Value	Result
H1	Financial Literacy $\rightarrow$ Investment Awareness	0.531	13.464	0.000	Diterima
H2	Spending Patterns $\rightarrow$ Investment Awareness	0.451	10.791	0.000	Diterima
H3	Saving Behavior $\rightarrow$ Investment Awareness	0.461	11.144	0.000	Diterima
H4	Financial Literacy $\times$ Self Control $\rightarrow$ Investment Awareness	0.087	2.130	0.034	Diterima
H5	Spending Patterns $\times$ Self Control $\rightarrow$ Investment Awareness	0.089	2.448	0.015	Diterima
H6	Saving Behavior $\times$ Self Control $\rightarrow$ Investment Awareness	0.072	1.992	0.047	Diterima

Source : SmartPLS 3.2.9 Processed Results

## Discussion

This study examines the factors that influence young people's investment awareness based on Behavioral Finance Theory, by highlighting financial literacy, spending patterns, saving behavior, and the moderating role of self-control. Hypothesis testing results show that financial literacy ( $\beta = 0.531$ ,  $p < 0.001$ ), spending pattern ( $\beta = 0.451$ ,  $p < 0.001$ ), and saving behavior ( $\beta = 0.461$ ,  $p < 0.001$ ) have a positive and significant





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effect on investment awareness. In addition, self-control moderates the relationship between variables with a significant effect ( $\beta$  interaction: 0.072-0.089,  $p < 0.05$ ), which indicates that individuals with high self-control are more disciplined in managing finances and investments. This finding confirms that investment decisions are not only influenced by financial knowledge, but also psychological factors. The implications of this study encourage policy makers and educational institutions to improve financial literacy and strengthen self-control to support early investment awareness.

## 5. CONCLUSION & SUGESTION

Financial literacy, spending patterns, and saving behavior significantly increase investment awareness among university students, with self-control as a moderator that strengthens the influence of these variables. The findings confirm that improved financial literacy and self-control are key to making more rational and strategic investment decisions. Thus, the integration of comprehensive financial education in the academic environment and the enhancement of self-control skills are crucial in preparing the younger generation for the challenges of modern financial markets. Suggestions for future research are to use a longitudinal design and involve a more geographically diverse sample to produce more generalizable and dynamic findings. Further research is also recommended to explore other variables that could influence investment awareness so as to provide deeper insights into strategies to improve financial literacy and self-control among the younger generation.

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