ANALYSIS OF SAVING BEHAVIOR IN OVERSEAS STUDENTS IN THE CITY OF SURABAYA

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Abstract: This study aims to examine saving behavior and the financial factors that influence it, including financial literacy, financial attitude, and financial inclusion, with self-control serving as a moderating variable for international students in Surabaya. The research focuses on international students enrolled in state universities in Surabaya. The population of this study consists of active undergraduate (S1/D4) students attending state universities in Surabaya. The sample includes 110 students, selected through purposive sampling. Data were collected using questionnaires, which were then analyzed with Structural Equation Modeling (SEM) using the Partial Least Square (PLS) application. The findings indicate that financial literacy, financial attitude, and financial inclusion all contribute to saving behavior. Self-control moderates the impact of financial literacy and financial attitude on saving behavior but does not moderate the impact of financial inclusion on saving behavior.

Keywords: Financial Literacy, Financial Attitude, Financial Inclusion, Saving Behavior, Self Control

1. Introduction

Supporting a country's progress, particularly achieving substantial economic growth, remains crucial. A key factor influencing development is the demographic structure, especially the share of the population within the working-age group (Dwi et al., 2023). Different generations significantly contribute by introducing new ideas that drive economic advancement in Indonesia (Syahrani & Yuniningsih, 2023). A significant presence of productive-age individuals can expedite economic growth within a country or region. Data from Indonesia's Central Statistics Agency (BPS) reveals fluctuating economic growth rates from 2019 to 2022. In 2020, there was a decline of 2.07%, followed by an increase of 3.70% in 2021, and a further rise to 5.31% in 2022. Savings levels have a significant impact on economic growth rates, particularly in Indonesia (Mardiana & Rochmawati, 2020; Sari & Anwar, 2022). Accumulated savings in financial institutions play a pivotal role in bolstering economic growth, especially within the aggregate sector (Siboro & Rochmawati, 2021). Therefore, cultivating a financial surplus through prudent financial behavior is essential for fostering economic stability (Oktaviyanti & Ichsanuddin, 2020). Positive financial practices promote sound decision-making and enhance financial stability across society (Haqiqi & Pertiwi, 2022).

Bank Indonesia (2024) data indicates varying trends in the position of rupiah and foreign currency savings in commercial banks and individual rural banks from 2019 to 2023. Rupiah deposits saw a substantial increase of 128,872 billion rupiah (7.62%) in 2019, followed by growth of 205,889 billion rupiah (11.32%) in 2020, slowing to 216,838 billion rupiah (10.71%) in 2021. In 2022, growth again decreased by 131,513 (Billion IDR) or 5.86%, and in 2023 there was another decline of 46,458 (Billion IDR) or 1.95%. Bank Indonesia (2024) data indicates varying trends in public deposits in East Java similarly displayed fluctuating growth from 2019 to 2022, with a peak of 40,732 billion rupiah (7.43%) in 2019, increasing to 50,570 billion rupiah (8.59%) in 2020, dropping to 49,154 billion rupiah (7.69%) in 2021, further declining to 25,580 billion rupiah (3.71%) in 2022, and whereas in 2023, there was another growth from the previous year of 31,321 (Billion IDR) or 4.73%. Despite high levels of public savings in East Java, there remain opportunities for significant increases.
Managing personal finances poses challenges for students, particularly those who migrate. Research by Rahmawati et al. (2023) highlights financial difficulties faced by students, leading to expenses surpassing income, accumulating debt, and delaying basic needs. This underscores their struggles in effective financial management. Previous studies have explored various factors influencing saving behavior, such as financial literacy and financial attitudes (Anastasya & Pamungkas, 2023), as well as financial inclusion (Wardani & Susanti, 2019). However, there are inconsistencies in research findings concerning the effects of these factors on saving behavior. Consequently, this study aims to examine the impact of financial literacy, financial attitudes, and financial inclusion on saving behavior among international students in Surabaya City, using social cognitive theory (Bandura, 1977) to explore these dynamics. Additionally, this research will investigate how self-control moderates the relationship between financial literacy, financial attitudes, and financial inclusion on saving behavior.

Based on the discussion outlined above, the researcher is interested in conducting a study titled “Analysis of Saving Behavior in Overseas Students in The City of Surabaya”. This research will focus on overseas students studying at public universities in the city of Surabaya.

2. Literature Review

2.1 Behavioral Finance Theory

According to Yuniningsih (2020), behavioral finance theory examines how psychological and sociological factors affect the investment decisions of both individuals and institutions. This theory highlights the cognitive biases and limitations that can lead to suboptimal investment decisions, combining fundamental theory with psychological and sociological perspectives. This theory also includes psychological studies of how individuals make decisions and act regarding their finances, which are closely related to how they manage and allocate funds (Lusiana & Ichsanuddin, 2022).

2.2 Social Cognitive Theory

Social cognitive theory, formulated by Bandura (1977), underscores the significant influence of cognitive and social mechanisms in comprehending human emotions, drive, and conduct. This theory views learning as a collective process where individuals acquire knowledge through social interactions and cognitive representations. According to Bandura, the main tenets of this theory include four aspects, namely observational learning, self-efficacy, self-reflective ability, and cognitive processes.

2.3 Life Cycle Hypothesis Theory

Life cycle hypothesis theory, proposed by (Modigliani & Brumberg, 1954) and expanded by (Friedman, 1957), analyzes household consumption patterns throughout life. This theory states that consumption is influenced by expected income. Modigliani explains the relationship between consumption, savings, and position in the life cycle, assuming that individuals maximize consumption satisfaction throughout their lives. According to (Yudiana, 2023), consumption patterns change with age: low during youth, increasing during career, and decreasing during retirement, affecting the amount of wealth and savings patterns of individuals.

2.4 Saving Behavior

According to Yuniningsih (2020), the primary emphasis in researching financial behavior lies in understanding saving habits, which aid individuals in making sound financial choices. Saving behavior includes individual activities in managing, utilizing, and managing their financial resources with the aim of saving (Mardiana & Rochmawati, 2020). Saving behavior involves steps such as setting aside income, planning for future needs, avoiding unexpected expenses, and making regular savings, which reflects an increase in individual net worth (Anastasya & Pamungkas, 2023). In the saving behavior variable, there are six indicators taken by researchers from two sources. Indicators of (1) monthly financial planning, (2) saving every month, (3) always reviewing financial position, (4) the importance of investment, and (5) having an emergency fund, refer to research by (Charista et al., 2022). While in indicator (6) buying only necessary items, referring to the research of (Sari & Anwar, 2022).
2.5 Financial Literacy

Yuniningsih (2020) defined financial literacy as the fusion of "financial," pertaining to money or knowledge of financial management, and "literacy," the capacity to comprehend, interpret, and act upon information pertinent to a given issue. (Yuniningsih & Santoso, 2020). Individuals possessing strong financial literacy are adept at making suitable investments in financial or tangible assets (Yuniningsih, 2020; Yuniningsih & Taufiq, 2019). Within the construct of financial literacy, researchers, drawing on Rosita & Anwar's (2022) work, identify four key indicators: understanding personal finance, comprehending credit and debt, grasping insurance principles, and comprehending savings and investment.

Mpaata et al. (2023) found a positive relationship between elevated financial literacy and responsible saving practices. Financial literacy helps individuals better manage personal finances, reduce the risk of poor financial decisions, and support personal well-being. In social cognitive theory, financial literacy is acquired through collective learning and social interactions that help individuals acquire knowledge directly.

H1: Financial Literacy Positively Influences the Saving Behavior of Overseas Students in Surabaya City

2.6 Financial Attitude

Adityandani & Haryono (2019) state that financial attitude is personal beliefs, views, and judgments about finance or finance. According to Lutfiani Fauzi & Yuniningsih (2023), individual attitudes can be influenced by financial incentives, which might affect both positive and negative behaviors and habits. Financial attitude reflects a person's behavior regarding finance which is reflected in attitudes (Prawitasari, 2023). As a determining factor, financial attitude affects the way a person concludes, collects, and spends their money (Siswanti & Halida, 2020). In the financial attitude variable, there are five indicators taken by researchers who refer to research conducted by (Charista et al., 2022), namely controlling monthly expenses, setting future financial targets, managing current money has an impact on the future, following monthly financial planning, and investing regularly.

Prawitasari (2023) view that "Money can be interpreted as power or freedom, a reward for effort, or something evil" shows how individuals view money. Financial attitudes are crucial in financial management, particularly when it comes to saving. In the application of social cognitive theory, financial attitude affects saving behavior through individual perceptions of the value of money and social influence. A positive financial attitude generally correlates with good saving habits, suggesting that the more positive the financial attitude, the more it supports effective saving behavior.

H2: Financial Attitude Positively Influences the Saving Behavior of Overseas Students in Surabaya City

2.7 Financial Inclusion

Gunawan et al. (2023) describe financial inclusion as a program aimed at improving access to financial services. According to PERPRES Number 114 of 2020, financial inclusion ensures that individuals can easily access a variety of reliable, accessible, secure, and affordable financial products and services from formal institutions to meet their needs and enhance their well-being (Nurlaela & Bahtiar, 2022). Within the framework of financial inclusion, researchers, citing Septiani & Wuryani (2020), identify four indicators: availability or accessibility, actual utilization of financial products and services, quality, and welfare.

Financial inclusion promotes increased saving behavior by facilitating access to essential products like savings accounts, investments, and insurance. Applying social cognitive theory, financial inclusion connects saving behavior through a learning process involving the observation, modeling, and reinforcement of financial norms and practices within society.

H3: Financial Inclusion Positively Influences the Saving Behavior of Overseas Students in Surabaya City
2.8 Self Control

Self-control refers to an individual’s ability to regulate their emotions and impulses, involving thoughtful consideration prior to making a purchase and altering or disregarding internal reactions to avoid impulsive spending (Anastasya & Pamungkas, 2023). (Rachma, 2019) states that the ability to control oneself is an advantage that each individual has to withstand the influence of the surrounding environment that arises due to conflicts between desires and other needs. In the self control variable, there are three indicators taken by researchers who refer to research conducted by (Sari & Anwar, 2022), namely behavioral control, cognitive control, and decision control.

Anastasya and Pamungkas (2023) define financial literacy as a comprehensive understanding of financial principles and risks, combined with the necessary skills, motivation, and confidence to make informed financial choices. This knowledge aims to enhance the financial well-being of both individuals and the broader community. Effective utilization of financial literacy hinges on self-discipline. Drawing on social cognitive theory, individuals who possess higher financial literacy typically demonstrate superior financial management and more effective saving practices, applying their acquired knowledge.

H4: Self Control moderates the relationship between Financial Literacy on Saving Behavior in Overseas Students in Surabaya City

Individuals with a positive financial attitude and high self-control tend to be more disciplined in saving. The ability to control their finances wisely helps them make smart decisions about financial gains and losses. With a good financial attitude and optimal self-control, they choose behaviors that support long-term benefits, such as saving for the future.

H5: Self Control moderates the relationship between Financial Attitude on Saving Behavior in Overseas Students in Surabaya City

Various factors affect saving behavior, including internal aspects such as self-control (Mardiana & Rochmawati, 2020). According to social cognitive theory, self-control in financial matters is shaped by observing and learning from one’s environment, as well as by personal beliefs and perceptions regarding financial values. Individuals who possess a strong grasp of financial products and the capacity for self-regulation generally exhibit more favorable financial behaviors.

H6: Self Control moderates the relationship between Financial Inclusion on Saving Behavior in Overseas Students in Surabaya City

3. Methodology

This study employs quantitative methods and focuses on active S1/D4 students enrolled in public universities within Surabaya City. Data was collected through an online questionnaire distributed via Google Forms to 110 students, chosen through purposive sampling. The selection criteria required students to be residing in Surabaya but from outside the city, to have experience with or active use of technology-based banking services, and to have experience with savings. The analysis was performed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS), which included assessing the outer and inner models and testing hypotheses about the direct impact of independent variables on the dependent variable, as well as the moderating effect of self-control.

4. Result and Discussion

There were 110 respondents in this study. Respondent data was categorized based on characteristics such as gender and state university. Based on the questionnaire data that has been collected, the majority of respondents are female (80%) compared to male (20%). In terms of state universities, the highest number of respondents came from UPN "Veteran" Jawa Timur (27%), followed by Universitas Negeri Surabaya (23%), Universitas Airlangga (18%), and Institut Teknologi Sepuluh November (18%). The percentage of respondents from UIN Sunan Ampel Surabaya, Politeknik Elektronika Negeri Surabaya, and Politeknik Perkapalan Negeri Surabaya is 5% each.
4.1 Validity of Indicators

Table 1. Factor Loading

<table>
<thead>
<tr>
<th>Financial Literacy (X1)</th>
<th>Financial Attitude (X2)</th>
<th>Financial Inclusion (X3)</th>
<th>Saving Behavior (Y)</th>
<th>Self Control (Z)</th>
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<tbody>
<tr>
<td>X1.1 0.853</td>
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<td>X1.2 0.862</td>
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<td>X1.3 0.876</td>
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<td>X1.4 0.890</td>
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<td>X2.1 0.921</td>
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<td>X2.2 0.917</td>
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<td>X2.3 0.927</td>
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<td>X3.2 0.924</td>
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<td>X3.3 0.907</td>
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<td>Y.1 0.779</td>
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<td>Y.5 0.825</td>
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<td>Y.6 0.786</td>
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Source: result of data processing

The validity of indicators is determined by evaluating the factor loadings of each variable against its indicators. Indicators are considered sufficiently valid if their factor loadings surpass 0.50 or if their T-Statistic values exceed 1.96 (Z value at \( \alpha = 0.05 \)). As shown in Table 4.8, the factor loadings (original sample) for all indicators related to financial literacy (X1), financial attitude (X2), financial inclusion (X3), self-control (Z), and saving behavior (Y) are above 0.50, and their T-Statistic values are greater than 1.96 (Z value at \( \alpha = 0.05 \)). Consequently, the results suggest that all indicators are valid and meet the required validity criteria.

4.2 Partial Least Squares (PLS) Model

Figure 1. Outer Model including Factor Loadings, Path Coefficients, and R-Square

Source: result of data processing
Figure 1 shows the PLS output, detailing the factor loading values for each indicator, which are indicated above the arrows connecting the variables and indicators. Additionally, it displays the path coefficients, positioned above the arrows that connect the independent variable to both the dependent variable and the moderating variable. The R-Square value, representing the variance explained, is also depicted within the circle corresponding to the dependent variable, saving behavior (Y).

4.3 Hypothesis Test

Table 2. Path Coefficients

|                                | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (|O/STDEV|) | P values |
|--------------------------------|---------------------|-----------------|-----------------------------|---------------------------|----------|
| Financial Literacy -> Saving Behavior | 0.622               | 0.647           | 0.075                       | 8.281                     | 0.000    |
| Financial Attitude -> Saving Behavior | 0.152               | 0.147           | 0.072                       | 2.102                     | 0.036    |
| Financial Inclusion-> Saving Behavior | 0.145               | 0.128           | 0.073                       | 1.985                     | 0.047    |
| Self Control x Financial Literacy -> Saving Behavior | 0.164               | 0.158           | 0.063                       | 2.624                     | 0.009    |
| Self Control x Financial Attitude -> Saving Behavior | 0.142               | 0.144           | 0.059                       | 2.395                     | 0.017    |
| Self Control x Financial Inclusion -> Saving Behavior | -0.255              | -0.251          | 0.074                       | 3.438                     | 0.001    |

Source: result of data processing

To evaluate the hypothesis, examine the coefficients and T-statistic values of the inner model. If the T-statistic exceeds the T-table value and the p-value is below the 0.05 (5%) significance level, the impact of the exogenous variables on the endogenous variables is considered significant. Furthermore, the self-control variable can moderate this relationship, but in a positive direction.

4.3.1 Financial Literacy has a positive effect on Saving Behavior of Overseas Students in Surabaya City

The study found that financial literacy plays a significant role to the saving behavior of overseas students in Surabaya City. These students, who live away from their families, are expected to manage their finances independently. Financial literacy supports saving behavior, showing that higher levels of financial literacy improve their ability to manage and save money. This can be further enhanced through financial education and training programs.

The factor loading analysis revealed that the highest indicator of financial literacy is knowledge of savings and investments. A thorough understanding of these products promotes better saving habits. Students with extensive knowledge in this area tend to make wise spending decisions, save regularly, and plan their finances carefully. They understand the importance of setting aside part of their income for savings and making profitable investments.

The findings of this study align with the research by Peiris (2021), Anastasya & Pamungkas (2023), Mpaata et al. (2023), Alshebami & Aldhyani (2022), Faramida et al. (2023), Wardani & Susanti (2019) and Irfan et al. (2023), which has research results that financial literacy has a positive and significant effect on saving behavior.

4.3.2 Financial Attitude has a positive effect on Saving Behavior of Overseas Students in Surabaya City
The study found that financial attitude plays a significant role to the saving behavior of overseas students in Surabaya City. Students with positive views on financial management tend to be more disciplined in saving and exhibit better money management skills. These attitudes include aspects like financial planning, prioritizing savings, and avoiding unnecessary expenses.

The factor loading analysis revealed that the highest indicator of financial attitude is the impact of current money management on future outcomes. This indicates that students who understand the importance of managing their finances effectively now are more likely to save, acknowledging the long-term effects of their financial choices.

The findings of this study align with the research by Anastasya & Pamungkas (2023), Perangin-angin et al. (2022), and Charista et al. (2022), which have research results that financial attitude has a positive effect on saving behavior.

### 4.3.3 Financial Inclusion has a positive effect on Saving Behavior of Overseas Students in Surabaya City

The study found that financial inclusion plays a significant role to the saving behavior of overseas students in Surabaya City. Students with greater access to financial services, such as bank accounts and digital savings products, are more effective at saving. Enhanced access to and understanding of financial services bolster financial stability and assist students in achieving their financial objectives.

The factor loading analysis revealed that the highest indicator of financial inclusion is the actual use of financial products and services, which has the highest impact on saving behavior. Easy access to financial facilities enables students to manage their finances more effectively, utilize various financial products, and develop good saving habits, ultimately enhancing their financial stability.

The findings of this study align with the research by Hajar & Isbanah (2023), Wardani & Susanti (2019), and Irfan et al. (2023), which have research results that financial inclusion has a significant effect on saving behavior.

### 4.3.4 Self Control moderates the effect of Financial Literacy on Saving Behavior in Overseas Students in Surabaya City

The study found that self-control moderates the effect of financial literacy on saving behavior among overseas students in Surabaya. Self-control enhances the positive impact of financial literacy on saving behavior. According to Albert Bandura’s (1977) social cognitive theory, self-control involves the ability to regulate emotions, control impulses, and make rational financial decisions. This research aligns with the theory, demonstrating that students with strong self-control are more capable of applying financial literacy knowledge to manage and save their money. Those who can control impulsive spending and practice disciplined financial planning are more successful in using financial literacy to save consistently and effectively. In essence, the ability to manage oneself and restrain unproductive financial behavior is crucial for maximizing the benefits of financial literacy. Enhancing self-control is expected to improve the effectiveness of financial literacy programs, promoting better and more sustainable saving habits.

The findings of this study align with the research by Mpaata et al. (2023) and Faramida et al. (2023), which have research results that self-control can moderate the relationship between financial literacy and saving behavior.

### 4.3.5 Self Control moderates the effect of Financial Attitude on Saving Behavior in Overseas Students in Surabaya City

The study found that self-control moderates the effect of financial attitude on saving behavior among overseas students in Surabaya. It has been found that self-control enhances the influence of financial attitude on saving behavior. Students who exhibit high self-control are better at translating positive financial attitudes into actual saving practices. This aligns with Albert Bandura’s social cognitive theory (1977), which posits that self-control aids students in transforming positive financial attitudes into solid saving behaviors. Those with higher self-control can more effectively curb unnecessary spending impulses and make prudent financial decisions, such as saving regularly and planning finances more effectively. This ability strengthens the link between a positive
financial attitude and consistent saving behavior. Enhancing students' self-control can, therefore, boost the success of initiatives aimed at fostering positive financial attitudes and sustainable saving practices.

The findings of this study align with the research by Mardiana and Rochmawati (2020), which also concluded that self-control can moderate the relationship between financial attitude and saving behavior.

4.3.6 Self Control moderates the effect of Financial Inclusion on Saving Behavior in Overseas Students in Surabaya City

The study found that self-control does not moderate the effect of financial inclusion on saving behavior among overseas students in Surabaya; in fact, it weakens the effect. Students with high self-control believe they do not need financial products to save, as they trust their ability to manage their own finances. This can lead to overconfidence, causing them to overlook the advantages of financial products and services. Applying Albert Bandura's social cognitive theory (1977) helps explain this outcome. While broad access to financial services promotes saving, a lack of self-control diminishes these benefits by fostering impulsive behavior. The theory highlights the significance of modeling and reinforcement in developing positive behavior, as well as the concepts of self-efficacy and overconfidence. Students with high self-control may feel they can handle their finances independently, thereby reducing the effectiveness of financial inclusion.

The findings of this study align with the research by Irfan et al. (2023), which also concluded that self-control cannot moderate and weakens the relationship between financial inclusion and saving behavior.

5. Conclusion

Based on the results from the Partial Least Squares (PLS) analysis of saving behavior among overseas students in Surabaya City, influenced by financial literacy, financial attitude, and financial inclusion, with self-control acting as a moderating factor, it was found that financial literacy, financial attitude, and financial inclusion play a significant role in shaping saving behavior. Self-control moderates the influence of financial literacy and financial attitude on saving behavior, but does not affect the relationship between financial inclusion and saving behavior. To improve their saving behavior, overseas students in Surabaya City should enhance their financial literacy through seminars, workshops, and online courses, and consider increasing their investments regularly. They should also make use of available financial services and develop self-control in managing their finances by avoiding impulsive spending and focusing on long-term goals. Future studies should explore additional factors that may impact saving behavior, such as parental guidance, peers, pocket money, personal modernity, lifestyle, and saving motivation, and stay updated on the latest trends in finance and saving behavior to maintain the study's relevance.

References


