

# Self-Control And Financial Education Moderate the Effects of Financial Literacy and Materialism on Savings Decisions

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## ABSTRACT

This study uses a quantitative descriptive research type with 395 respondents as undergraduate students of Sebelas Maret University, Surakarta as research subjects. The sampling technique uses probability sampling technique with a proportional random sampling approach. The data collection technique used is documentation and questionnaires. The validity test technique uses Confirmatory Factor Analysis (CFA) and the reliability test technique uses Croanbach's alpha. Data analysis in this study uses descriptive statistics, classical assumption tests (normality test, linearity test, multicollinearity test, and heteroscedasticity test) and hypothesis testing (hierarchical regression test, t-test, and assumption of determination coefficient) with SPSS 25 software. The results of the study show: Financial literacy has a positive and significant effect on saving decisions, Materialism has a negative and significant effect on saving decisions, Self-control cannot moderate the relationship between financial literacy and materialism on saving decisions, Financial education can moderate the relationship between financial literacy and materialism on saving decisions which is reinforced by the results of the study in the discussion.

## ABSTRAK

Penelitian ini menggunakan jenis penelitian deskriptif kuantitatif dengan jumlah responden sebanyak 395 orang mahasiswa S1 Universitas Sebelas Maret Surakarta sebagai subjek penelitian. Teknik pengambilan sampel menggunakan teknik probability sampling dengan pendekatan proporsional random sampling. Teknik pengumpulan data yang digunakan adalah dokumentasi dan kuesioner. Teknik uji validitas menggunakan Confirmatory Factor Analysis (CFA) dan teknik uji reliabilitas menggunakan Croanbach's alpha. Analisis data dalam penelitian ini menggunakan statistik deskriptif, uji asumsi klasik (uji normalitas, uji linearitas, uji multikolinearitas, dan uji heteroskedastisitas) dan uji hipotesis (uji regresi hierarkis, uji t, dan asumsi koefisien determinasi) dengan software SPSS 25. Hasil penelitian menunjukkan: Literasi keuangan berpengaruh positif dan signifikan terhadap keputusan menabung, Materialisme berpengaruh negatif dan signifikan terhadap keputusan menabung, Kontrol diri tidak dapat memoderasi hubungan literasi keuangan dengan materialisme terhadap keputusan menabung, Edukasi keuangan dapat memoderasi hubungan literasi keuangan dengan materialisme terhadap keputusan menabung yang diperkuat dengan hasil penelitian pada pembahasan.



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## INTRODUCTION

There are several factors that can influence a student to save. Factors that can influence students' decision to save according to Pangestu and Stevanus (2020) is financial literacy and materialism owned by students. According to Helmi Hashim (2018) Factors that can influence students to save are financial literacy, and peer influence. Meanwhile, according to Afsar et al (2018) Financial literacy and parental socialization are factors that influence a student to save. Nguyen & Doan (2020) Financial literacy, finance major, marital status, financial attitudes, and financial behavior are factors that influence a person to save.

So far, there have been many studies related to financial behavior that have linked it to financial literacy. Meanwhile, in the research conducted by Pangestu & Karnadi (2020) has

specifically discussed financial behavior, namely saving decision-making in generation Z. Saving decision-making in the study is not only influenced by financial literacy factors but also influenced by the level of materialism. The results of the study found that financial literacy had a positive and significant effect on students' savings decisions, while materialism had a negative effect. The study found another result that differences in study majors affect the level of financial literacy and have an impact on decision-making to save. The description above shows that there has been research that discusses the influence of financial literacy and materialism on students' savings decisions, but it is still rare. Therefore, this research was conducted with the aim of filling this scarcity and to re-examine whether financial literacy and materialism have an effect on saving decisions in students. This study adds self-control and financial education as moderation variables and as a differentiator from previous research.

Based on the level of financial literacy of the people of Indonesia, every year it continues to increase. It is evidenced by the results of a survey by the Financial Services Authority (OJK) on the Indonesian people that the level of financial literacy in 2013 was 21.84%, in 2016 it was 29.97%, and in 2019 it was 38.03%. OJK is a supervisory institution for the financial services sector established in 2011, which has the main function of protecting the interests of consumers and the public and ensuring health and competitiveness in the financial industry. In addition, there is one of the tasks of the OJK, which is to educate the public, especially those living in disadvantaged districts to achieve financial inclusion.

It has been explained above, that in Indonesia, the level of financial literacy has increased every year, but it is still far behind neighboring countries. These countries such as Thailand with a financial literacy rate of 78%, Malaysia at 81%, and Singapore at 98%. Poor financial management and difficulty in achieving financial prosperity are the cause of a lack of financial literacy.

Menurut Widyastuti et al (2016), financial literacy has an influence on savings, interest in saving, and saving behavior. The results of the study are that there is a positive and significant influence on the relationship between financial literacy and student savings. These results are in accordance with the research that has been conducted by Morgan and Long (2020) That is, financial literacy has a positive and significant influence on savings at all ages, including adolescents and youth. Likewise with the research that has been carried out by Pangestu and Karnadi (2020) which reveals that financial literacy has a positive and significant influence on saving decisions. Likewise, it is in line with the research conducted by Widjaja et al. (2020) Which explains that financial literacy has a positive influence on saving decisions.

Another influencing factor is materialism. The convenience and sophistication of technology today causes a person to become more consumptive and causes the level of materialism to be high. A person with a materialistic spirit has the belief that material is the most absolute and irreplaceable thing (Lavine, 2002). Students in carrying out their every action, especially in terms of saving, are also influenced by other factors. Other factors that are able to influence, both adding and decreasing, students' actions in saving based on financial literacy and materialism are *self control* or what is called self-control and financial education. Self-control is related to how individual students are able to influence themselves to take action. In addition to self-control, financial education is also able to influence, both adding and subtracting students' actions in saving based on financial literacy and materialism. Financial Education (*Financial education*) is a program related to financial knowledge which serves to increase understanding related to finance and its management and aims to improve the results of a person's financial well-being.

In general, the concept *Personal Financial Management Behavior* (PFMB) covers how individuals manage and make decisions regarding their personal finances. According to Goyal et al (2021) *Personal Financial Management Behavior* (*Personal Financial Management Behavior*) refers to the decisions and actions of individuals related to the management of their personal finances which include several aspects. These aspects are such as financial planning, income management, spending, saving, investment, and debt management. *Personal financial management behavior* refers to ability individual in managing (planning, budgeting, Review manage, control, Explore save) Resources Everyday finance (Kholilah & Iramani, 2013). Research conducted by Widjaja et al (2020) Which explains that financial literacy has a positive influence on saving decisions.

***H1: There is an influence of financial literacy on the decision to save for students of Sebelas Maret University (UNS).***

Decision is a step as an alternative selection used to achieve a goal (Handoko, 2012). Decision-making is defined as the determination of a series of activities to achieve a desired result. According to Setiadi (2008), decision-making is a follow-up action of a way to solve problems from human activities that are carried out consciously, purposefully and have a relationship to the future because the influence lasts for a long time. According to Hasan (2002), in making a decision becomes more directed if it knows the purpose of the decision first, and identifies several other alternative decisions to solve the problem.

Indicators of saving decisions include: Investing behaviour, consisting of: I have saved money for unexpected expenses, In the last six months, I have saved a lot, In addition to the money I have saved, I still save regularly. I also save money when I don't have a real saving goal, I spend money on daily necessities and save the rest. The second Spending Behaviour consists of: I spend all my money and don't save, I haven't saved in the last 12 months. Belk (1984) It is stated that materialism is a consumer's belief that is attached to him about the importance of owning worldly goods. Goldber et al (2003) stated that materialist teenagers tend to shop more often than save.

***H2: There is an influence of materialism on the decision to save for students of Universitas Sebelas Maret (UNS).***

Financial literacy is the knowledge, understanding, and skills possessed by a person in conducting financial management that will improve their financial welfare. When a person can understand financial literacy well, it will make the person's financial management tend to be good. This is because a person will know when to manage their finances well such as to save, invest money, and when to spend money for important purposes and use it as well as possible. Some indicators of financial literacy include: *Financial Knowledge, Financial Attitude, Financial behavior*. Based on research that has been conducted by Syafitri & Santi (2017) *self control* has a significant effect on a person's behavior in saving, but cannot moderate the variables that affect a person's behavior in saving.

***H3a: Self-control moderates the relationship between financial literacy and the decision to save for students of Universitas Sebelas Maret (UNS).***

According to Denegri et al. (2022), materialism became an accepted phenomenon in the postmodern era, especially in those at a young age. In addition, materialism is explained as a value that is present and it is believed that success and happiness in life depend on material

goods, which is very important and provides value to the individual who owns these goods (Denegri et al., 2022). These values in the individual as a self-definition and form of self-depiction, they are in accordance with the individual's expression, way of treatment, and problem-solving in a person which is called self-concept. Individuals who have high material value not only focus on owning an object but they also build psychological satisfaction that they can accept. The indicators used in this study to measure materialism using the reference of Richins & Dawson (1992) are: Considering material things very important in life, Considering material things as a source of happiness, Considering material things as a measure of success.

***H3b: Self-control moderates the relationship between materialism and the decision to save for students of Universitas Sebelas Maret (UNS).***

Self-control is a person's ability to restrain themselves or direct themselves in a better direction when faced with some temptation to spend money, there is a high level of self-control so a person can control their emotions, and can refuse purchases and illogical decisions to make them (Baumeister, 2002). Rahmani (2015) Self-control can be applied in decision-making to save money (savings) or make purchases. According to Haws, Bearden & Nenkov (2012), self-control is considered a major factor contributing to financial decision-making. Based on some of these opinions, it can be concluded that self-control is the ability in a person to control financial behavior and is the main factor that contributes to financial decision-making. According to Carpena et al (2017), financial education can increase financial awareness and attitudes but fail to improve long-term behavioral outcomes on budgeting, savings and borrowing.

***H4a: Financial education moderates the relationship between financial literacy and the decision to save for students of Universitas Sebelas Maret (UNS).***

*Financial education* or called financial education is a program that is closely related to knowledge in the financial sector and how to manage it. Financial education is one of the many tools that can improve financial results (Hastings et al., 2013). According to the OECD in Lusardi & Mitchell (2007) Financial education is a process by which a person to improve their understanding of financial products and concepts and, through objective information, instruction, and/or advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help, and to take other effective actions to improve financial well-being they.

***H4b: Financial education moderates the relationship between materialism and the decision to save for students of Universitas Sebelas Maret (UNS).***

## **RESEARCH METHOD**

The type of research used is descriptive research with quantitative methods. The population in this study is all students of Sebelas Maret University from various faculties and study programs. The sample in this study was 395.208433, then rounded to 395. The data collection techniques used by the researcher are documentation and questionnaires (questionnaires). The data collection technique with documentation is the collection of data from journals, books, data from the government and universities in accordance with the topic that is the object of the research being conducted. Meanwhile, the data collection technique with questionnaires is by distributing it to students of Sebelas Maret University (UNS) from various faculties and departments. The Data Analysis Techniques used in this study include the number

of respondents obtained, details of respondent data, and descriptive statistical results. Hypothesis tests include hierarchical regression analysis to obtain valid research results.

## RESULTS AND DISCUSSION

The results of the calculation in this study use hierarchical regression analysis with the help of the SPSS version 25 program which is the result of data analysis carried out many times with different variable compositions. Table 1. Showing a summary of the results of the hierarchical regression test conducted in this study. Regression analysis was carried out in 16 stages, so that 16 regression models were obtained. In order to see the influence between independent and dependent variables, a t table is needed.

**Table 1. Results of Regression Analysis of Saving Decision Hierarchy**

Variable	Model 1	Model 2	Model 3	Model 4	Information
<b>Control Variables</b>					
Gender	-0,205 (-0,558)	0,003 (0,009)	-0,082 (-0,274)	-0,063 (-0,211)	
Age	0,463 (0,893)	0,631 (1,388)	0,116 (0,272)	0,171 (0,399)	
Force	0,119 (0,627)	0,171 (1,026)	0,088 (0,568)	0,098 (0,635)	
Faculty	-0,169 (-3,054)	-0,072 (-1,471)	-0,060 (-1,316)	-0,063 (-1,385)	
Source of Income	0,202 (0,619)	0,168 (0,586)	0,171 (0,642)	0,219 (0,817)	
Average Income	-0,051 (-0,169)	-0,142 (-0,537)	-0,155 (-0,630)	-0,140 (-0,569)	
Pend. Intermediate	1,210 (1,842)	0,852 (1,478)	1,116** (2,078)	1,139** (2,123)	
Pend. Parents	0,085 (0,365)	-0,011 (-0,056)	-0,029 (-0,155)	-0,037 (-0,197)	
<b>Main Variables</b>					
Financial Literacy		0,552** (10,902)	0,453** (9,286)	1,200** (2,252)	H1 Supported
Materialism					
<b>Moderation Variables</b>					
Self-Control			0,319** (7,838)	0,834** (2,265)	
Financial Literacy*Self-Control				-0,017 (-1,408)	H3a Not Supported
Materialism*Self-Control					
Financial Education					
Financial Literacy*Financial Education					
Materialism*Financial Education					
Goodness	1,712	15,192	21,963	20,198	
N	395	395	395	395	
R2	0,034	0,262	0,364	0,367	
Adj R2	0,014	0,245	0,347	0,349	

\*\* Sig. < 0.05

Source: Primary data processed, 2023



**Table 2. Results of Regression Analysis of Saving Decision Hierarchy**

Variable	Model 5	Model 6	Model 7	Model 8	Information
<b>Control Variables</b>					
Gender	-0,234 (-0,712)	-0,278 (-0,913)	-0,237 (-0,776)	-0,096 (-0,336)	
Age	0,536 (1,156)	0,019 (0,043)	0,014 (0,033)	0,238 (0,558)	
Force	0,199 (1,169)	0,107 (0,679)	0,095 (0,603)	0,142 (0,960)	
Faculty	-0,130** (-2,625)	-0,107** (-2,323)	-0,108** (-2,351)	-0,057 (-1,313)	
Source of Income	0,198 (0,677)	0,195 (0,721)	0,242 (0,889)	0,220 (0,863)	
Average Income	-0,056 (-0,209)	-0,086 (-0,343)	-0,109 (-0,434)	-0,142 (-0,608)	
Pend. Intermediate	1,032 (1,757)	1,273** (2,335)	1,257** (2,308)	1,032** (2,029)	
Pend. Parents	0,327 (1,567)	0,244 (1,256)	0,278 (1,424)	0,152 (0,831)	
<b>Main Variables</b>					
Financial Literacy				0,771 (1,366)	
Materialism	-0,337** (-9,918)	-0,272** (-8,386)	-0,754** (-2,215)	-0,421 (-1,186)	H2 Supported
<b>Moderation Variables</b>					
Self-Control		0,331** (8,038)	0,064 (0,330)	0,430 (0,851)	
Financial Literacy*Self-Control				-0,009 (-0,715)	
Materialism*Self-Control			0,011 (1,422)	0,005 (0,598)	H3b Unsupported
Financial Education					
Financial Literacy* Financial Education					
Materialism* Financial Education					
Goodness	12,835	19,920	21,887	22,529	
N	395	395	395	395	
R2	0,231	0,342	0,363	0,435	
Adj R2	0,213	0,324	0,346	0,415	

\*\* Sig. < 0.05

Source: Primary data processed, 2023

**Table 3. Results of Regression Analysis of Saving Decision Hierarchy**

Variable	Model 9	Model 10	Model 11	Model 12	Information
<b>Control Variables</b>					
Gender	-0,205 (-0,558)	0,003 (0,009)	0,121 (0,395)	0,137 (0,451)	
Age	0,463 (0,893)	0,631 (1,388)	0,642 (1,496)	0,677 (1,584)	
Force	0,119 (0,627)	0,171 (1,026)	0,194 (1,234)	0,201 (1,285)	
Faculty	-0,169** (-3,054)	-0,072 (-1,471)	-0,012 (-0,264)	-0,015 (-0,310)	
Source of Income	0,202	0,168	0,188	0,231	

	(0,619)	(0,586)	(0,698)	(0,854)
Average Income	-0,051 (-0,169)	-0,142 (-0,537)	-0,016 (-0,064)	0,015 (0,059)
Pend. Intermediate	1,210 (1,842)	0,852 (1,479)	0,467 (0,855)	0,437 (0,803)
Pend. Parents	0,085 (0,365)	-0,011 (-0,056)	-0,034 (-0,176)	-0,034 (-0,178)
<b>Main Variables</b>				
Financial Literacy		0,552** (10,902)	0,444** (8,848)	0,557** (7,370)
Materialism				
<b>Moderation Variables</b>				
Self-Control				
Financial Literacy*Self-Control				
Materialism*Self-Control				
Financial Education			1,090** (6,964)	3,255** (2,964)
Financial Literacy* Financial Education				-0,069** (-1,991)
Materialism* Financial Education				
Goodness	1,712	15,192	20,208	18,873
N	395	395	395	395
R2	0,034	0,262	0,345	0,352
Adj R2	0,014	0,245	0,328	0,333

\*\* Sig. < 0.05

Source: Primary data processed, 2023

**Table 4. Results of Regression Analysis of Saving Decision Hierarchy**

Variable	Model 13	Model 14	Model 15	Model 16	Information
<b>Control Variables</b>					
Gender	-0,234 (-0,712)	-0,038 (-0,127)	-0,069 (-0,223)	-0,030 (-0,108)	
Age	0,536 (1,156)	0,581 (1,375)	0,556 (1,332)	0,642 (1,618)	
Force	0,199 (1,169)	0,230 (1,486)	0,188 (1,223)	0,210 (1,438)	
Faculty	-0,130** (-2,625)	-0,039 (-0,835)	-0,039 (-0,843)	-0,009 (-0,209)	
Source of Income	0,198 (0,677)	0,215 (0,808)	0,150 (0,569)	0,141 (0,564)	
Average Income	-0,056 (-0,209)	0,076 (0,308)	-0,033 (-0,133)	-0,078 (-0,331)	
Pend. Intermediate	1,032 (1,757)	0,499 (0,926)	0,507 (0,953)	0,435 (0,861)	
Pend. Parents	0,327 (1,567)	0,250 (1,309)	0,242 (1,283)	0,155 (0,865)	
<b>Main Variables</b>					
Financial Literacy				0,338** (3,201)	
Materialism	-0,337** (-9,918)	-0,299** (-9,588)	-0,470** (7,890)	-0,363** (-5,911)	
<b>Moderation Variables</b>					
Self-Control					

Financial Control	Literacy*	Self-Control		
Materialism*				
Financial Education	1,326** (8,952)	-1,278** (-1,614)	-0,486 (0,295)	
Financial Literacy* Financial Education		0,101** (3,348)	-0,009 (-0,228)	H4b Supported
Materialism* Financial Education			0,071** (2,361)	
Goodness	12,835	21,939	21,493	23,548
N	395	395	395	395
R2	0,231	0,364	0,382	0,446
Adj R2	0,213	0,347	0,364	0,427

\*\* Sig. < 0.05

Source: Primary data processed, 2023

A summary of the results of the hierarchical regression analysis test that has been carried out is in Table 1. This regression analysis is carried out through several stages, which are 16 stages. The way to find out how much influence the independent variable and the dependent variable is by looking at the ttable value and the significant value produced. It can be said that there is an influence between independent variables on dependent variables if the significance level is <0.05 and the tcal value is greater than the ttable. The ttable value in this study is 1.966 (obtained from the TINV Microsoft Excel formula).

Based on the average results of financial literacy scores in economics & business and non-economics & business students, there are differences. The average result of the financial literacy score for business students was 33,045. Meanwhile, the average literacy score for non-business students was 30.325. The results show that the average literacy score of economics & business students is higher than that of non-economics & non-business students.

## DISCUSSION

Based on hierarchical regression analysis, the results show results that are in line with the hypothesis proposed by the researcher, namely financial literacy affects savings decisions. Pangestu and Kardani (2020) explained that higher financial literacy leads to increased savings decisions among students, this is in line with research conducted by Morgan and Long (2020) which states that financial literacy has a positive and significant influence on savings at all ages, including adolescents and young people.

This study shows that the results of the study are in line with hypothesis 2, namely materialism affects saving decisions. In line with Pangestu and Kardani (2020) stated that the higher the level of student materialism, the less students decide to save their money, so it can be concluded that materialism has a negative and significant effect on students' savings decisions. This study shows that materialist behavior contributes negatively to lowering the decision to save. Materialism is an individual attitude that views everything from material, so that the understanding of materialism makes a person tend to measure everything from finances.

The results showed that self-control did not moderate financial literacy and materialism towards saving decisions, which showed that the results did not support hypotheses 3a and 3b. This research contributes to the importance of self-control in decision-making, including the



decision to save. Self-control in each individual will keep a person to behave excessively and be more restrained in making decisions related to finances.

The results of the study show that financial education moderates financial literacy and materialism towards saving decisions which is in line with hypotheses 4a and 4b. Financial education has an important contribution for every individual in managing finances. Individuals who have attended financial education will be more cautious in making decisions to spend less useful finances. Financial education is a program related to financial knowledge which serves to increase understanding of finance and its management and aims to improve the results of a person's financial well-being.

In this study, it classifies which are included in economics and business students, namely students of study programs that receive more economic learning materials, namely the Economics Education study program, Accounting Education, Office Administration Education, and all students from the Faculty of Economics and Business (FEB) study program. Meanwhile, non-economics and business students include all students of study programs at Sebelas Maret University except for students of the study programs mentioned earlier. The reason why it is necessary to classify which economics and business students are included or not is because students at Sebelas Maret University who receive a lot of economics learning materials are not centralized in 1 faculty. The results of the research that have been carried out show that the average literacy score of economics & business students is higher than that of economics & non-business students.

## CONCLUSIONS

Based on the results of research on the influence of financial literacy and materialism on the decision to save moderated self-control and financial education in Sebelas Maret University students, conclusions can be drawn. Financial literacy has a positive and significant effect on the savings decision of Universitas Sebelas Maret (UNS) students. This means that the higher the level of financial literacy in students, the desire to save will increase.

Materialism has a negative and significant effect on the decision to save for students of Sebelas Maret University (UNS). The results show that the attitude of materialism causes the desire to save in students to decrease. Self-control does not moderate the interaction of the relationship between financial literacy and materialism on the savings decisions of Sebelas Maret University (UNS) students. Financial education moderates the relationship between financial literacy and materialism on the savings decisions of students of Universitas Sebelas Maret (UNS). The results show that financial education can strengthen the relationship between financial literacy and students' savings decisions, because the higher the level of financial literacy in students, the more desire to save. Financial education can weaken the interaction of students' materialistic relationships with savings decisions.

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