

Self-Control, Financial Literacy, and Behavior in Organizing Money

Anita Anita¹, Rosemarie Sutjiati Njotoprajitno², Bram Hadianito³

¹ Undergraduate student in management, Business Faculty, Maranatha Christian University, Bandung, Indonesia

^{2,3} Management department, Business Faculty, Maranatha Christian University, Bandung, Indonesia

Correspondence: Bram Hadianito, Management Department, Business Faculty, Maranatha Christian University, Jl. Prof. Drg. Suria Soemanti, MPH., No.65, Bandung 40164, Indonesia. Email: tan_han_sin@hotmail.com

Abstract

The higher educational institutions' students are familiar with technological advancement. As a terrible consequence, they will be trapped in incontrollable consumption by purchasing something they do not need. This circumstance cannot be separated from their classmate's trendy lifestyle and lures. This situation leads to poor organizing money. Besides, according to previous studies, this poor money management is usually affected by low financial literacy. Therefore, this investigation examines the influence of self-control and financial literacy on money management behavior. The population in this research consists of 1,226 active undergraduate students in the accounting and management departments from batches 2016 to 2021 in the business faculty at Maranatha Christian University. Based on the Slovin formula with a 5% fault boundary, the sample size is 302. Considering this situation, we use a stratified random sampling technique by treating the batches as strata. Then, we distribute the questionnaire to them. Unfortunately, only 94 students respond; the response rate is 31.17%. After analyzing their response by a structural equation model based on partial least squares, we conclude that self-control positively affects students' behavior in organizing their money. Unfortunately, financial literacy does not.

Keywords: Friend Suggestion, Money-Related Behavior, Self-Control

1. Introduction

In macroeconomics, consumption is the private spending of money on goods and services, depending on customers' disposable income (Samuelson & Nordhaus, 2010). If this spending is uncontrollable, it will create compulsive buying (Islam, Wei, Sheikh, Hameed, & Azam, 2017). This behavior will disturb financial plans, such as savings and investments (Herdjiono & Damanik, 2016), reducing financing welfare (Pathirannahalage & Abetrathna, 2020).

As the young generation, the students in higher educational institutions are the individuals who understand technology well. Supported by the fashionable lifestyle and the lures from their classmates, they buy goods and

services they do not need (Puspita & Isnalita, 2019; Rohmanto & Susanti, 2021) through online shopping platforms (Mitra, Syahnar, & Alizamar, 2019). To buy them, the students may use the money to pay rent for boarding home (Mitra et al., 2019). Consequently, they owe money through credit cards (Roberts, 1998). If this problem is not resolved well, they cannot concentrate on the lessons delivered, the exams, and their academic performance (Hancock, Jorgensen, Swanson, & Swanson, 2013). Finally, if this situation occurs, they cannot finish their study punctually (Bamforth, Jebarajakirthi, & Geursen, 2018).

Regarding this issue, studying the behavior of managing money becomes interesting for scholars. The existing research reveals that behavior to organize cash is positively affected by self-control; for example, Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2017), Younas, Javed, Kalimuthu, Farooq, Khalil-ur-Rehman, and Raju (2019), Khoirunnisaa and Johan (2020), Komarudin, Nugraha, Hardjadi, and Pasha (2020), and Rey-Ares, Fernández-López, Castro-González, and Rodeiro-Pazosb (2021). Unfortunately, this evidence is conflicting, as demonstrated by Christiany, Sudarto, and Sulistyandari (2021), with a negative association.

Students equipped with financial literacy usually have good money-related behavior, as proven by Younas et al. (2019), Komarudin et al. (2020), Kamel and Sahid (2021), Khawar and Sarwar (2021), Rohmanto and Susanti (2021) and Rahayu, Ali, Aulia, and Hidayah (2022): a positive relationship exist. Unfortunately, this empirical evidence is inconsistent; for instance, the study of Khoirunnisaa and Johan (2020) and Christiany et al. (2021) cannot depict this relationship.

Based on these different results of the previous research, this investigation aims to check and analyze the influence of self-control and financial literacy on behavior in managing money by employing undergraduate students taking the management department in the business faculty at Maranatha Christian University in Bandung.

2. Literature Review and Hypothesis Development

2.1. Behavior in organizing money

For individuals, the behavior in managing money means that they can budget, save, invest, spend, and supervise money (Bamforth et al., 2018). In the broader concept, this behavior is also related to credit card management (Joo, Grable, & Bagwell, 2003). These details they execute are obtainable in the personal financial plan, consisting of income and expenditures (Altfest, 2004).

2.2. Self-control

Self-control is the ability to organize (1) the brain to think, (2) emotion, (3) impulse, and (4) performance. Using brain functions to eliminate unwanted things or forcibly concentrate on something. Utilizing emotions intends to preserve a good mood and be interested or disinterested in something, and employing impulse aims to reject lures. By performance, someone keeps acting although complicated barriers exist (Baumeister, 2002). Moreover, this control is based on value and trust as a reference (Komarudin et al., 2020).

2.3. Financial literacy

In the behavioral finance literature, financial literacy represents knowledge containing thoughts and procedures (Amagir, Groot, Van den Brink, & Wilschut, 2020). With virtuous literacy, someone will have self-confidence and the capability to manage money well in the short and long-term periods, even under changing economic circumstances (Remund, 2010). Also, Vitt, Anderson, Kent, Lyter, Siegenthaler, and Ward (2000) explain that people having this literacy will be able to read, analyze, and organize their financial situation to achieve physical welfare.

2.4. Self-control and behavior in organizing money

After studying 2,063 Swedish people aged between 20 and 75, Strömbäck et al. (2017) found a positive association between self-control and behavior toward managing money. In their investigation of 416 people from educational institutions, enterprise sectors, and food courts in Pakistan, Younas et al. (2019) documented this relationship. Similarly, this sign was obtained by Khoirunnisaa and Johan (2020) when researching 113 senior high school students in Bogor, Indonesia, and Komarudin et al. (2020) once investigating 56 elementary school teachers in all districts in Kuningan, Indonesia. Rey-Ares et al. (2021) studied 7,000 people in Spain, where 30% were millennials, and approve that self-control positively affected money-related behavior: investment for these two groups. Also, a positive sign existed in the association between self-control and indebtedness for the non-millennials, but an insignificant relationship happened for the millennial group. Based on these research facts, the first hypothesis offered is like this.

H₁: Self-control has a positive influence on behavior in organizing money.

2.5. Financial literacy and behavior in organizing money

In their investigation of 416 people from educational institutions, enterprise sectors, and food courts in Pakistan, Younas et al. (2019) documented that financial literacy positively influenced money-associated behavior. Furthermore, Komarudin et al. (2020) affirmed this evidence after surveying elementary school teachers' perceptions in all districts in Kuningan, Indonesia. Also, Kamel and Sahid (2021) confirm this fact when investigating 339 students in the universities in Malaysia. Correspondingly, Khawar and Sarwar (2021) demonstrated this proof when inspecting 330 employees working at the banks in Pakistan. Furthermore, Rohmanto and Susanti (2021) affirmed this fact once researching 276 management and accounting students in a higher school in economics in Surakarta. Through their research, Rahayu et al. (2022) confirmed the positive effect of digital financial literacy on spending, saving, and investment behaviors when investigating the perspective of 741 Indonesians aged 25 until 40 from several cities. Based on these research facts, the second hypothesis offered is like this.

H₂: Financial literacy has a positive influence on behavior in organizing money.

2.6. Research Model

According to the two hypotheses mentioned in the preceding section, the research model can be drawn and displayed in Figure 1.

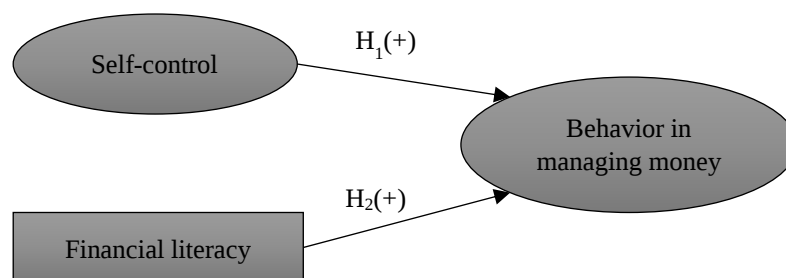


Figure 1: Research Model

Source: The hypotheses developed in sections 2.4 and 2.5

3. RESEARCH METHOD

3.1. Variable Definition

This study uses three variables: self-control and financial literacy as independent and money management behavior as a dependent:

- a. Following Tangney et al. (2004), we measure self-control by the five brief items showing the non-reverse: (1) I am not easily influenced by negative allurements (SC1), (2) I never let myself out of control (SC2),

- (3) I do not follow the destructive influence (SC3), (4) People can rely on me on my timetable (SC4), (5) I am trustworthy (SC5), and (6) I like the regularity (SC6).
- b. Denoting Lusardi and Mitchell (2007), financial literacy is measured by the number of correct answers to five fundamental questions (see FL1 to FL5): (1) numerical issue (FL1), (2) compound interest (FL2), (3) inflation (FL3), (4) time value of money (FL4), (5) money illusion (FL5), and eight advanced ones (see FL6 to FL13): (1) capital market function (FL6), (2) mutual funds understanding (FL7), (3) association between interest rate and bond price (FL8), (4) the judgment of the safer asset (FL9), (5) the determination of the risky asset (FL10), (6) assets having the highest return based on their length (FL11), (7) assets having the highest return based on the highest fluctuation (FL12), (8) risk diversification (FL13).
- c. Referring to Perry & Morris (2005), we measure behavior to manage money by five items: I can control my spending (BMM1), pay bills promptly (BMM2), organize my financial plan (BMM3), look for cash by myself (BMM4), and save money in the bank (BMM5).

3.2. Population and Sample

The study population is from the students in the management and accounting departments in the business faculty at Maranatha Christian University between batches 2016 to 2021, totaling (TP) = 1,226. Additionally, we utilize the Slovin formula with the border of fault (bf) of 5% to count the sample size (SS) as displayed in the first equation.

$$SS = \frac{TP}{1+TP(bf^2)} \quad (1)$$

Denoting this formula, the sample size is $\frac{1,226}{1+1,226(5\%*5\%)} = \frac{1,226}{4.065} = 301.59 \approx 302$. By considering this information, 302 students are taken by stratified random technique.

Table 1: The Allocation of Total Samples From the Batches-based Population

Batch	Accounting	Management	Total Population	%	Total Sample
2016	17	48	65	5.30%	16.01 $\approx$ 16
2017	53	80	133	10.85%	32.76 $\approx$ 33
2018	127	199	326	26.59%	80.30 $\approx$ 80
2019	89	164	253	20.64%	62.32 $\approx$ 62
2020	52	154	206	16.80%	50.74 $\approx$ 51
2021	73	170	243	19.82%	59.86 $\approx$ 60
Total	411	815	1,226	100%	302

3.3. Method to take and investigate the data

The student-related data needed in this study consists of (1) demographic features: gender and age, (2) educational features: batch and department, and (3) the students' responses to items. To get them, we utilize the survey. According to Hartono (2012), the survey is executed by distributing a questionnaire with close questions:

- To measure the financial literacy level, we provide multiple choices.
- To measure the answer of self-control and behavior to manage money, we use the Likert scale from one to five to describe the disagreement and agreement.

Unfortunately, after surveying the students between April and May 2022, we obtained 94 complete responses. Because of this total, we apply the structural equation based on partial least square, as Ghazali (2008) suggests. The intended model is in the second equation:

$$BMM = \beta_1 SC + \beta_2 FL + \zeta_1 \quad (2)$$

Before testing hypotheses, the data need to pass two steps. Firstly, the detection of validity and reliability. To verify the valid response, we use confirmatory factor analysis. Mentioning Sholihin & Ratmono (2013), we compare the loading factor with 0.7. If it is above 0.7, the response to the item is valid. Moreover, the Cronbach Alpha and composite reliability coefficients are used to verify the reliable response. If they are above 0.7, they are reliable.

Secondly, following this rule by Ghazali (2008), the model assessment is needed based on f-square, R-square, and Q-square, comparing their value with the specific cut-off points:

- The cut-off value for f-square to declare the partial effect is enormous, middle, and small is 0.35, 0.15, and 0.02.
- The cut-off value for R-square to state the big, medium, and small contributions of all determinants are 0.67, 0.33, and 0.19.
- The cut-off value for Q-square to declare that the model has predictive relevance is 0. If Q-square is above 0, the model has the power to predict.

4. RESULT AND DISCUSSION

4.1. The student profiles

The survey in this study was conducted between April and May 2022. It obtained 94 students with the demographic features of gender and age and educational features of batch and department. In the second table, the most students joining this survey are 50 males (53.19%) and 52 individuals aged between 21 and 25 (55.32%). Besides, 32 are from batch 2018 (34.04%), and 61 are from the management department (64.89%).

Table 2: The student profiles

Profile	Type	Description	Total	Percentage
Demographic Feature	Gender	Male	50	53.19%
		Female	44	46.87%
	Age	18-20	41	43.62%
		21-25	52	55.32%
		26-30	1	1.06%
Educational Feature	Batch	2016	3	3.18%
		2017	4	4.26%
		2018	32	34.04%
		2019	15	15.96%
		2020	19	20.21%
		2021	21	22.34%
	Department	Accounting	33	35.11%
		Management	61	64.89%

Source: The primary data from the survey processed

4.2. The Result of Validity and Reliability Tests

The validity test detects the accuracy of respondents' answers to the items. To perform this test, we use the confirmatory factor analysis. In the first stage, we find the indicators with a loading factor less than 0.7, i.e., SC4: 0.554, SC5: 0.681, SC6: 0.533, BMM2: 0.500, and BMM5: 0.617 (see Table 3A).

Table 3A: The first stage of the validity test result: Loading factor detection

Research variable	Item	Loading factor
Self-control	SC1	0.810
	SC2	0.777
	SC3	0.783

Table 3A: The first stage of the validity test result: Loading factor detection

Research variable	Item	Loading factor
Behavior to manage money	SC4	0.554
	SC5	0.681
	SC6	0.533
	BMM1	0.730
	BMM2	0.500
	BMM3	0.852
	BMM4	0.719
	BMM5	0.617

Source: Modified output of Smart PLS 3.

Because of this situation, the items are not valid and have to vanish. After deleting them, we test this validity again, where the result is in Table 3B. In this table, all loading factors are above 0.7: 0.962 for SC1, 0.814 for SC2, 0.947 for SC3, 0.777 for BMM1, 0.854 for BMM3, and 0.799 for BMM4. Thus, valid responses for these items are available.

Table 3B: Loading factor, Cronbach Alpha, Composite Reliability for Items reflecting self-control and behavior in managing money

Research Variable	Item	Loading Factor	Cronbach Alpha	Composite Reliability
Self-control	SC1	0.962	0.896	0.935
	SC2	0.814		
	SC3	0.947		
Behavior to manage money	BMM1	0.777	0.739	0.852
	BMM3	0.854		
	BMM4	0.799		

Source: Modified output of Smart PLS 3.

After that, checking the reliability of the answer by Cronbach Alpha and composite reliability is necessary, and the result is also in Table 3B. In this table, the Cronbach Alpha is higher than 0.7: 0.896 for SC and 0.739 for BMM. Also, the composite reliability coefficients are above 0.7: 0.935 for SC and 0.852 for BMM. In this situation, the test on reliable answers to these items is attainable.

4.3. The associated result with the estimated model

Table 4 in this section presents two panels: A and B. Panel A illustrates the result from the model assessment based on f-square, R-square, and Q-square. Meanwhile, Panel B demonstrates the estimated research model result.

Table 4: The associated result with the estimated model

Table 4: The associated result with the estimated model				
Panel A. The result of the model assessment				
Explaining Variable	f-square	R-square	Q-square	
SC	0.457	0.326	0.191	
FL	0.005			
Panel B. The result of the estimated structural equation model				
Explaining Variable	Coefficient	The standard error for the coefficient	t-statistic	Probability
SC	0.560	0.076	7.327	0.000
FL	0.056	0.083	0.677	0.498

Source: Modified output of Smart PLS 3.

In Panel A, the f-square of SC is 0.457; hence, its partial impact is significant. On the other hand, the f-square of FL is 0.005; therefore, its partial effect is unimportant. The R-square shows 0.326; thus, the contribution of SC and FL to explain the variance of the model is almost modest. The Q-square for this model is 0.191: The model can appropriately predict behavior to manage money.

In Panel B, the probability of the t-statistic for SC of 0.000, below 5%, and FL of 0.498, exceeding 5%. Hence, the first hypothesis is accepted: self-control positively affects this behavioral money management, but the second is refused: financial literacy does not affect this behavior.

4.4. Discussion

Statistically, the first hypothesis is accepted: Self-control positively influences students' behavior in managing money. By having strong self-control, the students cannot be tempted by something terrible. Also, they are constantly under their control and following an upright impact, and this impact can come from their close family or friends with responsible attitudes. With this evidence, this study supports Strömbäck et al. (2017), Younas, et al. (2019), Khoirunnisaa and Johan (2020), Komarudin et al. (2020), and Rey-Ares et al. (2021).

Statistically, the second hypothesis is disallowed. It means that the behavioral money management of the students is not influenced by financial literacy. This condition is due to the almost similar average proportion of the students with correct and improper answers (see Table 5): 53.11% is available for the right versus 46.89% for the incorrect. The students cannot answer the question well about compound interest (FL2), inflation (FL3), time value of money (FL4), money illusion (FL5), the association between interest rate and bond price (FL8), the judgment of the safer asset (FL9), and the investments having the highest return based on their length determination (FL11), and the risk diversification (FL13). This situation is determined by the percentage of correct answers below and near the mean of 53.11%. The lowest correct answer is 29.79% on risk diversification. Meanwhile, the correct answer above and near the average of 53.11% is 54.26% on money illusion. Without the effect of financial literacy on behavioral money management, this study confirms Khoirunnisaa and Johan (2020) and Christiany et al. (2021).

Table 5: The students with the correct answer to financial problem topics based on their number and percentage

Item	Topic	The students with the correct answer	
		Number	Percentage
FL1	Numerical issue	76	80.85%
FL2	Compound interest	40	42.55%
FL3	Inflation	32	34.04%
FL4	Time value of money	42	44.68%
FL5	Money illusion	51	54.26%
FL6	Capital market function	65	69.15%
FL7	Mutual funds understanding	71	75.53%
FL8	Association between interest rate and bond price	34	36.17%
FL9	The judgment of the safer asset	44	46.81%
FL10	The determination of the risky asset	60	63.83%
FL11	The assets having the highest return based on their length determination	46	48.94%
FL12	The assets having the highest return based on the highest fluctuation determination	60	63.83%
FL13	The risk diversification	28	29.79%
Average correct answer			53.11%
Average false answer			46.89%

Regarding a positive relationship between self-control and behavior in managing money, this study suggests that the students should shape a group of their close family or relatives. Furthermore, they are asked to share their experiences and give their advice to make the students have strong self-control to decide to use money properly.

Considering the insignificant association between financial literacy and behavior to manage money, the management and accounting departments can work together to hold public talks or seminars presenting the topic

of financial literacy regularly to increase the students' knowledge related to money. Additionally, a workshop involving the students and the related lecturers can be another alternative to accomplish this goal.

5. Conclusion

This research intends to examine the effect of financial literacy and self-control on behavior in organizing money by surveying 94 undergraduate students in the management and accounting departments of the business faculty of Maranatha Christian University, Bandung. Once testing the related hypotheses, this study reveals that self-control positively affects students' behavior in organizing their money; unfortunately, financial literacy does not affect this behavior.

This study has some deficiencies: the small number of the sample and the determinants of money behavior. This first situation can be insight for subsequent researchers to add the sample size of at least 200 students. With this number, the theory testing can be better by utilizing the structural equation based on covariance. With the limited number of determinants, the following researchers can improve the factors affecting the research model like gender, lifestyle, financial attitude, money from parents, and financial socialization.

References

- Altfest, L. (2004). Personal financial planning: Origins, developments, and a plan for future direction. *The American Economist*, 48(2), 53-60. <https://doi.org/10.1177/056943450404800204>
- Amagir, A., Groot, W., Van den Brink, H. M., & Wilschut, A. (2020). Financial literacy of high school students in the Netherlands: Knowledge, attitudes, self-efficacy, and behavior. *International Review of Economics Education*, 34, 100185. <https://doi.org/10.1016/j.iree.2020.100185>
- Bamforth, J., Jebarajakirthi, C., & Geursen, G. (2018). Understanding undergraduates' money management behavior: A study beyond financial literacy. *International Journal of Bank Marketing*, 36(7), 1285-1310. <https://doi.org/10.1108/IJBM-05-2017-0104>
- Baumeister, R. F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of Consumer Research*, 28(4), 670-676. <https://doi.org/10.1086/338209>
- Christiany, F. V., Sudarto, S., & Sulistyandari, S. (2021). Financial behavior and financial well-being of college students: Effect of self-control, optimism, and deliberative thinking. *International Sustainable Competitiveness Advantage Proceeding* (pp. 373-392). <http://www.jp.feb.unsoed.ac.id/index.php/sca-1/article/viewFile/2805/1873>
- Ghozali, I. (2008). *Structural Equation Modeling: Alternative Method by Partial Least Square* (2 ed.). Semarang: Badan Penerbit Universitas Diponegoro.
- Hartono, J. (2012). *Business Research Methodology* (5 eds.). Yogyakarta: Badan Penerbit Fakultas Ekonomi Universitas Gadjah Mada.
- Hancock, A.M., Jorgensen, B.L. & Swanson, M.S. (2013). College students and credit card use: The role of parents, work experience, financial knowledge, and credit card attitudes. *Journal of Family and Economic Issues*, 34, 369-381. <https://doi.org/10.1007/s10834-012-9338-8>
- Herdjiono, I., & Damanik, L. A. (2016). The financial attitude, financial knowledge, and parental income impact financial management behavior. *Journal of Theory and Applied Management*, 9(3), 226-241. <https://doi.org/10.20473/jmtt.v9i3.3077>
- Islam, T., Wei, J., Sheikh, Z., Hameed, Z., & Azam, R. I. (2017). Determinants of compulsive buying behavior among young adults: The mediating role of materialism. *Journal of Adolescents*, 61, 117-130. <https://doi.org/10.1016/j.adolescence.2017.10.004>
- Joo, S.-H., Grable, J. E., & Bagwell, D. C. (2003). Credit card attitudes and behaviors of college students. *College Student Journal*, 37(3), 405-409. <https://link.gale.com/apps/doc/A108836906/AONE?u=anon~98cc48b&sid=googleScholar&xid=09088696>
- Kamel, A. M., & Sahid, S. (2021). Financial literacy and financial behavior of university students in Malaysia. *Turkish Online Journal of Qualitative Inquiry*, 12(9), 1208-1220. <https://www.tojqi.net/index.php/journal/article/view/5863>
- Komarudin, M. N., Nugraha, N., Hardjadi, D., & Pasha, R. A. (2020). The effect of financial literacy and self-control on the behavior in financial management (Survey on educators in the elementary school in all districts in Kuningan). *Jurnal Keuangan dan Bisnis*, 18(1), 159-178. <https://journal.ukmc.ac.id/index.php/jkb/article/view/51/51>

- Khawar, S., & Sarwar, A. (2021). Financial literacy and financial behavior with the mediating effect of family financial socialization in the financial institutions of Lahore, Pakistan. *Future Business Journal*, 7(1). <https://doi.org/10.1186/s43093-021-00064-x>
- Khoirunnisaa, J., & Johan, I. R. (2020). The effects of financial literacy and self-control on financial behavior among high school students in Bogor. *Journal of Consumer Sciences*, 5(2), 73-86. <https://doi.org/10.29244/jcs.5.2.73-86>
- Lusardi, A., & Mitchell, O. (2007). Financial literacy and retirement planning: New evidence from the Rand American life panel. *Michigan Retirement Research Center Working Paper 157*, 1-34 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1095869
- Mitra, N., Syahniar, S., & Alizamar, A. (2019). Consumptive behavior of students in shopping online and implications in guidance and counseling services in universities. *International Journal of Research in Counseling and Education*, 3(2), 67-75. <https://doi.org/10.24036/00132za0002>
- Pathirannahalage, S., & Abeyrathna, G. M. (2020). Factors affecting personal financial management behaviors of government employees in Sri Lanka. *International Journal of Scientific and Research Publications*, 10(5), 761–767. <https://doi.org/10.29322/IJSRP.10.05.2020.p10188>
- Perry, V. G., & Morris, M. D. (2005). Who is in control? The role of self-perception, knowledge, and income in explaining consumer financial behavior. *The Journal of Consumer Affairs*, 39(2), 299-313. <https://doi.org/10.1111/j.1745-6606.2005.00016.x>
- Puspita, G., & Isnalita, I. (2019). Financial literacy: Knowledge, self-confidence, and financial behavior of accounting students. *Owner: Riset & Jurnal Akuntansi*, 3(2), 117-128. <https://doi.org/10.33395/owner.v3i2.147>
- Rahayu, Ali, Aulia, & Hidayah (2022). The current digital financial literacy and financial behavior in the Indonesian millennial generation. *Journal of Accounting and Investment*, 23(1), 78-94. <https://doi.org/10.18196/jai.v23i1.13205>
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276-295. <https://doi.org/10.1111/j.1745-6606.2010.01169.x>
- Rey-Ares, L., Fernández-López, S., Castro-González, S., & Rodeiro-Pazosb, D. (2021). Does self-control constitute a driver of millennials' financial behaviors and attitudes? *Journal of Behavioral and Experimental Economics*, 93, 101702. <https://doi.org/10.1016/j.soccec.2021.101702>
- Roberts, J. A. (1998). Compulsive buying among college students: An investigation of its antecedents, consequences, and implications for public policy. *The Journal of Consumer Affairs*, 32(2), 295-319. <https://doi.org/10.1111/j.1745-6606.1998.tb00411.x>
- Rohmanto, F., & Susanti, A. (2021). Influence of financial literacy, hedonist lifestyle, and personal financial attitudes towards student financial behavior. *ECOBISMA (Jurnal Ekonomi, Bisnis, dan Manajemen)*, 8(1), 40-48. <https://jurnal.ulb.ac.id/index.php/ecobisma/article/view/2057>
- Samuelson, P., & Nordhaus, W. (2010). *Economics* (19 eds.). New York: McGraw-Hill.
- Sholihin, M., & Ratmono, D. (2013). *The analysis of SEM-PLS by Warp PLS 3.0*. Yogyakarta: Penerbit Andi.
- Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being? *Journal of Behavioral and Experimental Finance*, 14, 30-38. <http://dx.doi.org/10.1016/j.jbef.2017.04.002>
- Tangney, J.P., Baumeister, R.F., & Boone, A.L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72(2), 271-324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- Vitt, L. A., Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, J. K., Ward, J. (2000). *Personal finance and the rush to competence: Financial literacy education in the U.S.* Virginia: Institute for Socio-Financial Studies.
- Younas, W., Javed, T., Kalimuthu, K. R., Farooq, M., Khalil-ur-Rehman, V., & Raju, V. (2019). Impact of self-control, financial literacy, and financial behavior on financial well-being. *The Journal of Social Sciences Research*, 5(1), 211-218. <https://doi.org/10.32861/jssr.51.211.218>