



Financial Literacy, Attitude, Internal Control Locus, and Money-Associated Behavior of Undergraduate Students

Oktavianus Marbun, Bram Hadiano*, Ana Mariana

Management Department, Business Faculty, Maranatha Christian University, Bandung

Jl. Surya Sumantri No.65, Sukawarna, Kec. Sukajadi, Kota Bandung, Jawa Barat, Indonesia

Email: ¹oktavianusmarbun281099@gmail.com, ^{2,*}bram.hadiano@eco.maranatha.edu, ³ana.mariana@eco.maranatha.edu

Correspondence Author Email: bram.hadiano@eco.maranatha.edu

Submitted: 30/04/2023; Accepted: 28/05/2023; Published: 29/05/2023

Abstract—Financial literacy becomes the guideline for its users to perform financially well. As educated users, undergraduate business students are expected to behave well in managing their money. Furthermore, to test this tendency, this study employs the financial attitude and internal control locus as additional determinants. This research also takes 150 students in the management department of business faculty at Maranatha Christian University as a population. Considering some batches utilized, this study employs stratified random sampling to take the samples. Besides, this study uses a survey method to obtain their response related to demographic and academic features, covariance-based structural equation model, and the related statistic: the probability of critical ratio to analyze the data and examine the first, second, and third hypotheses. After testing them, this investigation concludes that the more financially literate the students are, the more they behave financially. With a better financial attitude and internal control locus, the students can manage their money well.

Keywords: Covariance-Based Structural Equation Model; Financial Attitude; Financial Literacy; Internal Control Locus; Money-Associated Behavior

1. INTRODUCTION

The 2022 national survey of financial literacy in Indonesia demonstrates this national literacy index achieved 49.68%, which increased from 38.03% in 2021 (Financial Service Authority, 2022). Based on the rule set by Chen and Volpe, cited by Lie et al. (2022), this literacy index is low despite a positive change because it is still below 60%. This situation means Indonesians do not yet understand the features of financial products and services. Furthermore, to increase the future literacy level in Indonesia, senior high school students receive related training through service to the community, delivered by higher education lecturers (Aravik & Tohir, 2022; Pranoto, Fauzi, Kustini, Maduningtias, & Yuangga, 2020; Putra, Silfiana, Khoiriyah, & Sacipto, 2020; Sitorus & Sadjiarto, 2022; Sumardi & Habibi, 2022; Zusryn, Rofi'i, & Gani, 2021).

Unlike senior high school students needing financial literacy training, undergraduate business students in higher education directly get the literacy courses based on the curriculum (Firdausi & Kasri, 2022). In the simple context, the substances of this literacy cover interest rates, interest compounding, inflation, and risk diversification (Klapper & Lusardi, 2020). Therefore, they are relevant to be the target of research on financial literacy and its related aspects (Adriani, 2021; Aydin & Akben Selcuk, 2019; Çoşkun & Dalziel, 2020; Kamel & Sahid, 2021; Khawar & Sarwar, 2021; Mudzingiri, Mwamba, & Keyser, 2018; Noh, 2022; Radianto, Kristama, & Salim, 2021; Setiana & Hadiano, 2022; Sukma, Hamidah, & Kurnianti, 2022; Syaliha, Sutieman, Pasolo, & Pattiasina, 2022; Tsuroyya & Nuryana, 2021; Waty, Triwahyuningtyas, & Warman, 2021; Zaki, Rosli, Yahya, & Halim, 2020). Besides, they also must become responsible managers for monthly pocket money from their parents (Anggari & Dewanti, 2021). Furthermore, Waty et al. (2021) explain that they have to commit to their principle from the lure of friends to spend money on unwanted goods and follow a hedonic lifestyle. In other words, according to Khoirunnissa and Johan (2020), they must have strong self-control in managing money.

In several studies, financial behavior becomes the consequence of financial literacy, and the related research successfully verifies that financial literacy positively affects this behavior (Bhakti, Gunadi, & Suarjana, 2023; Kamel & Sahid, 2021; Khawar & Sarwar, 2021; Mudzingiri et al., 2018; Mutlu & Özer, 2022; Pusparani & Krisnawati, 2019; Santoso & Sari, 2021; Syaliha et al., 2022; Zaki et al., 2020). Students with virtuous economic behavior can allocate money based on budget, save money in their accounts, and pay the bill on time (Aydin & Akben Selcuk, 2019). However, this evidence does not always occur. In their study, Reswari et al. (2018), Waty et al. (2021), Setiana and Hadiano (2022), and Meylandariska and Tasman (2022) verify that financial literacy does not become the determinant of money-associated behavior.

Preferably, this economic behavior should be influenced by financial attitude, as Yong et al. (2018), Aydin and Akben Selcuk (2019), Pusparani and Krisnawati (2019), Bapat (2020), Çoşkun & Dalziel (2020), Khoirunnissa and Johan (2020), Zaki et al. (2020), Santoso and Sari (2021), Adriani (2021), Radianto et al. (2021), Tsuroyya and Nuryana (2021), Kamel and Sahid (2021), Noh (2022), Meylandariska and Tasman (2022), Sukma et al. (2022), and Sheda (2023) prove. People with good financial attitudes will focus on planning and keeping to put money in a saving account (Rai, Dua, & Yadav, 2019). Unfortunately, these proofs do not always happen. For instance, Syaliha et al. (2022) demonstrate no association between financial attitude and behavior.

Ideally, this financial behavior should be affected by internal locus control. This situation is confirmed by Bapat (2020), Radianto et al. (2021), Santoso and Sari (2021), Mutlu & Özer (2022), Sukma et al. (2022), Syaliha et



al. (2022), Bhakti et al. (2023), and Sheda (2023). People with high internal control locus (ILC) depend on their hardworking to attain their life destination (Bapat, 2020). Unfortunately, this evidence does not always exist, as Adriani (2021) demonstrates: no association between ILC and money-related behavior.

These contradictory relationships motivate this research to reexamine three determinants of financial behavior: financial literacy, attitude, and internal control locus. Additionally, this study is based on the perception of the active undergraduate students in the management department of business faculty at Maranatha Christian University, Bandung. The use of these students is different from research utilizing graduate students (Santoso & Sari, 2021), employees working in financial institutions (Khawar & Sarwar, 2021), junior high school students (Pusparani & Krisnawati, 2019), senior high school students (Khoirunnisaa & Johan, 2020), post-graduate students in university (Santoso & Sari, 2021), entrepreneurs (Reswari et al., 2018; Sheda, 2023), young working adults (Yong et al., 2018), a combination among students and working professionals (Bapat, 2020), working females (Rai et al., 2019), individual investors (Mutlu & Özer, 2022), residents (Bhakti et al., 2023), and employees (Nugroho, Astuti, & Sari, 2023).

2. RESEARCH METHODS

2.1 Basic Research Framework

This study examines the effect of financial literacy, attitude, and internal control locus on money-associated behavior. Then, to achieve this intention, this study uses statistical tools to examine the hypotheses. The hypotheses intended are as follows.

H₁: Financial literacy positively affects money-associated behavior

H₂: Financial attitude positively affects money-associated behavior

H₃: Internal control locus positively affects money-associated behavior

Based on this information, this study can be categorized as quantitative, as Sugiyono (2019). Furthermore, Sugiyono (2019) explains that the model is needed to illustrate the cause-and-effect relationship. The first figure presents the associated model in shape, where three arrows symbolize causality. The rectangle is used to draw the observed variable: financial literacy. Meanwhile, the oval illustrates the unobserved variable: financial attitude, internal control locus, and money-associated behavior.

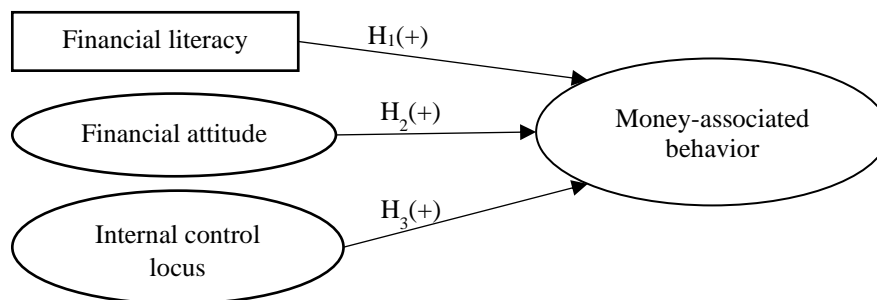


Figure 1. Research Model

2.2 Variable Measurement

The variables in this research consist of two types. The first is dependent: the money-associated behavior (MAB), and the second is independent: the financial literacy, attitude, and internal control locus. Additionally, three items in Aydin and Akben Selcuk (2019) measure money-associated behavior and financial attitude, respectively. Meanwhile, three indicators in Bapat (2020) quantify internal control locus. More precisely, these items are obtainable in the first table.

Table 1. The items to reflect financial behavior, attitude, and internal control locus

| Variable | Code | Items | Source |
|---------------------------|------|--------------------------------------------------------------------------------|-------------------------------|
| Money-associated behavior | MAB1 | I spend my money based on my budget | Aydin and Akben Selcuk (2019) |
| | MAB2 | I have already saved my money dynamically since the previous year. | |
| | MAB3 | I always pay my bills promptly. | |
| Financial attitude | FA1 | I like saving money to anticipate my uncertain future rather than spending it. | Aydin and Akben Selcuk (2019) |
| | FA2 | I always save the money left. | |
| | FA3 | I tend to prepare my future with my existing money. | |
| Internal control locus | ICL1 | I can resolve my numerous issues. | Bapat (2020) |
| | ICL2 | I can change the vital matters in my life. | |
| | ICL3 | I can control my future and desires. | |



Financial literacy is measured by the correct answer to five questions in Klapper and Luzardi (2020). One question exists for diversification, inflation, and numeracy problems, respectively. For compound interest, two questions are available. Moreover, the content for each question is in the second table, where the correct answer is in bold.

Table 2. The questions of financial literacy

| Topic | Code | Question | The choices |
|-------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diversification | FL1 | Which is the saver alternative if you have money? | a. Investing money in a single business b. Investing money in multiple businesses |
| Inflation | FL2 | If the price for the subsequent two years is double, what will it happen with your purchasing power if your salary in the same circumstance is double? | a. My purchasing power will be the same for the subsequent two years. b. My purchasing power will be less for the subsequent two years. c. My purchasing power will be more for the subsequent two years. |
| Numeracy | FL3 | If you borrow \$100 from the bank today, which payment will be cheaper: \$108 or \$100 with a 5% interest rate? | a. \$108 b. \$100 with a 5% interest rate |
| Compound interest | FL4 | If you place money in the bank for two years with a 15% yearly interest rate without withdrawal. Please, select one correct answer based on the time value of money concept. | a. The bank will add more money in the second year than in the first. b. The bank will add less money in the second year than in the first. c. The bank will add the same money in both years. |
| | FL5 | If you open the deposit account with \$100 as the initial amount and the bank sets a 10% yearly interest rate, how much will you get in this account if you do not take money after five years? | a. Bigger than \$150 b. Lower than \$150 c. The same as \$150 |

2.2 Population and samples

The population in this study is the dynamic undergraduate management students from batch 2016 to batch 2021 in the business faculty at Maranatha Christian University, Bandung. Based on information from the related department, their size for batches 2018, 2019, 2020, and 2021 is 20, 28, 51, 100, 147, and 151, respectively. The students in these batches are expected to take basic and advanced financial management courses in the third and fourth semesters. Hence, the total (TP) is 497 persons. Furthermore, to obtain a representative sample size (SS), this research applies the Slovin formula in the first equation with a 5% fault boundary (FB) cited from Firdaus (2021).

$$SS = \frac{TP}{1+TP.FB^2} \tag{1}$$

By mentioning the first equation, the sample size is $\frac{497}{1+(497 \times 5\%^2)} = 221.62 \approx 222$ students.

Because of this circumstance, this study considers them as the strata; therefore, stratified random sampling is used as the technique. After the allocation, as the third table exhibits, the sample size for 2016, 2017, 2018, 2019, 2020, and 2021 is 9, 12, 23, 45, 66, and 67, separately (see the third table).

Table 3. The sample size required for each batch

| Batch | Population size | Portion | Sample size |
|-------|-----------------|---------|-------------|
| 2016 | 20 | 4.02% | 8.93 ≈ 9 |
| 2017 | 28 | 5.63% | 12.51 ≈ 12 |
| 2018 | 51 | 10.26% | 22.78 ≈ 23 |
| 2019 | 100 | 20.12% | 44.67 ≈ 45 |
| 2020 | 147 | 29.58% | 65.66 ≈ 66 |
| 2021 | 151 | 30.38% | 67.45 ≈ 67 |
| Total | 497 | 100% | 222 |

2.3 Method to obtain the data

This study applies the survey to obtain the response and information from the dynamic students as samples. Through this survey, this research distributes the questionnaire based on the five-point Likert scale between one and five to express disagreement and agreement on items, as described by Sugiyono (2019).



2.4 Method to analyze the data

This study uses the variance-based structural equation model to analyze the data. This model is applied because of the latent variables, i.e., money-associated behavior (MAB), financial attitude (FA), and internal control locus (ICL), and observed variable: financial literacy (FL), as Hair et al. (2019) demonstrate. Additionally, this model is in the second equation.

$$MAB = \beta_1FL + \beta_2FA + \beta_3ICL + \zeta_1 \tag{2}$$

3. RESULTS AND DISCUSSION

3.1 The profiles of the students

This survey was conducted from February to April 2023, acquiring 150 responsive students as samples. Hence, the response rate is $150/222 \times 100\% = 67.57\%$. Moreover, they are grouped based on gender, age, and cumulative grade point average, and their total is displayed in the fourth table. This table is from the result of data tabulation based on Microsoft Excel. According to gender, female students are dominant (56.0%), and males are the rest (44%). Furthermore, the most extensive participating students are between 20 and 21 (57.33%). In the second and last positions, they are aged between 22 and 23 (36.00%) and from 24 to 25 (6.67%). Based on batches, the students are primarily from 2020 (34.67%), followed by 2021 (33.33%), 2018 (16%), 2019 (13.13%), 2016 (1.33%), and 2017 (1.33%). By mentioning the final cumulative grade point average, the students in the group between 3.51 and 4.00 is the biggest (51.33%). It is followed by the group between 3.01 and 3.5 (30%) in the second position, 2.51 and 3 (14%) in the third position. Finally, 2.00-2.50 (4.67%) is the group in the tiniest place.

Table 4. The profile of the undergraduate management students joining the survey

| Profile | Description | Total | Portion |
|-----------------------------------------|-------------|-------|---------|
| Gender | Male | 66 | 44.00% |
| | Female | 84 | 56.00% |
| Age | 20-21 | 86 | 57.33% |
| | 22-23 | 54 | 36.00% |
| | 24-25 | 10 | 6.67% |
| Batch | 2016 | 2 | 1.33% |
| | 2017 | 2 | 1.33% |
| | 2018 | 24 | 16.00% |
| | 2019 | 20 | 13.33% |
| | 2020 | 52 | 34.67% |
| | 2021 | 50 | 33.33% |
| The last cumulative grade point average | 2.00-2.50 | 7 | 4.67% |
| | 2.51-3.00 | 21 | 14.00% |
| | 3.01-3.50 | 45 | 30.00% |
| | 3.51-4.00 | 77 | 51.33% |

3.2 The correct answer of students to financial literacy questions

The fifth table, based on data tabulation results from Microsoft Excel, presents the proper response of the students when the questions were given. There is 97.33%, 88%, 86%, 82.67%, and 71.33% of 150 students who appropriately solve diversification, inflation, and numeracy problems, as well as two compound interest issues. The ability to solve these issues is due to their dominant grade point average between 3.01 and 4.00 (81.33%).

Table 5. The correct answer of students to financial literacy questions

| The topic of the question | Code | The students with the correct answers | |
|---------------------------|------|---------------------------------------|---------|
| | | Number | Portion |
| Diversification | FL1 | 146 | 97.33% |
| Inflation | FL2 | 132 | 88.00% |
| Numeracy | FL3 | 129 | 86.00% |
| Compound interest | FL4 | 124 | 82.67% |
| | FL5 | 107 | 71.33% |

3.3 Validity and reliability testing result

Because of the items to measure money-associated behavior in the first table, the response examination of the validity and reliability is essential. Furthermore, to determine a valid answer, this study uses the loading factor (LF) and average variance extracted (AVE), as Hair Jr. et al. (2019) describe. The validity is achieved if the LF and AVE are



higher than 0.5. Also, reliability testing is needed. This testing is reached if its composite and the Cronbach Alpha are above 0.7, as explained by Hair Jr. et al. (2019).

The sixth table, generated from the output of IBM SPSS AMOS 19, exhibits the validity testing result demonstrated by the loading factor of MAB1, MAB2, MAB3, FA1, FA2, FA3, ICL1, ICL2, and ICL3 above 0.5: 0.847, 0.679, 0.655, 0.627, 0.738, 0.895, 0.813, 0.811, and 0.911. Equally, the AVE of MAB, FA, and ICL is higher than 0.5: 0.536, 0.580, and 0.716. Therefore, an accurate response occurs. Besides, this table reveals the achievement reliability testing result, shown by its composite greater than 0.7: 0.774 for MAB, 0.802 for FA, and 0.883 for ICL, and the Cronbach Alpha bigger than 0.7: 0.761, 0.791, and 0.850 for MAB, FA, and ICL, respectively.

Table 6. Validity and reliability testing results

| Variable | Indicator | Loading factor | AVE | Composite reliability | Cronbach Alpha |
|---------------------------|-----------|----------------|-------|-----------------------|----------------|
| Money-associated behavior | MAB1 | 0.847 | 0.536 | 0.774 | 0.761 |
| | MAB2 | 0.679 | | | |
| | MAB3 | 0.655 | | | |
| Financial attitude | FA1 | 0.627 | 0.580 | 0.802 | 0.791 |
| | FA2 | 0.738 | | | |
| | FA3 | 0.895 | | | |
| Internal control locus | ICL1 | 0.813 | 0.716 | 0.883 | 0.850 |
| | ICL2 | 0.811 | | | |
| | ICL3 | 0.911 | | | |

Besides the loading factor and AVE as convergent validity measurements, Hair Jr. et al. (2019) describe another validity: discriminant. This validity differentiates one construct from another (Hair Jr. et al., 2019). This validity is attained if the square root of AVE exceeds the correlation between the other two constructs (Baharum et al., 2023). The seventh table, generated from the IBM SPSS AMOS 19 output, provides this information. In this table, the square root of AVE of MAB, FA, and ICL is 0.732, 0.761, and 0.850 (see the bold ones). Meanwhile, the correlation between MAB and FA is 0.440, MAB and ICL is 0.293, and FA and ICL is 0.338. Discriminant validity is achieved because the square root values are higher than correlations.

Table 7. AVE and correlation between constructs

| Construct | MAB | FA | ICL |
|-----------|--------------|--------------|--------------|
| MAB | 0.732 | | |
| FA | 0.440 | 0.761 | |
| ICL | 0.293 | 0.338 | 0.846 |

3.4 The goodness of fit testing result

The eighth table, generated from the output of IBM SPSS AMOS 19, demonstrates CMIN/DF, the goodness of fit index (GFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). For CMIN/DF, this value is lower than 2: 1.824; therefore, the empirical data are suitable for the model, as Hair Jr. et al. (2019) explained. Moreover, GFI and CFI exceed 0.9: 0.930 and 0.957, as required by Hair Jr. et al. (2019) and Baharum et al. (2023). Hence, the model is empirically supported by data. Based on RMSEA, this value is less than 0.8; thus, the model fits the data, as obligated by Hair Jr. et al. (2019).

Table 8. The goodness of fit testing result

| The goodness-of-fit measurement | Result | Necessary situation | Interpretation |
|---------------------------------|--------|-----------------------------------------|-----------------------------------------|
| CMIN/DF | 1.824 | Lower than 2 (Hair Jr. et al., 2019) | The data empirically support the model. |
| GFI | 0.930 | Upper than 0.90 (Hair Jr. et al., 2019) | |
| CFI | 0.957 | Upper than 0.90 (Baharum et al., 2023) | |
| RMSEA | 0.074 | Lower than 0.08 (Hair Jr. et al., 2019) | |

3.5 The estimation of the research model

The ninth table, generated from the output of IBM SPSS AMOS 19, displays the estimation result of the covariance-based structural equation model with the probability of critical ratio for the effect of financial literacy (FL) on money-associated behavior (MAB) of 0.004, financial attitude (FA) on MAB of 0.000, and internal control locus (ICL) on MAB of 0.032. Hypotheses one, two, and three are acceptable because these values are under a 5% significance level with a positive unstandardized coefficient of 0.194, 0.232, and 0.152.

Table 9. The estimation result of the structural equation model based on covariance

| Causal relationship | Unstandardized Coefficient | Standard error | Critical ratio | Probability |
|---------------------|----------------------------|----------------|----------------|-------------|
| FL → MAB | 0.194 | 0.067 | 20.905 | 0.004 |



| Causal relationship | Unstandardized Coefficient | Standard error | Critical ratio | Probability |
|---------------------|----------------------------|----------------|----------------|-------------|
| FA → MAB | 0.232 | 0.069 | 30.386 | *** |
| ICL → MAB | 0.152 | 0.071 | 20.146 | 0.032 |

3.6 Discussion

By accepting the first hypothesis, financial literacy positively influences money-associated behavior. It means the more well-educated the individuals, the more influential their ability to organize money. This situation happens because the students are equipped with financial management courses. Although their contents are more towards how the company manages the fund, the philosophies to answer the financial literacy problems are given in time value of money substance. Hence, with this positive tendency, this study supports Mudzingiri et al. (2018), with 191 university students in South Africa as their samples, Pusparani and Krisnawati (2019), with 400 junior high school students in Bandung as their participants, and Zaki et al. (2020), with 152 Malaysian undergraduate students as their respondents. Likewise, this study aligns with Kamel and Sahid (2021), using 399 university students in Malaysia as the sample, and Khawar and Sarwar (2021), utilizing 330 employees working at banks in Pakistan as their analysis unit. This study also confirms Santoso and Sari (2021), Mutlu and Özer (2022), and Syaliha et al. (2022), documenting a positive propensity of this literacy on financial behavior based on the perception of 89 post-graduate students in Semarang, 1,347 individual investors in Turkey, and 50 accounting students at Yapis University in Indonesia, one to one. Finally, Bhakti et al. (2023), utilizing 100 residents in Denpasar, confirm this positive inclination too.

Receiving the second hypothesis means financial attitude positively influences money-associated behavior: the better the financial attitude, the more influential the ability to organize money. This study shows that financial attitude is reflected by the saving inclination of money to anticipate and prepare for the future. If money from the parents is still available, the students do not spend it all. Therefore, having a positive relationship between financial attitude and behavior in this study confirms Yong et al. (2018) based on the viewpoint of 1,915 working adults in Malaysia, Aydin and Akben Selcuk (2019) investigating 1,443 students from 14 campuses in Turkey, and Pusparani and Krisnawati (2019), surveying 400 junior high school students in Bandung, Indonesia. Besides, this study supports Bapat (2020), who researched 584 young working adults aged 18 to 35 in India; Çoşkun and Dalziel (2020) after researching 396 university students in Turkey, and Khoirunnissa and Johan (2020) once studying 113 Indonesian senior high school students in Bogor, taking a concentration of natural and social sciences. Additionally, this study aligns with Zaki et al. (2020), Santoso and Sari (2021), and Adriani (2021), Radianto et al. (2021) after surveying the perception of 152 Malaysian undergraduate students, 89 post-graduate management students at Semarang University, 168 students majoring international business management at Ciputra Universitas in Surabaya, and 159 accounting students in Surabaya, singly. This positive tendency of financial attitudes on financial behavior in this study is supported by Tsuroyya and Nuryana (2021), Kamel and Sahid (2021), Meylandariska and Tasman (2022), Noh (2022), Sukma et al. (2022) based on the perspective of 186 students in the economic education department at Semarang State University, and 339 undergraduate students at public universities in Malaysia, 190 students becoming Generation Z in Padang State University, Indonesia, 193 undergraduate and graduate students at a Midwestern university in the United States, 300 students in vocational and undergraduate departments in Jakarta State University, respectively. Finally, Sheda (2023), employing 80 small and medium entrepreneurs utilizing online platforms in Surakarta, and Nugroho et al. (2023), using 100 employees at Hanchen Industrial Indonesia, Inc., Semarang, Indonesia, follow this positive propensity too.

Accepting the third hypothesis indicates a positive effect of the internal control locus on money-associated behavior: the higher the internal control locus (ILC), the more influential the ability to organize money. As educated and rational people, students with high ILC believe everything happens because of their effort and hard work, not depending on fortune factors. Hence, having a positive association between ILC and financial behavior in this study affirms Bapat (2020) using the viewpoint of 584 young working adults from 18 to 35 years old in India, Radianto et al. (2021) employing the perception of 159 accounting students from Surabaya. Equally, this research evidence confirms Santoso and Sari (2021) and Mutlu & Özer (2022) based on the perception of 89 post-graduate management students at Semarang University and 1,347 individual investors in Turkey, singly. Also, this study aligns with Sukma et al. (2022) and Syaliha et al. (2022), checking the responses of 300 students in vocational and undergraduate departments at Jakarta State University and 50 accounting students at Yapis University in Indonesia. Lastly, Bhakti et al. (2023), utilizing 100 residents in Denpasar, and Sheda (2023), with 80 actors of small and medium companies as the virtual platform users in Surakarta, track this positive tendency too.

4. CONCLUSION

Ideally, every student in the management department in higher education institutions should have responsible financial behavior. Moreover, to investigate its reasons, this research appears by utilizing financial literacy, economic attitude, and internal control locus as the determinants and undergraduate students in the same department at Maranatha Christian University as the samples. After surveying their perspective from and statistically examining one hundred and fifty responses, this study concludes that financial behavior is positively affected by this literacy and attitude and internal control locus. Despite showing a meaningful relationship as predicted in three hypotheses, this study still has



limitations: the scope and the number of variables. This circumstance becomes an opportunity for the subsequent scholars to improve. Related to the first boundary, the scholars can combine undergraduate students in management departments from private and public campuses in one city, for example, Bandung. After that, they are expected to use the campus type to differentiate financial behavior and examine it as moderating variable. Additionally, they can add several big cities in Indonesia as locations to get the samples. Regarding the second border, the succeeding researchers can add the other money behavior determinants, for example, economic confidence, teaching from parents, socialization, risk tolerance, mental accounting, lifestyle, gender, external locus control, and self-esteem.

ACKNOWLEDGMENT

We thank Maranatha Christian University for supporting funds for the article publishing fee.

REFERENCES

- Adriani, J. (2021). Factors affecting financial behaviors: A study of the students with venture creation. *International Journal of Review Management Business and Entrepreneurship*, 1(2), 191–204. <https://doi.org/10.37715/rmbe.v1i2.2427>
- Anggari, A. N., & Dewanti, P. W. (2021). The effect of external and internal locus of control, financial attitude, pocket money, and lifestyle on the use of e-money. *Nominal: Barometer Riset Akuntansi & Manajemen*, 10(2), 253–270. <https://doi.org/10.21831/nominal.v10i2.41429>
- Aravik, H., & Tohir, A. (2022). Improving financial literacy comprehension of students of the vocational high school of Muhammadiyah 1 in Palembang. *Aksi Kepada Masyarakat*, 3(1), 29–36. <https://doi.org/10.36908/akm.v3i1.429>
- Aydin, A. E., & Akben Selcuk, E. (2019). An investigation of financial literacy, money ethics, and time preferences among college students: A structural equation model. *International Journal of Bank Marketing*, 37(3), 880–900. <https://doi.org/10.1108/IJBM-05-2018-0120>
- Baharum, H., Ismail, A., Awang, Z., McKenna, L., Ibrahim, R., Mohamed, Z., & Hassan, N. H. (2023). Validating an instrument for measuring newly graduated nurses' adaptation. *International Journal of Environmental Research and Public Health*, 20, 2860. <https://doi.org/10.3390/ijerph20042860>
- Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: The moderating role of financial risk tolerance. *International Journal of Bank Marketing*, 38(5), 1177–1194. <https://doi.org/10.1108/IJBM-10-2019-0356>
- Bhakti, I. G. K. K. W., Gunadi, I. G. N. B., & Suarjana, I. W. (2023). The impact of financial literacy, self-efficacy, and locus of control on financial management behavior of the society in Denpasar. *Values*, 4(1), 131–138. Retrieved from <https://e-journal.unmas.ac.id/index.php/value/article/view/6200>
- Çoşkun, A., & Dalziel, N. (2020). Mediation effect of financial attitude on financial knowledge and financial behavior: The case of university students. *International Journal of Research in Business and Social Science*, 9(2), 1–8. <https://doi.org/10.20525/ijrbs.v9i2.647>
- Financial Service Authority. (2022). Press conference: Financial literacy and inclusion indexes of society elevate. Retrieved from <https://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Documents/Pages/Indeks-Literasi-dan-Inklusi-Kuangan-Masyarakat-Meningkat/SP-INDEKS LITERASI DAN INKLUSI KEUANGAN MASYARAKAT MENINGKAT.pdf>
- Firdaus, F. (2021). *Quantitative Research Methodology*. Bengkalis: CV. DOTPLUS Publisher.
- Firdausi, M. R. A., & Kasri, R. A. (2022). Islamic financial literacy amongst Muslim students in Indonesia: A multidimensional approach. *Al-Muzara'Ah*, 10(Special Issue), 77–94. <https://doi.org/10.29244/jam.specialissue2022.77-94>
- Hair Jr., J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th ed.). Andover, the United Kingdom: Cengage Learning, EMEA.
- 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. Retrieved from <https://www.tojqi.net/index.php/journal/article/view/5863>
- 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*, 7.27, 1–11. <https://doi.org/10.1186/s43093-021-00064-x>
- Khoirunnisaa, J., & Johan, I. R. (2020). The effects of financial literacy and self-control towards 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>
- Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, 49(3), 589–614. <https://doi.org/10.1111/fima.12283>
- Lie, S., Astuti, D., & Malelak, M. I. (2022). The effect of financial literacy and demographics on the saving behavior of the millennial generation. *International Journal of Financial and Investment Studies*, 3(2), 110–118. <https://doi.org/10.9744/ijfis.3.2.110-118>
- Meylandariska, M., & Tasman, A. (2022). The internal locus of control and financial management behavior. *Operation Management and Information System Studies*, 2(4), 275–284. Retrieved from <https://jkmosi.ppp.unp.ac.id/index.php/omiss/article/view/86>
- Mudzingiri, C., Mwamba, J. W. M., & Keyser, J. N. (2018). Financial behavior, confidence, risk preferences and financial literacy of university students. *Cogent Economics and Finance*, 6(1), 1512366. <https://doi.org/10.1080/23322039.2018.1512366>
- Mutlu, Ü., & Özer, G. (2022). The moderator effect of financial literacy on the relationship between locus of control and financial behavior. *Kybernetes*, 51(3), 1114–1126. <https://doi.org/10.1108/K-01-2021-0062>
- Noh, M. (2022). Effect of parental financial teaching on college students' financial attitude and behavior: The mediating role of self-esteem. *Journal of Business Research*, 143, 298–304. <https://doi.org/10.1016/j.jbusres.2022.01.054>
- Nugroho, M., Astuti, F. Y., & Sari, N. (2023). The role of financial literacy, locus of control, and financial self-efficacy on financial management behavior. *Journal Economic Insights*, 2(1), 169–181. Retrieved from



- <https://jei.uniss.ac.id/index.php/v1n1/article/view/59>
- Pranoto, P., Fauzi, R. D., Kustini, E., Maduningtias, L., & Yuangga, K. D. (2020). Financial literacy for the vocational high school students of Sasmita Jaya. *BAKTIMAS: Jurnal Pengabdian Pada Masyarakat*, 2(2), 119–122. <https://doi.org/10.32672/btm.v2i2.2137>
- Pusparani, A., & Krisnawati, A. (2019). Analysis of the effect of financial literacy and financial attitude on the financial behavior of junior high school students in Bandung. *Jurnal Mitra Manajemen*, 3(1), 72–83. <https://doi.org/10.52160/ejmm.v3i1.181>
- Putra, L., Silfiana, I., Khoiriyah, A., & Sacipto, R. (2020). The financial literacy application in managing the money of students. *Jurnal Karya Abdi Masyarakat*, 4(1), 132–135. <https://doi.org/10.22437/jkam.v4i1.9830>
- Radianto, W. E. D., Kristama, B. Y., & Salim, I. R. (2021). Exploring the relationship between locus of control and financial behavior of accounting students from the social construction theory approach. *Academic Journal of Interdisciplinary Studies*, 10(2), 118–128. <https://doi.org/10.36941/ajis-2021-0043>
- Rai, K., Dua, S., & Yadav, M. (2019). Association of financial attitude, financial behavior, and financial knowledge towards financial literacy: A structural equation modeling approach. *FIIB Business Review*, 8(1), 51–60. <https://doi.org/10.1177/2319714519826651>
- Reswari, A. D., Sudarto, S., & Widiastuti, E. (2018). The influence of financial literacy towards financial behavior. *Journal of Research in Management*, 1(2), 11–17. Retrieved from <https://www.researchgate.net/publication/329361092>
- Santoso, A., & Sari, E. P. (2021). The role of financial literacy as one of the influences on financial behavior. *Jurnal Manajemen*, XXV(3), 415–430. <https://doi.org/10.24912/jm.v25i3.758>
- Setiana, S., & Hadianto, B. (2022). Financial knowledge, internal control locus, and personal money-related behavior: A survey on undergraduate accounting students. *Integrated Journal of Business and Economics*, 6(2), 172–184. <https://doi.org/10.33019/ijbe.v6i2.360>
- Sheda, G. A. (2023). The influence of financial knowledge, financial attitude, and internal locus of control on the financial management behavior of the micro, small, and medium businesspersons in Surakarta. *Jurnal Maneksi*, 12(1), 204–211. <https://doi.org/10.31959/jm.v12i1.1323>
- Sitorus, D. S., & Sadjarto, A. (2022). SIKU interactive media: The development of learning media to improve student financial literacy. *Jurnal Kependidikan*, 8(2), 386–396. <https://doi.org/10.33394/jk.v8i2.4770>
- Sugiyono, S. (2019). *The Quantitative, Qualitative, and R&D-based Research Methods*. Bandung: Alfabeta.
- Sukma, A. P., Hamidah, H., & Kurnianti, D. (2022). The effect of financial attitude, financial knowledge, and income on financial management behavior with the locus of control as an intervening variable. *Jurnal Bisnis, Manajemen, & Keuangan*, 3(2), 1–12. Retrieved from <http://pub.unj.ac.id/index.php/jbmk/article/view/679>
- Sumardi, S., & Habibi, P. (2022). Pelatihan Literasi Keuangan untuk Gen Z di SMK. *El-Mujtama: Jurnal Pengabdian Masyarakat*, 3(1), 83–92. <https://doi.org/10.47467/elmujtama.v3i1.2253>
- Syaliha, A., Sutieman, E., Pasolo, M. R., & Pattiasina, V. (2022). The effect of financial literacy, lifestyle, financial attitude, and locus of control on financial management behavior. *Public Policy*, 3(1), 52–71. <https://doi.org/10.51135/publicpolicy.v3.i1.p52-71>
- Tsuroyya, K., & Nuryana, I. (2021). The influence of attitudes, internal locus, and financial socialization agents on financial management behavior. *Economic Education Analysis Journal*, 10(1), 188–201. <https://doi.org/10.15294/eeaj.v10i1.44670>
- Waty, N. Q., Triwahyuningtyas, N., & Warman, E. (2021). Financial behavioral analysis of the students during the Covid-19 pandemic. *KORELASI - Prosiding Konferensi Riset Nasional Ekonomi, Manajemen, & Akuntansi*, 2(1), 477–495. Retrieved from <https://conference.upnvj.ac.id/index.php/korelasi/article/view/1109>
- Yong, C.-C., Yew, S.-Y., & Wee, C.-K. (2018). Financial knowledge, attitude and behavior of young working adults in Malaysia. *Institutions and Economics*, 10(4), 21–48. Retrieved from <https://ijie.um.edu.my/index.php/ijie/article/view/13444/8426>
- Zaki, U. R. A., Rosli, M. H., Yahya, N. F., & Halim, H. (2020). The relationship of financial literacy and financial attitude towards financial behavior: An empirical finding. *International Journal of Business and Economy*, 2(4), 13–24. Retrieved from <https://myjms.mohe.gov.my/index.php/ijbec/article/view/11403>
- Zusryn, A. S., Rofi'i, M., & Gani, A. N. (2021). Islamic financial literacy program in Generation Z Islamic senior high school students. *Abdimas: Jurnal Pengabdian Masyarakat Universitas Merdeka Malang*, 6(4), 541–551. <https://doi.org/10.26905/abdimas.v6i4.5365>