Chapter 9
Financial Literacy and Financial Behavior: An Evidence of Linkage in Albanian Context

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Abstract This paper is an effort to undertake and analyze a survey of not only a detailed financial literacy but also to see a correlation between financial knowledge and the financial behavior among individuals (who represent households) considering socioeconomic factors. A quantitative approach was adopted for this study, utilizing questionnaire survey as the main research instrument, and factor analysis, analysis of variances, and correlative techniques are efficiently used. A positive significant correlation between financial literacy and financial behavior is expected. Moreover, less educated individuals and lower-income ones are expected to have lower financial literacy and lower behavior performance

Keywords Financial literacy • Financial behavior • Financial education

JEL Classification D14, G02, H3, I22

9.1 Introduction

Recently, all over the world, the developed and developing countries and economies have become increasingly concerned about the level of financial literacy of their citizens. This is due to some socioeconomic phenomenon such as shrinking public and private support systems, shifting demographic profiles including the aging of the population, and wide-ranging developments in the financial marketplace.

People are more and more challenged by the economic and financial developments and are conscious that there is a lack of financial literacy especially focused to the factors contributing to ill-informed financial decisions and that these decisions could, in turn, have tremendous negative spillovers (Gerardi et al. 2010). As a

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result, financial literacy is now globally acknowledged as an important element of economic and financial stability and development; this is reflected in the recent G20 endorsement of the OECD/INFE High-level Principles on National Strategies for Financial Education.

There has been a widespread transfer of risk from both governments and employers to individuals. This is why financial literacy is often considered and used interchangeably as financial education. There is a continuous increase of the number of financial decisions that individuals have to make due to rapid and serious changes in the market and the economy. For instance, longer life expectancy means individuals need to ensure that they accumulate savings to cover much longer periods of retirement. People also need to assume more responsibility for funding personal or family healthcare needs. Moreover, increasing education costs make it important for parents to plan and invest adequately for their children's education.

Competition and innovation in the market would be encouraged by financially literate consumers, who can make more informed decisions and demand higher quality services. They are also less likely to react to market conditions in unpredictable ways, less likely to make unfounded complaints, and more likely to take appropriate steps to manage the risks transferred to them. All of these factors will lead to a more efficient financial services sector and potentially less costly financial regulatory and supervisory requirements and above all less financial crisis all over the world. All these individual actions will affect the governmental behavior resulting in more helpful financial decisions on reducing government aid and more effective taxation policies.

Individuals with higher financial literacy are better able to manage their money, referring to their success in stock market, good performance in portfolio investment, and their choice of mutual funds with lower fees (Hastings and Tejeda-Ashton 2008; Hilgert et al. 2003; Stango and Zinman 2009; Yoong 2011), opting for less costly mortgages and avoiding high interest payments and additional fees (Gerardi et al. 2010; Moore 2003). Lusardi and Mitchell (2011) conclude that those who have greater financial knowledge are more likely to accumulate higher amounts of wealth as well. These results have convinced policy makers all over the world that increased efforts in advancing financial education will increase household saving and participation in financial market, improve well-being, and reduce poverty. Increasing financial literacy and capability promotes better financial decision-making, thus enabling better planning and management of life events such as education, health, real estate, and retirement plans.

Considering the view in a macroeconomic perspective, we can say that individual financial behavior (focusing on savings and investment) benefits the entire nation. Individual financial behavior has a positive impact on the economy as a whole because funds financed for financial assets are then channeled through financial intermediaries to fund investments by business. As a result, investments of the business will ultimately benefit the nation through higher productivity and economic growth. Furthermore, savings and investments can also hedge countries against economic downturns and financial crisis as well. Thus, financially literate individuals

can make effective use of financial products and services and will not get cheated by salespeople selling financial products not suited for them. Financial literacy aids in improving the quality of financial services and contributes to economic growth and development of a country.

Through this paper an attempt has been made to know whether financial literacy affects the awareness and financial behavior (focused on savings and investments) of individuals in Albanian context.

9.2 Literature Review

Financial literacy is described as the understanding and knowledge of basic financial concepts and the ability to use them to plan and manage their financial decisions (Hogarth 2002). In the literature financial literacy was defined as "the ability to make informed judgments and to take effective decisions regarding the use and management of money," while Roy Morgan Research (2003) defined the terms as "being knowledgeable and assured in the areas of saving and spending."

The most used explicit definitions found for the concept of financial literacy include: "ability to read, analyze, manage and communicate about the personal financial conditions that affect material well-being" (Chen and Volpe 1998; Vitt et al. 2000; Cude et al. 2006; Huston 2010); "ability to manage the situation of cash and payments, knowledge about opening a saving account and obtaining a credit, basic understanding of health and life insurance, ability to compare offers and plan for future financial needs" (Emmons 2005); "basic knowledge necessary for people to survive in the modern society" (Kim et al. 2001); "capability to understand key financial concepts necessary to function in the normal American society" (Bowen 2002); "ability to make informed judgments and effectively take decisions concerning money" (ANZ 2005); "measure of the degree to which a person understands key financial concepts and has the necessary ability and confidence to manage own finances through short term decisions and long term planning, taking into consideration the economic events and changing conditions" (Remund 2010); and "ability to use knowledge and manage financial resources for a good financial well-being throughout the whole life" (Jump Start Coalition for Personal Financial Literacy 2009, cited by Huston 2010).

Going through all these definitions, we can see that the concept of financial literacy comprises several aspects: financial knowledge (ANZ 2005; Hung et al. 2009; Huston 2010; Remund 2010; OECD 2015), ability to communicate about different financial concepts (Remund 2010), ability to use different financial concepts and instruments (Hung et al. 2009; Huston 2010; Remund 2010), people's confidence in financial operations performed (Huston 2010; Remund 2010), financial operations experience (Orton 2007; OECD 2015), ability to take adequate financial decisions (Remund 2010; OECD 2015), and attitude toward the use of financial instruments (Orton 2007).

Also, there are cases where the terms financial literacy, knowledge, and education may be used interchangeably (Huston 2010). The definition used by Remund (2010) match the ideas of being financially literate of this research. Both definitions include not only understanding financial concepts but utilizing that knowledge to make sound financial decisions.

Various types of surveys have been conducted to measure the degree and spread of financial literacy. People with a low level of education, females, African-Americans, and Hispanics, demonstrate low levels of financial literacy, which subsequently affect financial decision-making (Lusardi and Mitchell (2007). Due to lack of knowledge in basic financial concepts, these groups of respondents fail to plan properly for the retirement period, have less participation in the stock market, and have poor borrowing behavior (Lusardi and Mitchell 2007).

A popular survey on financial literacy is the Jump Start Coalition in the USA, which measures individual personal capability among the high school students.

In the UK, a study conducted on financial literacy for Nat West Group Charitable Trust focused on people renting government-owned houses, young generation, single parents, and students. Questions of the survey asked about money management, saving and buying attitudes, and their confidence in facing with money issues. Brown and Graf (2013) conducted a survey to find whether households in Switzerland are equipped with the necessary financial knowledge to make well-informed investment and borrowing decisions. They found that household finance in Switzerland is characterized by an increased individual responsibility for retirement planning, increased exposure of retail investors to complex assets, exposure of mortgage borrowers to interest rate and house price risk, as well as rising levels of consumer debt.

Chen and Volpe (1998) examined financial literacy among more than 900 students in 14 American universities. By linking the scores to individuals' socioeconomic and demographic attributes, results showed that young females with non-business majors and little work experience have very low degrees of financial literacy. Similar to confidence, a person's perceived financial literacy may affect their financial behaviors (Allgood and Walstad 2013). A study by Allgood and Walstad (2013) shows how perceived and actual financial literacy affects various credit card behaviors at different ages. In general, results showed that both perceived and actual financial literacy were related to positive credit card behaviors. Another study finds that women have lower financial literacy scores and are less likely to make household decisions compared to men (Fonseca et al. 2009). Lusardi and Mitchell (2007) find that in adults 55 and older, financial literacy is a significant related to retirement planning. Bernheim and Garrett (2003) estimate how workplace financial education affects people's saving rates.

In 2008, OECD created the International Network on Financial Education, INFE, as an organization which would help the coordination among countries to measure and develop the financial education through countries. It already established a OECD/INFE toolkit for measuring financial literacy and financial inclusion, welcomed by G20 leaders in September 2013. The toolkit was piloted in 2010 during the first OECD international financial literacy and financial inclusion

measurement exercise. Between 2011 and 2014, it was used in over 30 additional countries. Each of the questions has been chosen to provide valuable information about a specific aspect of financial literacy or financial inclusion. The responses to various core questions can also be combined to produce financial literacy scores and a financial inclusion score using the methodology devised by the OECD/INFE. In this respective, an initiative has been undertaken to promote financial literacy in Albania (Ceca et al. 2011). This paper is an effort to undertake and analyze a survey of not only a detailed financial literacy but also to see a correlation between financial knowledge and the financial behavior among individuals (who represent households) considering socioeconomic factors.

9.3 Methodology

This study is conducted with the premise that financial behavior is associated with financial literacy and both financial behavior and financial literacy are influenced by individual's education and income levels. Figure 9.1 diagrammatically explains these relationships.

Hilgert et al. (2003) noted that there is a significant correlation between financial literacy and behavior whereby those who are more financially literate are more likely to engage in recommended financial practices such as paying bills on time and having an emergency fund. They maintain that the direction of the causality between financial literacy and financial behavior is unclear because causality may be reversed in the sense that people may gain financial knowledge as they save and accumulate wealth. Hence, the following hypothesis is developed:

H_1 There is a significant correlation between financial literacy and financial behavior.

The current study therefore hypothesized that individuals who are more educated are more exposed to personal finance matters and are more resourceful. We all expect that more educated people exhibit better financial behavior and financial

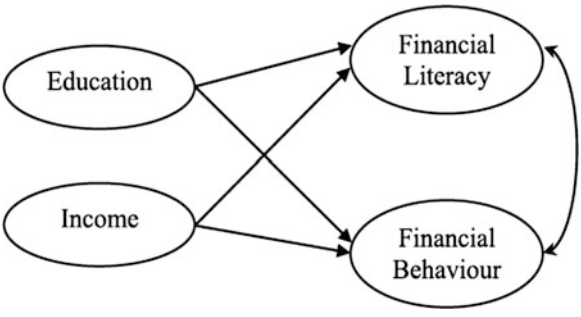

Fig. 9.1 Theoretical framework. Source: Hilgert et al. 2003

literacy. So the second premise of the study holds that individuals with higher economic income may exhibit higher financial literacy and better financial behaviors. Thus, the following hypotheses are constructed:

H_2 Education has a statistically significant impact on financial literacy and financial behavior.

H_3 Income has a statistically significant impact on financial literacy and financial behavior.

The study is carried out through a survey and a research questionnaire is specifically developed as the main instrument for this study. The questionnaire was made up of the 40 core questions and elicits data on respondents' financial literacy, financial behaviors, and demographics. Financial literacy items test respondents' knowledge on various financial matters including investments, credit card usage, interest rates, insurance, and personal taxation. Financial behaviors items measure respondents' decisions and behaviors related to their personal finance matters such as savings, financial products, payments and other expenditures, loan repayments, and budgeting.

The survey targeted households, and it covered 500 individuals, aged 18 and over, distributed to five main cities of Albania: Tirana, Elbasan, Durrës (center of Albania), Vlorë (South), and Shkodër (North) whose allocation was proportional to the number of residents in the respective districts. All those salaried individuals of these cities (urban area) whether in government or nongovernment job and those who fall under income tax bracket were considered as the population for this study. Primary data from the respondents was collected by using a non-disguised structured questionnaire. The questionnaire was prepared with utmost care incorporating all necessary information by using close-ended questions, attitudinal rating questions, as well as knowledge testing questions. Multistage sampling has been adopted for collection of the data. A random sample has been applied. From each city, the required number of salaried individuals was selected based on purposive sampling by using some criteria like place of work, occupational status, and the attitude of the respondents to cooperate for the study, so as to get the representative sample of the population. Six hundred questionnaires were distributed, out of which 550 questionnaires were received back from the respondents. After analyzing the questionnaires, few questionnaires were found incomplete, and finally a total of 500 questionnaires were used for the purpose of this study.

In order to measure the level of financial literacy of the respondents, a mixture of OECD approach and Zauwiyah et al. (2013) has been used in this study. This kind of mixture approach is considered as more comprehensive, attempting to measure the level of financial literacy.

Socio-demographic data is gathered through multiple choice questions of the questionnaire. The answer is a categorical data, for gender, age, marital status, education level, occupation, and monthly income. The respondents had to put him/her in one of the category (group) of the respective closed question.

Financial literacy gauges respondents' knowledge on various personal finance matters. There were 18 questions on this chapter, and the respondents were required to indicate whether the statement given was correct (coded as 1) or incorrect (coded as 0). Respondents were also given an "uncertain" choice in order to avoid respondents from guessing the answers (this was considered as a missing value). In order to determine respondents' financial literacy, their correct responses were added to become a total score. The higher the total score indicates a higher literacy level. Responses therefore range between 0, where all responses are incorrect, to 18, where all responses are correct.

Financial behaviors were tested through ten statements introduced to the respondents. The statements were focused on good spending and saving habits such as monthly savings, maintaining emergency funds, and monitoring financial situation. Financial behavior was measured on 5-point Likert scale. Respondents were required to state the level of their agreement with each statement, ranging from "1," strongly disagree, to "5," strongly agree, and thus their maximum possible score is 5 each. SPSS 21.0 is used for analyzing the data and testing the hypothesis, and a correlation analysis and analysis of variance techniques are used to test the hypothesis and to provide descriptive statistics.

9.4 Data and Results

Referring to the *descriptive results* of the data of questionnaire, we can see that within 500 respondents, 57.4 % are males, and 28.9 % are within 40–49 years old. The majority of the respondents have, as the highest diploma, the high school diploma (51.7 %), followed by a bachelor's degree (23.3 %). Respondents are from various occupational backgrounds, ranging from self-employed (31.7 %), professionals (30.8 %), and non-self-employed (22.6 %) to nonexecutives (17.1 %). A majority of the respondents are from the lower-income bracket, i.e., below 200€ (45.2 %). The demographic and employment distribution of respondents is presented in Table 9.1.

The response per statement, by which *financial literacy* is evaluated, is shown in Table 9.2. Statement 1, i.e., the need for financial knowledge, has the majority of the respondents who responded correctly (82.1 %). Respondents also seemed to be well versed on matters related to loans (statements 5 and 17), whereby more than 70 % of them responded to this statement correctly. On the other hand, a majority of respondents (42.7 %) could not provide correct responses to statements related to investments (statement 7).

Respondents tend to respond as "uncertain" on most of the statements. The most uncertain response is received for statement 13, which tests respondents' knowledge on compound interests.

Statements relating to investments also received higher "uncertain" responses, including those relating to government bonds (statement 8, 41.8 %), risks of investments (statement 8, 39.1 %), inflation and cost of living (statement 11,

Table 9.1 Demographics results

	Demographic items	Percentage
Gender	Male	57.4
	Female	42.6
Age	18–29	12.15
	30–39	22.2
	40–49	28.9
	50–60	14.3
	Above 60 years old	22.1
Marital status	Single	21.2
	Married or co-lived	67.3
	Divorced/separated/widower	11.5
Education level	High school or lower	517
	Bachelor's degree	23.3
	Master's degree	16.8
	Postgraduate	8.2
Occupation	Self-employed	31.7
	Nonexecutive	17.1
	Executive	5.2
	Professional	30.8
	Others	15.2
Monthly income	Equal or less than 200€	45.2
	201–500€	32.3
	501–1000€	16.3
	Equal or above than 1000€	6.2

Source: Author's calculations

36.1 %), investment plan (statement 7, 36.1 %), and investment practice (statement 4, 29.1 %). This indicates the lack of respondents' knowledge on investments.

As it is previously mentioned, the *financial behavior* is summarized in Table 9.3. Ten items were constructed to test respondents. The evaluation of this kind of behavior is done through ten statements, to which the respondents should choose to strongly agree (5), agree (4), indifferent (3), disagree (2), or strongly disagree (1). The goal is to test the behavior on spending and saving habits such as monthly savings, maintaining emergency funds, and monitoring financial situation.

Table 9.3 presents the mean and standard deviation related to respondents' financial behaviors per item. Factor analysis is used to construct the validity of the tested items. The principal component analysis method was employed and Varimax rotation was applied. The factor analysis for these ten items resulted in one factor only (Kaiser–Meyer–Olkin measure of sampling adequacy was considered acceptable at 0.911). Cronbach's alpha for all items is 0.876, which is considered good. In every item the respondents agree with an average above 3, which means that the behavior is above indifferent, but still less than 4. Respondents rather agree that they are cautious with their spending (mean = 4.12), they always review the spending (mean = 3.62), and they always review their financial position (mean = 3.60).

Table 9.2 Financial literacy

No.	Statements	% of correct answers	% of incorrect answers	% of uncertain
1	Knowledge in personal finance helps you to avoid being conned in an investment scam	82.1	12.5	5.4
2	You are spending more, if the amount charged to your credit card is more than your salary	45.6	33.2	21.2
3	Value-added tax is payable by each individual and is deducted from his/her monthly salary	56.2	16.4	27.4
4	The main purpose of buying insurance policy is for personal protection against losses due to natural disasters such as earthquake	48.4	22.5	29.1
5	If you are the guarantor for your friend's loan, you will be responsible to repay the loan in the event your friend defaulted	79.3	12.4	8.3
6	Car insurance premium is fixed based on the type and age of the vehicle	69.8	11.3	17.9
7	A mutual fund investor has the right to advise the investment manager on the type of shares to be invested	21.2	42.7	36.1
8	Investment in the Albanian government treasury bonds is more risky than investment in the share market	44.8	13.4	41.8
9	Tax has to do with fiscal policy	68.9	11.7	19.4
10	A real estate property is more liquid than a current bank deposit	58.2	18.1	23.7
11	High inflation means that the cost of living is in a high-speed increase	46.8	17.1	36.1
12	Car insurance premium is determined based on the age of the car owner	58.2	23.5	18.3
13	With an investment of 1000€ at interest rate of 4 % per annum, compounded monthly, the total investment will be 1040€ within a year	48.2	8.4	43.4
14	"Besa" Foundation is a private company that provides borrower's credit background information	58.6	11.3	30.1

(continued)

Table 9.2 (continued)

No.	Statements	% of correct answers	% of incorrect answers	% of uncertain
15	It is more appropriate for a pensioner that receives fixed monthly pension to invest in high-risk investment that provides high return	41.3	19.6	39.1
16	Long-term investment refers to investment period of 2–5 years	45.9	22.1	32
17	As a guarantor for a friend's loan, you are entitled to receive part of the loan	76.8	7.2	16
18	Credit cards can be used to obtain cash loan or advance	69.2	11.9	18.9

Source: Author's calculations

Table 9.3 Financial behavior

Items	Mean	Standard deviation
1. I have monthly financial planning and observed it strictly	3.32	1.07
2. I always review my spending	3.62	1.03
3. I record every expense	3.15	1.12
4. I know the value my entire assets	3.07	1.14
5. I save every month	1.8	1.23
6. I always review my financial position	3.60	1.11
7. Investment is a very important matter to me	3.01	1.21
8. I am very cautious with my spending	4.12	1.05
9. I have savings that can be used in case of emergency	3.23	1.14
10. I am prepared to face any financial problem	1.96	1.91

Source: Author's calculations

However, they quite disagree that they save every month (mean = 1.8) and that they are prepared to face any financial problems (mean = 1.96). Perhaps the current uncertain economic condition creates a feeling of uncertainty among the general public. Respondents are also least likely to consider investments as an important matter to them (mean = 3.01) and to know the value of their assets (mean = 3.07).

Three *hypotheses* were developed for the purpose of this study, in accordance with the theoretical framework.

The hypotheses test the relationship between financial literacy and financial behavior and the impact of education and income levels on both financial literacy and financial behavior.

H_1 There is a significant correlation between financial literacy and financial behavior.

The interrelationship between financial literacy and financial behavior is evaluated through a Pearson correlation analysis (Table 9.4). A positive, significant

Table 9.4 Correlation analysis

		Financial literacy
Financial behavior	Pearson correlation	0.395*
	Sig. (2-tailed)	0.042
	Kendall's tau-b	0.302*
	Sig. (2-tailed)	0.048

Source: Author's calculations
*Correlation is significant at 0.05 level, 2-tailed

Table 9.5 Analysis of variance: education's effect on financial literacy and behavior

		Mean	*F*-value	Significance
Financial literacy	High school or lower	7.1	61.126	0.000*
	Bachelor's degree	9.3		
	Master's degree	11.8.		
	Postgraduate	12.5		
Financial behavior	High school or lower	3.1	22.673	0.000*
	Bachelor's degree	3.36		
	Master's degree	3.52		
	Postgraduate	3.81		

Source: Author's calculations
*Statistically significant at 0.05 level, 2-tailed

correlation is found between these variables ($r = 0.395$, significant at 0.05 level). Similar result is obtained from the nonparametric test of Kendall's tau-b. Hence, the above hypothesis is accepted. What we can conclude in this case is that in Albanian contexts, the financial literacy has a positive impact on financial behavior and the higher the level of financial literacy, the higher performance of financial behavior it provides.

H_2 Education has a statistically significant impact on financial literacy and financial behavior.

Table 9.5 summarizes the results from the analysis of variance performed in order to test hypothesis number 2. Respondents from different education backgrounds responded differently on both variables. Those who obtained a master's degree and a postgraduate degree seem to have higher levels of financial literacy compared to those with high school diploma and bachelor one. On average, master's and postgraduate degree holders achieved more than 12 correct responses out of 18. Those with high school diploma or lower only managed to obtain about seven correct responses and those with bachelor's degree ten correct responses. In terms of financial behavior, those with lower education exhibit less favorable financial behaviors. The influence of education levels on financial literacy and financial behavior are statistically significant.

H_3 Income level has a statistically significant impact on financial literacy and financial behavior.

Table 9.6 Analysis of variance: income level's effect on financial literacy and behavior

		Mean	*F*-value	Significance
Financial literacy	Equal or less than 200€	6.98	75.436	0.000*
	201–500€	10.02		
	501–1000€	13.12		
	Equal or above than 1000€	12.89		
Financial behavior	Equal or less than 200€	3.13	21.749	0.000*
	201 –500€	3.62		
	501–1000€	3.73		
	Equal or above than 1000€	3.92		

Source: Author's calculations
*Statistically significant at 0.05 level, 2-tailed

The analysis of variance techniques is used to test if monthly income level is a significant factor impacting the financial behavior and literacy as well. Table 9.6 summarizes the results. Significant differences were detected in responses among respondents from different income levels. Respondents with higher incomes were found to have higher financial literacy levels compared to those in the lower-income basket (equal or less than 200€). This group only obtained about seven correct responses out of 18. The middle income earners (200–500€) were found to have moderate financial knowledge (about ten correct responses). There is pretty much the same result for the income level of the last two groups with around 13 correct answers (501–1000€ and above 1000€). Low-income earners also seemed to indicate lower good financial practices compared to the other groups (mean = 3.13). This result further supports the notion that financial literacy is enhanced as individuals have resources to manage. Those who are low-income earners may not have the opportunity to consider investment choices. These results suggest that any personal finance program should focus on those from the lower education and lower-income backgrounds, maybe emphasizing the awareness toward financial management as well as equipping participants with financial knowledge necessary for wealth accumulation.

9.5 Conclusions

In this paper we use survey data covering a representative sample of 500 individuals to document the level of financial literacy and financial behavior among Albanians and to examine how financial literacy is related to individual financial behavior and to see how two main components such as education and the income level affect financial behavior and literacy.

Referring to the assessment of financial literacy, there were considered 18 statements, where the percentage of correct, incorrect, and uncertain attitude for each one is calculated. Considering the equal importance of each statement, the

average percentage of correct attitude is 59.2 %, incorrect attitude is 17.2 %, and uncertain attitude is 23.6 %.

Referring to the chapter of financial behavior, there we asked a set of multiple choice of ten questions (1 = strongly disagree to 5 = strongly agree), and the mean of the results' mean is equal to 3.08, which seems to be a little bit higher than neutral attitude (which is 3).

In this respect, there is positive correlation between financial literacy and behavior (Pearson correlation 0.395 and Kendall's one 0.305), and it is not a high one, but statistically significant.

The results of this paper show that there is a positive effect of education and income level of individuals to financial behavior. The study has also shown that monetary concepts as simple as compound interest are alien to this group of respondents. In this perspective, it is recommended that focus should be given to the lower-income earners and the less educated citizens.

One of the ways to impart financial knowledge is via financial education. It is believed that financial education may prove to be beneficial in improving financial literacy. Sometimes people fail to make correct decisions because they have not received a sound personal finance education. Those who are low-income earners may not have the opportunity to consider investment choices.

These results suggest that any personal finance program should focus on those from the lower education and lower-income backgrounds. Perhaps, these programs could also emphasize on creating the awareness toward financial management as well as equipping participants with financial knowledge necessary for wealth accumulation that cater specifically to their background.

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