A Study on Financial Decision of Indonesian Millennials

IVAN DESTIAN BUTAR BUTAR¹, OKKY YULIANI PUTERI², CHRISTIAN HAPOSAN PANGARIBUAN³, BAMBANG SETIONO⁴, YOLANDA RAHMALIA BELDA⁵
Faculty of Business
Sampoerna University
L'Avenue Building, Jalan Raya Pasar Minggu16, Jakarta
INDONESIA

Abstract: This study examines Indonesian millennial financial decisions affected by financial education and financial behaviors. Financial behavior composes short-term and long-term behavior and this study focuses more on the short-term behavior. As a result, this study reveals millennial short-term behavior will mediate the relationship between financial education and financial decision if moderate with a high level of income. Then, this study also highlighted that millennial financial decisions have a direct relationship with financial education. Therefore, the millennials need to get effective financial programs in the college and workplace in order to improve their short-term behavior and financial decision.

Key-Words: Millennials, Financial Education, Income, Short-Term Behavior, Financial Decisions

1 Introduction

Millennials, also known as Generation Y, are an interesting subject that is widely discussed. In Indonesia, this generation represents one-third of the total population and 44% of the productive age [19]. The term Millennials generally refers to the generation born between 1980 and 2000. In this period, there are abundant technological advancements that support their diverse characteristics compared with other generations. The characteristics are said to comprise 3C characters, i.e. creativity, confidence, and connectedness [2]. It means that the Millennial generation can be defined as the generation that can think out of the box, express their opinion well, and easy to socialize with others. Within this strength, they have the opportunity to become the majority generation that leads the Indonesian workforce [19]. Hence, having an income and carefully consider their financial decisions to make sure their income will be enough to fulfill their needs. Therefore, it can be implied that the Millennials are in a period with various financial activities where they need better financial decisions.

Concerning this situation, it is essential to consider the factor that can improve the Millennials’ financial decisions, such as financial behavior [15]. The Millennials might have different financial behaviors between one and another. Financial behavior can categorize into short-term behavior and long-term behavior. Financial behavior is characterized as short-term if it relates to emergency saving and spending behavior while it is described as long-term if it relates to investment and retirement saving behavior [10]. The Millennials are often facing difficulties in choosing the right financial decision. They were often facing the dilemma of choosing between two financial decisions, whether they need to spend or save. A previous study stated that there is a positive relationship between their financial behavior and financial decisions [15]. When an individual possesses good financial behavior, they will also make better financial decision. Therefore, it is important to manage financial behavior that can improve financial decisions.

This study has the purposes of examining the mediating role of short-term behaviors supported by income in the relationship between financial education and financial decisions. This study provides several implications for the financial education institution and organization that reveals the factors that affect the financial decision of the Millennials. In terms of originality, this study contributes to the understanding that explains the relationship between financial education and financial decision. The finding reveals that the Millennials determine their financial decision based on the level of income and financial education program that affects their short-term behavior.
2 Literature Review

2.1 Financial Education and Financial Decision

Financial education defined as the process when financial customers, entrepreneurs, and investors improve their understanding of financial products, concept, and risk through the information that makes them develop their skills and awareness to improve financial decisions [17]. From this definition, it can be implied, the purpose of financial education is to improve financial behaviors that will lead to better financial decisions. According to Pokrikyan, financial decisions are the decision that relates to financial matters such as decisions on spending, saving, and budgeting [17]. Past researchers argued that implementing financial education programs is one of the best solutions for the right and effective decisions with all available financial resources [5]. In addition, it is also essential to know the financial education program that can lead to better financial decisions for the Millennials in college and workforce.

In college, the financial education program usually had sessions in the form of courses, presentations, or seminars. During the session, there are numerous teaching methods that can be used by the instructors; one of the methods is traditional lecturers. From the previous research, there is evidence that traditional lecturers become effective methods for financial education [3]. Other than the traditional lecturer method, the instructor also can use the website and social media as the learning platform. In this platform, students can choose the financial education topics that they are curious about and want to implement it in their financial decision [3]. For the workplace, the example of a financial education program is the Employee Financial Wellness Program (EFWP). Hannon defined EFWP as a program developed in the workplace to offer information and a personal finance strategy that can help the employee to well-considered their financial decision [9]. It can be concluded that colleges and workplaces provide different kinds of financial education programs. By having an effective financial education program, the Millennials will gain more confidence and ability to make better financial decisions whenever they face financial challenges. Therefore, this study hypothesizes that:

Hypothesis 1 Financial education will be positively relate to financial decision

2.2 The Mediating Role of Short-Term Behavior

Financial behavior is defined as short-term when it involves money management tasks such as spending, emergency funding, budgeting, and cash management [5, 14]. Those behaviors will encourage people to keep their short-term financial life events on track. Related to this behavior, there are prior studies that examine factors that can influence short-term behaviors. According to Azmi and Ramakrishnan, several factors like self-control, financial literacy, and financial education will affect individual’s spending behaviors [5]. According to past study, financial education has a positive relationship with short-term behaviors, meaning that when people get financial education, their spending, cash management, and emergency funding behaviors will improve [14]. Therefore, financial education does have an impact on the Millennials’ short-term financial behaviors.

Besides being influenced by financial education, short-term financial behavior itself also becomes an important factor that can influence financial decisions. Previous study found that the financial behaviors of millennials have a direct relationship with their financial decision [15]. If the Millennials have good short-term financial behavior, their motivation generally considers well financial decision that are beneficial for their financial health. Hence, the mediating role of short-term financial behavior between the relationship of financial education and financial decision. Prior study also mentioned that financial education could change people's financial behavior and improve their financial decisions [21]. It refers to the lack of financial education that can drive individuals to have poor financial behavior, resulting in choosing an inappropriate financial decision. Therefore, this study hypothesizes that:

Hypothesis 2 Short-term behavior will mediate the relationship between financial education and financial decision

2.3 The Moderating Role of Income

Limited studies have been conducted to examine the relationship between financial education, income, and short-term behaviors. Henager and Cude found that Millennials with less education and income tend to have poor financial behavior [10]. This condition occurs since less income means limited ability to participate in financial education program. Previous
study reported that the Millennials with lower income tend to have higher total spending than the amount of their income [14]. Therefore, Millennials with less income and financial education are unable to manage their short-term behavior well. Therefore, this study predicts a high amount of income will moderate the strength of financial education and short-term behavior relationship. This study hypothesizes:

**Hypothesis 3** Income moderates the relationship between financial education and short-term behavior.

In sum, hypotheses 1, 2, 3 imply a mediated effect of financial education and financial decision via short-term behavior, and moderated effects of income on financial education and short-term behavior relationship. Following previous findings, this study further argues that income may have the potential to increase the mediating effect of short-term behavior on financial education and financial decision relationship [6, 20]. Therefore, this study would like to add the following hypothesis:

**Hypothesis 4** Income moderates the mediated relationship between financial education and financial decision through short-term behavior, such that the mediated relationship is stronger when income is high.

### 3 Research Methodology

#### 3.1 Sample and Procedures

The sample in this study is millennials in Indonesia, whether employed or unemployed. The reason why millennials are the sample in this research is because of its large population in this country. According to *Badan Pusat Statistik*, the population within the age between 20 and 40 years old is 83,993,600 [7]. With this large number of populations, it makes the data easier and faster to be collected. To collect the primary data from the respondents, the researchers used online questionnaire.

Of 220 responses collected, the majority of respondents were female (54.1%), within the age of 20-23 years old (52.3%), unmarried (79.1%), have no children (84.5%), and possess bachelor degree (55.5%). Relate to the job description, most of the respondents are employed (63.3%) as a private employee (45%) with job duration between 1 and 5 years (26.8%). For income, most of the respondents get between IDR 1,000,000 (about USD 70) and 5,000,000 (USD 340) each month. The data says that since the source of income is coming from either their parents, family, or part-time jobs.

#### 3.2 Measures

##### 3.2.1 Financial Education

Financial education was measured with five question items adapted from [12] and [14]. This study adapted the questions into a seven-point Likert scale format, which ranges between 1 (strongly disagree) and 7 (strongly agree). Examples of items are: (1) “I attended the financial education programs in the past”; (2) “I felt the financial education program that I received at school and college was more than enough”. The reliability of financial education factor was $\alpha = 0.79$ in present study.

##### 3.2.2 Short-Term Behavior

The short-term behavior variable was measured with four-question items adapted from [5] and [14]. Examples of items are: (1) "Before I buy something, I consider whether I can afford it or not"; (2) "I find it more satisfying to saving money for the long term than spend it". For short-term behavior, the reliability was $\alpha = 0.72$ in present study.

##### 3.2.3 Financial Decision

The financial decision measured with four question items adapted from [20] and [4]. The original four-point Likert Scale was adapted to a seven-point Likert scale format that ranges between 1 (strongly disagree) and 7 (strongly agree). In this study, the researchers added the intermediate of neutral (neither disagree nor agree) as one of the respondent choices. Examples of the items are: (1) “I paid my bills on time every month” (2) “I start to set aside my money to anticipate the emergencies”. For financial decisions, the reliability was $\alpha = 0.66$ in current study.

##### 3.2.4 Income

The question about monthly income was adapted from [13]. In accordance with previous study, this study also used the question about monthly income ranging from $1 = < 1,000,000$ to $5 = > 20,000,000$). This range of income will be analyzed whether it affects financial education and short-term behavior.
3.2.5 Control Variables

For the control variables, this study chooses gender, age, and level of education as the variables that need to be controlled. In this analysis, the researchers coded respondent’s gender as 1 = female and 2 = male, age (ranging from 1 = 17-23 to 4 = >37), and education level (ranging from 1 = High School to 4 = Master degree).

3.3 Method of Analysis

This study would examine the hypothesis with mediation and moderation analysis by utilizing PROCESS macros that operate under SPSS 21. The PROCESS macros were developed by Hayes as the tool to test models with mediators and moderators [6]. To do the test, the researchers would run the PROCESS macros by choosing model 4 for mediation analysis without moderation and model 7 for the moderated mediation analysis. In both models, the researchers utilized bootstrap procedures of 5000 samples at a 95% confidence level. Bootstrapping is a statistical procedure that changes data from the sample obtained and resamples the data to obtain new simulation data [6]. Bootstrapping provides a more accurate estimation of the indirect effect and its confidence interval. The confidence interval will determine the significance of the indirect effect. When the confidence intervals have a value above zero, it indicates the indirect effect is significant.

4 Results

Table 1 provides information about the means, standard deviation, correlation, and the main variables reliabilities. The data shows that the correlation matrix has resulted in that accordance and can support the proposed hypothesis. According to Table 1, financial education was positively correlated to the financial decision \( (r = 0.21, p < 0.01) \), while short-term behavior was also positively related to the financial decision \( (r = 0.49, p < 0.01) \).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.46</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1.46</td>
<td>0.79</td>
<td>0.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>2.31</td>
<td>1.03</td>
<td>0.80, 0.44**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>2.31</td>
<td>1.02</td>
<td>0.09, 0.55**</td>
<td>0.48**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Education</td>
<td>3.97</td>
<td>1.32</td>
<td>0.15, 0.01</td>
<td>0.10</td>
<td>-0.02</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Behavior</td>
<td>5.49</td>
<td>0.95</td>
<td>-0.13</td>
<td>-0.01</td>
<td>0.11</td>
<td>0.17**</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-Term</td>
<td>5.61</td>
<td>1.04</td>
<td>-0.87</td>
<td>0.05</td>
<td>0.04</td>
<td>0.06</td>
<td>0.48**</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Descriptive Statistics and Correlation Matrix

4.1 Hypothesis Tests

Hypothesis 1 proposes that financial education is positively related to financial decisions. After running the PROCESS macros with model 4, the result shows a significant regression coefficient of the direct relationship between financial education and financial decision \( (b = 0.13, p < 0.05) \). Then, Hypothesis 2 proposes that short-term behavior mediates the relationship between financial education and financial decision. As shown in Table 2, financial education did not relate to short-term behavior \( (b = -0.28, p < 0.05, 95\% CI [-0.54, -0.02]) \). When we included both financial education and short-term behavior as predictors. Short-term financial behavior had a statistically significant effect on financial decision \( (b = 0.42, p < 0.05) \). The 95% confidence interval did not contain zero \( (95\% CI [0.32,0.53]) \). These results indicate that Hypothesis 2 was not supported. However, this mediation relationship also relates to the moderation of income in hypothesis 3. Another different result might be occurred after testing the hypothesis 3.

Hypothesis 3 proposes that income can moderate the relationship between financial education and short-term behaviors. After running PROCESS macros with model 7, the results are shown in Table 3 showing the results of the moderating effects of income on the relationship between financial education and short-term behavior. Accordingly, there is a significant moderating effect of income on the relationship between financial education and short-term behavior. The significant is notable through “financial education x income” that has \( p < 0.05 \) and 95% CI [0.06, 0.27].

In this study, the simple slope and the slope of different significance tests are to justify the moderated effect [8]. Based on Table 3, financial education is related to short-term behavior when income was high \( (b = 0.26, SE =0.079, t =3.28, p < 0.05) \) with 95% confidence interval did not contain zero \( (95\% CI [0.10, 0.41]) \). The result suggested that the relationship between financial education and
short-term behavior was stronger when the income was high. The plots in Fig. 2 reveals that high income was a more favorable condition for the influence of financial education on short-term behaviors. It can be implied that these findings support hypothesis 3.

Finally, this study examines the moderated mediation analysis to which short-term behavior mediated the effect of financial education on financial decisions at the high-level of income (i.e., Hypothesis 4). Table 4 shows that the interaction was significant at a high level of income ($b = 0.11$, 95% CI $[0.04, 0.18]$), indicating the relationship between financial education and short-term behavior moderated by income. The positive coefficient of $b$ indicated, as income increased, the relationship between financial education and short-term behavior became stronger. Therefore, the finding support hypothesis 4.

Table 2. Regression results for testing the mediating or indirect effect

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
<th>LL CI</th>
<th>UL CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome: Financial Decision</td>
<td>2.82</td>
<td>0.24</td>
<td>12.1</td>
<td>0.00</td>
<td>2.38</td>
<td>3.26</td>
</tr>
<tr>
<td>Financial Education</td>
<td>0.15</td>
<td>0.04</td>
<td>3.77</td>
<td>0.00</td>
<td>0.04</td>
<td>0.26</td>
</tr>
<tr>
<td>Short-term Behavior</td>
<td>0.45</td>
<td>0.03</td>
<td>14.6</td>
<td>0.00</td>
<td>0.39</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Table 3. Regression results for testing the moderating effect

<table>
<thead>
<tr>
<th>Outcome variable: Short-term behavior</th>
<th>$b$</th>
<th>SE</th>
<th>$t$</th>
<th>$P$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.55</td>
<td>0.58</td>
<td>11.9</td>
<td>0.00</td>
<td>[4.40, 4.70]</td>
</tr>
<tr>
<td>Financial Education</td>
<td>-0.28</td>
<td>0.13</td>
<td>-2.14</td>
<td>0.04</td>
<td>[-0.54, -0.02]</td>
</tr>
<tr>
<td>Income</td>
<td>-0.57</td>
<td>0.22</td>
<td>-2.63</td>
<td>0.01</td>
<td>[-1.06, -0.08]</td>
</tr>
<tr>
<td>Financial Education &amp; Income</td>
<td>0.16</td>
<td>0.05</td>
<td>3.02</td>
<td>0.00</td>
<td>[0.06, 0.26]</td>
</tr>
<tr>
<td>Conditional effect of Income: Effect</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>95% CI</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>-1.07</td>
<td>0.07</td>
<td>-14.9</td>
<td>0.00</td>
<td>[-21.2, 0.07]</td>
</tr>
<tr>
<td>Mean</td>
<td>0.00</td>
<td>0.05</td>
<td>1.74</td>
<td>0.08</td>
<td>[-0.10, 0.10]</td>
</tr>
<tr>
<td>High</td>
<td>0.36</td>
<td>0.05</td>
<td>7.23</td>
<td>0.00</td>
<td>[0.20, 0.52]</td>
</tr>
</tbody>
</table>

Table 4. The conditional indirect effect of financial education on financial decision through short-term behavior at different values of Income

5 Discussion

The purpose of this study was to examine the relationships among financial education, short-term behavior, income, and financial decision on Indonesian millennials. Prior research stated financial education has an impact on short-term behavior related to financial decisions [12, 18]. In accordance with past studies, current study tried to examine the direct and indirect relationship between financial education and financial decision. As a result, this study found to support that financial education has a direct influence on financial decisions. For the indirect influence through short-term behavior, this study cannot support this hypothesis since the result of the relationship between financial education and short-term behavior is insignificant. However, this study revealed the relationship between financial education and short-term behavior could be stronger if it is supported by income. In response to research that examines the potential influence of income on short-term behavior outcomes [10], this study found that a high-level of income positively moderates the link between financial education and short-term behavior. In other words, the indirect influence through short-term behavior can be supported when there is a moderation effect from the high level of income.

5.1 Theoretical Contributions

First, this study contributes to the financial education theory by examining how its effects can be transferred to financial decisions. This study found
the evidence of a significant result in the direct relationship between financial education and financial decision. These findings were consistent with [3] and [5] studies that stated the financial education programs showed positive effects on college students and employees understanding to engage in better financial decisions. Second, this study contributes to providing evidence to support the mediating role of short-term behavior in the relationship between financial education and financial decision. By using short-term behavior as the mediator, this study found evidence that financial education does not have a strong relationship with short-term behavior. This finding was in line with the theory from Wagner and Walstad that stated, in some cases, learning by doing might be more influential for correcting millennials’ short-term behavior rather than financial education programs [21].

Furthermore, the mediating analysis also shows a significant relationship between short-term behavior and financial decisions. This study suggests that financial education can leverage strong short-term behavior within a situation when the income level of millennials is high. This result can be supported by prior research that found millennials with high-level income participated more in the financial education programs; and engaged five times more often in short-term behavior rather than those with lower levels of income [10, 11].

5.2 Managerial Implications

The key managerial implication of this study is the need to develop more financial education programs for the Millennials generation (e.g. college students and employees) in Indonesia. To support the short-term behavior, there should be institutions that offer affordable financial counseling, financial coaching with professionals, and financial planning programs for millennials. For an organization, each of it might have a financial planning department that needs to forecast the organization's income and operating performance. Within this job description, it fulfills the activities that relate to cash management, budgeting, and spending behavior. Therefore, it will be beneficial for the organization to give them financial education programs like training, seminars, or workshop.

5.3 Strength, Limitation, Future Research

Like other studies, this study also has several strengths and limitations. The main strength of this study is that it reveals the mediating role of short-term behaviors in the relationship between financial education and financial decision. This study then reveals the moderation role of income that maximizes the relationship between financial education and short-term behaviors. By using the income as moderation, it strengthens the mediating role of short-term behaviors. Moreover, the context of the study uses Indonesian sample size. It is expected that this study can stimulate other researchers to examine further the role of financial education and short-term behavior in the alignment of financial decisions.

However, the findings also lead to several limitations that suggest further improvement in the future. First, this study only explored financial education as a variable that affects short-term behavior and financial decisions. Thus, the findings in this study only limited to the financial education requirement. For further research, it is recommended to include more variables, e.g. financial literacy and self-control, that can affect the millennials' short-term behaviors and financial decisions. Second, this study did not consider the millennials' major of study and their parents' financial support. By considering those major of study, future studies are advised to develop whether millennials that are not related to business major would have good short-term behavior and financial decision or not. In addition, future research can compare the short-term behaviors between the Millennials who get financial support from their parents and those who are financially independent.

6 Conclusion

The developed and tested financial education and financial decisions model is the response to a call for research to extend the significant influence of millennials’ short-term behavior on financial education and financial decisions relationship. The study finds the importance of financial education in the Millennial's financial decisions. Further, this study also highlights the moderating role of income that can strengthen the mediating role of millennials short-term behaviors in the relationship between financial education and financial decisions.
References:


