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THE EFFECT OF INSTRUMENTED FINANCIAL LITERACY ON YOUNG GENERATION STOCK INVESTMENT DECISIONS: COUNTERING ENDOGENEITY PROBLEM

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Abstract

This study examines the endogeneity between financial literacy and stock investment decisions among young individuals. While prior research finds that financial literacy influences financial behavior, many studies measure current literacy based on past decisions. This creates endogeneity, leading to biased estimates, as financial literacy can evolve over time. To address this, the financial condition of the oldest sibling is used as an instrumental variable to isolate exogenous variation in financial literacy. The study focuses on graduate students from a reputable business school in Jakarta and analyzes their decision to participate in the Government's early-stage stock investment initiative, Program Yuk Nabung Saham. The Control Function method is applied to estimate the causal effect. Results show that instrumented financial literacy significantly increases the likelihood of stock investment. Individuals with low financial literacy have a minimal probability of investing, while those with full literacy show a 91.11% probability. Although not intended to evaluate the program itself, these findings highlight the importance of addressing endogeneity when studying financial behavior. Improving the understanding of this relationship provides a stronger foundation for policies and educational efforts aimed at enhancing financial decision-making among youth.

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INTRODUCTION

In 2015, only 434,107 people or 1 percent of total Indonesian population that had a Single Investor Identification (SID) number for investment stocks, government securities, and mutual funds. Whilst, the growth of Indonesia's Composite Stock Index annual return relatively high, reached 12.71 percent by the 1997-2020. So, the Government introduce a program to encourage the numbers of Indonesian investor that called Program Yuk Nabung Saham (Saving Stocks Programme).

Since that, the growth of stock investors significantly high. The Indonesian Central Securities Depository (PT. Kustodian Sentral Efek Indonesia/KSEI) recorded a 2,070,394 SID at the end of 2019, or a growth is about 376.90 percent only in four years. By the age composition, number of SID has been dominated by young generation. The composition of investors as follows: age 21-30 years with 39.72 percent; age 31-40 years with 25.34 percent; age 41-50 years with 18.69 percent, age 51-60 years with 10.69 percent, and the age category more than 60 years 5.56 percent until 2018.

From time to time, literature shows a positive relationship between financial literacy and individual investment in the stock market (Almenberg & Dreber, 2015; Bucher-Koenen et al., 2023; M. van Rooij et al., 2007, 2011; Yamori

& Ueyama, 2022). However, most studies in financial literacy and financial decision test the current financial literacy to past financial decisions without considering that people may increase their financial literacy after that. People may increase their literacy by the experience of analyzing a stock, joining the community, and exposing themselves to the news, business magazines, and seminars (Grody et al., 2011; Guthrie & Nicholls, 2015). The possibility of this simultaneous relationship can cause endogeneity problems so that the estimated parameters become biased and inconsistent Woolridge (2016). To counter the simultaneity, the model with instrumental variables is suitable.

This study examines the effect of financial literacy on the investment decisions of the young generation after adopting the Saving Stocks Program. It is urgent due to the impact on their financial condition and the country's future macroeconomic conditions. Even so, this study did not intend to evaluate the program.

Hypotheses Development

The literature shows that financial literacy affects stock market participation (Almenberg & Dreber, 2015; M. van Rooij et al., 2007; Yamori & Ueyama, 2022). Many studies test the relationship between present financial literacy and stock investment decisions in the past without considering that people may increase their financial literacy after investing by making transactions, participating in groups and seminars, reading newspapers and business magazines, etc (Frijns et al., 2014). If this simultaneous relationship is not accommodated, it can lead to serious endogeneity problems. Even so, Fernandes et al. (2014) found that more than 72 percent of 111 studies about financial literacy and financial decisions did not accommodate these simultaneous relationships. Lusardi et al. (2014) explain that the non-instrumented estimates of financial literacy may underestimate the actual effect.

This study tries to do a pre-test to check for a simultaneous relationship. Suppose it is proved, the estimation method will use the instrumental variable. The instrumental variable (IV) is a variable that correlates with independent variables but does not correlate with errors, and these instruments correlate with dependent variables only if by the independent variables (Duflo, 2004). Frijns et al.2014) show that someone's experience significantly improves financial literacy. The instrumental variable used in this study is the economic condition of the oldest sibling. The experience of the oldest sibling is an exogenous, beyond the respondent's control. There is a learning channel between the respondents and the oldest siblings' bad financial experiences: the respondents naturally learn to avoid the condition as their siblings. These fears lead people to learn about finance, so their financial literacy will increase (M. C. J. van Rooij et al., 2011). This research measures the instrumental variable by the dummy variable equal to one of the siblings having a worse economy than the respondents.

This research develops a decision-making model that considers other factors may impact, such as self-confidence, gender, risk preference, income, and self-health perception. Xia et al. (2014) study shows a relationship between self-confidence and stock market participation. Overconfidence positively correlated with stock market participation, vice versa. Van den Steen (2010) explains that individuals with the same information and intelligence have different self-confidence due to genetic differences and early life experiences. By the arguments, we put the level of self-confidence in the model. This research measured self-confidence as a difference between actual (objective) financial literacy and subjective (perception).

Woman relatively have a low financial literacy due to several constraints (Ghosh & Vinod, 2017; Joglekar et al., 2024). Almenberg & Dreber (2015) study using the Swedish FSA found a gender gap in stock market participation. Women participate less than men in the stock market. This study is concerned that gender factors will significantly influence the decision to participate in the stock market, especially in Indonesia. This country upholds a patriarchal culture where men become the ultimate decision-makers for themselves and their families. This study uses a dummy variable equal to one for men respondents.

M. van Rooij et al. (2007) accommodate that risk preference is an essential determinant of stock ownership. Risk preference can be categorized into three categories: risk-taker, moderate, and risk-averse. M. van Rooij et al. (2007) explain that some researchers argued that knowledge and cognitive ability might affect preferences, such as risk aversion and the rate of time preference. This study was classified into a category based on seeking risk-based activity. Individuals are categorized as individuals who like risk if they want to maximize savings and investment growth, even if faced with some threat that causes decreased value. They prefer products with high-yielding and riskier opportunities, such as stock market investment. Individuals who like less risk are oriented to secure their savings and investment, even though value growth is not optimum. They prefer to choose time deposits or other fixed assets. This research measures risk preference by asking what they will do in retirement and is considered a dummy variable equal to one for individuals who categorize risk-takers.

The differences in income are related to the individual selection of financial products

(Fungáčová & Weill, 2014). Individuals with higher incomes should have a more extensive choice of investment products because they have more capital capabilities, using personal funds and access to capital at financial institutions, and vice versa. This research measure income differences by categorizing income into five range starting from Rp 5,000,000 (almost USD 345, the Upah Minimum Provinsi/Provincial Minimum Wage is about USD 252), then multiples of Rp 5,000,000 until beyond Rp 20,000,000 (nearly USD 1,394).

Individual perceptions of health risks affect investment choices. Cardak & Wilkins (2009) explain that individuals with high self-health risk perceptions prefer to invest in low-risk products. It is because they can feel secure. If something happens, they can withdraw anytime without declining asset value too high. Self-assessed health is measured using a five-point scale from poor to excellent health.

This study argues that there is an endogenous problem between the financial literacy and the stock investment decision. We proposed the hypothesis is as follows:

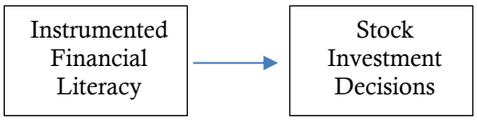

Figure 1. Research Model

METHOD

The population of this study is young individuals who work or are entrepreneurs, so they have the independence to manage their income as a consumption, saving, and investment. The sample was selected using nonprobability sampling and purposive sampling methods. The criteria: 1) students in the Executive Class of Master of Business Administration (MBA) in one of reputable business school in Jakarta, 2) students from the matriculation class, the first and second semesters are chosen as respondents to avoid exposure to the advanced financial knowledge in specific finance class. The observation period starts from the program's campaign, which was introduced in November 2015 until the data collection.

As the dependent variable, the stock investment decision is binary, with the value of one if the respondent is investing in the stock market during the program period and zero if not investing in the stock. As an independent variable, financial literacy is a personal understanding of financial concepts. The questions adapt to previous questions from Anderson et al. (2015), which are worth one for each correct answer and zero for each wrong answer. Financial literacy scores are measured using the total respondents' correct answers. Details of financial literacy questions are in Appendix 1. The questions have been tested for validity and reliability to ensure the accuracy and consistency of the question items. Tests were carried out using Pearson's Correlation for validity and Kuder-Richardson 20 (KR-20) for reliability because the answer items are binary, so it is impossible to test Cronbach's alpha.

Self-confidence as a control variable is measured by using perceived score through subjective probabilities to capture higher variance from each individual than using the perception of correct answers with the integer numbers. The scoring is done by adding the multiplication between each correct answer (I_j) with the probability value of self-confidence (p_j), as it follows:

Table 1. Self Confidence Measurement

Confidence (I_j)	**Probability (p_j)**
Probability that I have all five correct answers	……. %
Probability that I have four correct answers	……. %
Probability that I have three correct answers	……. %
Probability that I have two correct answers	……. %
Probability that I have one correct answers	……. %
Probability that I have no correct answers	……. %
Total	**100%**

$$Perceived\ score\ = \sum_0^5 I_j p_j \qquad (1)$$

The other control variables are: gender, income, health as previous studies mentioned (Anderson et al., 2017; Lantara & Kartini, 2015). Gender is the binary value that value to one for the male respondent and zero for the female respondent. The monthly income is divided into

five categories. Risk preference is the binary variable that values one for the risk-taker and zeroes for the risk-averse; self-health perception is done by asking about their health condition scaled from very bad (1) to very good (5). Based on various studies of the literature, the econometric model is formulated as follows:

$$Stock\_investment_i = \alpha + \beta_1.financial\_lit_i + \beta_2.confidence_i + \beta_3.gender_i + \beta_4.risk\_pref_i + \beta_5.income_i + \beta_6.health_i + \varepsilon_i \quad (2)$$

The pre-test checks the simultaneous relationship between financial literacy and the stock market by following Woolridge's (2016) recommendation. Appendix 3 shows the equation for every test step: all variables regressed to the dependent variable, then predict the fitted value, get the residual by reducing the first regression with the fitted value, and all variables are regressed to the residual. If the endogenous variable significantly influences the residual, it can be concluded that a simultaneous relationship exists. That is equivalent to variable endogeneity testing, which can also be done using the Hausman or Durbin-Wu-Hausman tests.

If the simultaneous relationship is proven, the primary independent variable, financial literacy, will be instrumented using the financial condition of the oldest sibling. The question item used is, "How do you assess the financial condition of your oldest sibling?". The answer choices are worse than I am, better, or do not have older siblings. If his sibling's financial condition worsens, its value one and the other will be zero. If the respondents do not have an older sibling, it counts as zero. Logical reasoning has been examined before.

If the simultaneous relationship does not exist, the estimation method for the hypothesis testing will use the Maximum Likelihood (ML). But if it exists, the estimation method will use a Control Function (CF) that requires an instrumental variable. Control Function testing can be done manually by regression of two equations or by combining both in one regression using the built-in command in the statistical processing program. This study uses features in the statistics processing program because manual testing provides standard error and statistical tests that need to be validated (Woolridge, 2016) due to additional errors in the first equation not being accommodated (Duflo, 2004).

RESULT AND DISCUSSION

The final sample of this study was 88 respondents, with the characteristics shown in Table 2. A total of 57 percent of respondents were male. Furthermore, most respondents are in the category of age 24 to 29 years and are still single. There are only 32 respondents were married. Singles should be more flexible in allocating their income because they do not yet have responsibilities to their spouses or children.

Table 2. Descriptive Statistic of respondents

Characteristic	Number	
	Person	Percentage (%)
1. Gender		
a. Male	50	57
b. Female	38	43
2. Age		
a. < 24 y.o	10	11
b. 24 – 29 y.o	48	55
c. 30 – 35 y.o	30	34
3. Status		
a. Single	56	64
b. Married	32	36
4. Income		
a. < Rp 5.000.000	6	7
b. Rp 5.000.000 – Rp 10.000.000	26	29
c. Rp 10.000.001 – Rp 15.000.000	27	30
d. Rp 15.000.001 – Rp 20.000.000	15	17
e. > Rp 20.000.000	14	17

5. Education background		
a. Economic	33	38
b. Non-economic	55	62
6. Jobs related to economic		
a. Yes	47	53
b. No	41	47
7. Stock investments		
a. Yes, since 2015	36	41
b. No	52	59
Total	88	100

By the income distribution, 93.18 percent of respondents are sure to have a higher income than the Provincial Minimum Wage (about 252 USD). It means that most of the respondents are considered to meet basic needs so that they can allocate their income to savings or investments. By the educational background and job linearity, as many as 55 respondents did not have an economic education background, but 19 had jobs related to the economy, so it might encourage individuals to take further financial education. Yet, 36 respondents did not have an educational background or economics-related occupations but chose to be MBA students. With many variances in respondents' characteristics, it is expected to justify no selection bias in sampling selection.

The validity and reliability tests of the questionnaire confirm that it is both valid and reliable, making it suitable for use (even in unpublished sections). Table 3 Panel A presents the distribution of correct answers, revealing that only 13.64% of respondents answered all the questions correctly. The mean, median, and mode of the scores correspond to the class with three correct answers. Additionally, only 35.23% of respondents scored above average, while 35.22% scored below average.

Table 3. Breakdown of the answer to the financial literacy question

	Total (persons)	Percentage (%)
Panel A. Total correct answers		
a. Five correct answers	12	13.64
b. Four correct answers	19	21.59
c. Three correct answers	26	29.55
d. Two correct answers	18	20.45
e. One correct answer	11	12.50
f. No correct answer	2	2.27
Panel B. Correct answer based on the topic		
a. Compounding interest	78	88.64
b. Inflation	56	63.64
c. Risk diversification	46	52.27
d. Debt management/mortgage	55	62.50
e. Investment	26	29.55

Table 3 Panel B, details the number of correct answers for each question. The instruments is ordered from the most familiar to the least familiar topics.

According to Panel B, nearly 89% of respondents correctly answered the first question on compound interest. 63% of respondents correctly answered the second question, which focused on the relationship between inflation and currency values. Only 52% of respondents understood the concept of stock diversification in the third question. Sixty-two percent of respondents answered the fourth question about housing finance correctly, while only 29% mastered the concept of the relationship between asset prices and specific interest rates on bonds in the last question. Interestingly, the third question on risk diversification between stocks and bonds had fewer correct answers than the fourth question on housing finance.

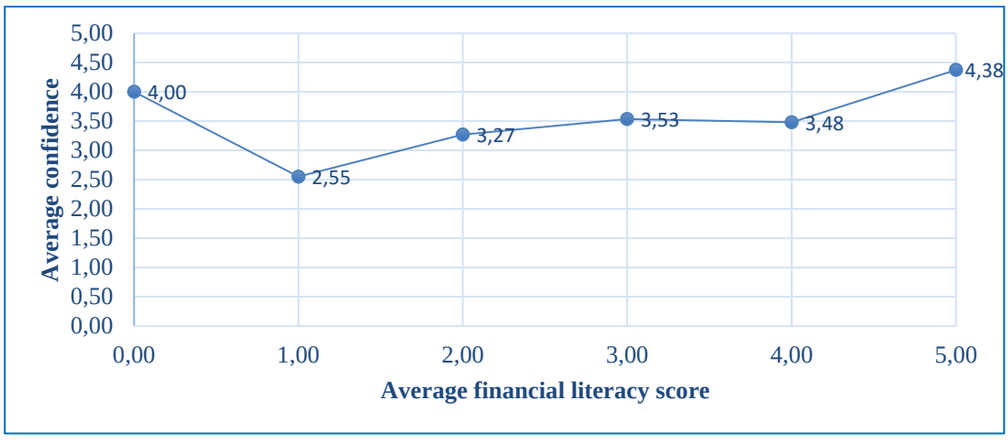

Figure 2. The relationship between average confidence and average financial literacy score

Figure 2 illustrates the relationship between average levels of objective (actual) financial literacy and respondents' average confidence levels. The figure reveals that respondents with actual financial literacy scores between 0.00 and 3.00 tend to exhibit higher confidence than their actual financial literacy scores. In contrast, individuals with scores between 4.00 and 5.00 generally display lower confidence relative to their actual financial literacy scores. Takeda et al. (2013) found that the higher the investment literacy of investors, the lower their confidence, and the less likely they are to be exposed to an overconfidence bias. This pattern resembles the Dunning-Kruger Effect, although it is less pronounced and steep compared to the classic Dunning-Kruger curve. The chart transitions from the "mount of stupidity" (where individuals with low to average abilities often overestimate their abilities) to the "plateau of sustainability" (where individuals become more aware of their limitations and work to improve their knowledge more effectively). A competent individuals will have a proper calibration between their knowledge and self-confidence.

The pre-test for hypothesis checking involved performing a simultaneity test between stock investment decision-making and financial literacy. This test (detailed in the unpublished section) reveals a simultaneous relationship between the two variables: higher financial literacy increases the probability of investing in stocks, and conversely, individuals who invest in stocks tend to enhance their financial literacy through experience. Therefore, the appropriate estimation method for this analysis is the Control Function (CF) approach, which uses instrumental variables to minimize bias in hypothesis testing.

Table 4. Regression results

	Stock investment	
	Panel A. Control Function	Panel B. Maximum Likelihood
Financial literacy	.946***	.066*
	(.058)	(.038)
Confidence	-.336***	-.011
	(.120)	(.048)
Gender	-.275	-.162*
	(.327)	(.089)
Risk preference	.364	.348***
	(.518)	(.061)
Income	-.266***	-.007
	(.101)	(.038)
Self-health	.369**	-.047
	(.168)	(.060)
Cons.	-.092	-.409***
	(.167)	(.043)
R^2	0.289	

Note: The dependent variable is a dummy variable with one value for investing in a stock. The independent variables are financial literacy. Panel A uses the Control Function (CF) estimation methods that accommodate the simultaneity relationship, and Panel B uses Maximum Likelihood (ML). The value listed in the first row is marginal in the test table, while the second is the standard error. ***, **indicate the significance level, * for the 1%, 5% and 10% significance levels.

Table 4 Panel A presents the results of the hypothesis testing using the CF estimation method to instrument financial literacy and its impact on stock investment decisions. Although the coefficients in Table 4 Panel A cannot be interpreted as they would be in a standard regression model, the direction of the coefficients remains informative.

Table 4 Panel A shows that instrumented financial literacy has a positive influence on stock investment decisions. Table 5 Panel A explains the likelihood of stock investment based on the average financial literacy score. This method is aligned with the study from Anderson et al. (2017) and M. van Rooij et al. (2007). Respondents with no correct answers have a very low probability of investing in stocks, approximately 0.7 percent. On the other hand, respondents who correctly answer five times have a 91.1 percent chance of investing in stocks. The respondents who achieve a perfect score in financial literacy do not necessarily possess exceptional intelligence, knowledge, or wealth, as this set of questions is a widely accepted standard in financial literacy, adopted by numerous bureaus worldwide over the past decade.

Other factors also influence the likelihood of investing in stocks, and this study identifies additional control variables. The control variables in this paper include self-confidence, gender, risk preference, income, and health perception. Table 4 Panel A shows that self-confidence negatively affects stock investment decisions; higher self-confidence is associated with a lower likelihood of investing in stocks. Given that the majority of respondents lack an economics educational background, the prudential principle may be relevant. This instills a sense of self-awareness in the respondents, encouraging them to avoid taking risks. Income is also negatively related to stock investment (Table 4 Panel A). Higher income is associated with a lower probability of investing in stocks because high-income respondents often have access to various investment options with high fixed returns, such as government bonds, which require substantial capital (e.g., USD 688 with a coupon rate of up to 6% annually). In contrast, individuals with a positive perception of their health are more likely to invest in stocks. They feel more secure and are more flexible with their investments, including being willing to withdraw funds in a limited time.

Table 4 Panel A also shows no significant difference in stock investment probabilities between men and women or between individuals with low and high risk tolerance. This finding contrasts with previous studies that often associate men and risk-takers with a higher probability of stock investment compared to women and risk-averse individuals. This study's academic respondents may understand financial matters better, explaining this discrepancy.

Table 5. Probability to invest in a stock

Financial Literacy Score	Stock Investment (%)	
	Panel A Control Function	Panel B. Maximum Likelihood
0	.0076	.0746
1	.0820	.1420
2	.1991	.2446
3	.4419	.4279
4	.7823	.4996
5	.9111	.6336

This research also does the robustness test: what if we assume no simultaneous relationship? In other words, the financial literacy measured today will be used to estimate the probability of investing in stocks that have been carried out in the past. Still, as it is known, individual financial literacy will increase after investing in stocks due to interaction and experience. Even if it potentially brings up the endogeneity problem, it is still interesting to find out the answer. The Maximum Likelihood estimation method will be used to test the financial literacy and the stock investment decision. Table 4 Panel B and Table 5 Panel B show that the power effect and magnitude

become lower than the model that accommodates the simultaneous relationship. This estimation becomes underestimated because it ignores the difference in current financial literacy when first investing in stocks.

There are two stages of the financial literacy question series: the basic and the advanced. This paper uses the basic financial literacy question developed by Annamaria Lusardi and Olivia Mitchell. This set of questions is well accepted by the U.S. National Financial Capability Study and throughout the world. Initially, the development of basic financial literacy comprised three questions, which later expanded to five. Nowadays, researchers develop an advanced financial literacy that is specific to each financial decision, investment, or asset. But the Lusardi's version is still used due to the generalization.

According to Table 3 Panel A, there is cause for concern that the number of respondents with all correct answers is relatively low, only 13.64 percent. The Indonesia Financial Services Authority (OJK) conducted a continuous survey that led to this finding. The survey suggests that financial literacy in Indonesia is relatively low. In 2024, the financial literacy index of the Indonesian population was 65.43 percent, while the financial inclusion index was 75.02 percent. Meanwhile, the 2022 SNLIK results showed that the financial literacy and financial inclusion index of the Indonesian population was 49.68 percent (85.10 percent), an increase from 2019 when it was only 38.03 percent (76.19 percent). The gap between financial literacy and inclusion could potentially lead to future losses, such as becoming entangled in various unfavorable financial decisions.

In general, the questions are arranged by the most familiar and least familiar topics from: compounding interest; inflation; risk diversification; debt management/mortgage; and investment. But in the Indonesia context, Table 3 Panel B shows that the most familiar to the least familiar topics are: compounding interest; inflation; debt management/mortgage; risk diversification; and investment. Respondent appears to be more familiar with housing finance schemes compared to stock or bond investments. Data from the Indonesia Central Bank indicates that, as of Q4 2022, 75.03% of house purchases are financed through mortgages. In contrast, as of 2023, only about 2.4% of Indonesia's population is involved in stock market investments, with around 6.4 million individual stock investors recorded by the Indonesian Central Securities Depository (KSEI). This gap highlights why people tend to be familiar with and have a better understanding of mortgages compared to stock or bond investments.

The notion of the low level of public understanding of stock investment has been understood by the Government. Therefore, the Government launched the Program Yuk Nabung Saham (Let's Save Stocks Program) in 2015. This program provides various facilities to attract public participation in stock investment, such as: the number of shares per lot is reduced, the capital cost is only IDR 100,000 ($ 7.25 in 2015), easy access based on mobile phone applications through registered securities, and so on.

This paper demonstrates the effect of financial literacy to stock investment decision-making since the Program Yuk Nabung Saham was introduced. However, it is difficult to assess real financial literacy at the time when the respondents decide to invest in stock. It creates ambiguity if we still asses the current financial literacy to the past decision-making. People may be better and increase their financial literacy through seminars, webinars, industry updates, and books. Fernandes et al. (2014) found that more than 72 percent of 111 studies about financial literacy and financial decisions neglect that simultaneous issue.

To accommodate that issue, this paper uses the instrumental variable as the estimation method. And it is proof that this simultaneous relationship exists. Past financial literacy drives people to invest in stocks, also stock investment drives them to have better financial literacy today.

Having good financial literacy is a must for any financial decision-making because it has long-term consequences, not only for the individual but also for the family, generation, and nation. The young generation under 40 led to a significant increase in stock investors in Indonesia. It is unclear what motivates a significant number of people to invest in stocks in such a short period. It may be because of their financial literacy, the affordability of stock investments, the FOMO of current trends, or something else.

This paper shows that investors with higher financial literacy tend to prefer investing in stocks, and vice versa. The number is so significant, the probability exceeds 90% for the people who get all correct answer. This number is really something to encourage people to invest in stock since the number of stock investor in Indonesia relatively low than other countries. It is about 13.45 million investors divided by 282 million people in Indonesia, or it is about 4.76%. In developed country, it is reached 62% investor in United States, or 23% investor in Britain.

It is harmful when financial inclusion is going faster without financial literacy. People may in risks because going to trapped in their decision. But, the decision that driven by the financial literacy will always give benefit. People with higher financial literacy have a deeper understanding of the basic concept of financial, including the risk and return of asset. They also can optimize their asset returns and minimize

their risks with an attention to the fundamental economic of the firms and momentum so they can make a strategy of buying, holding, or selling assets. In addition, they may be more careful about cognitive biases in investing such as herding behavior, a behavior of individuals in a group acting collectively without centralized direction.

CONCLUSION AND RECOMMENDATION

The dominance of the previous literature shows that financial literacy affects financial decision-making without considering the simultaneous relationship. However, this study proof that there is a simultaneous relationship between financial literacy and stock market decision making. It should be accommodated by the instrumental variable that reduced biased and parameters inconsistency. The instrumental variable that used in this study is the financial condition of the eldest sibling, because the experience of the oldest sibling is an exogenous variable.

This research found that financial literacy, as measured through an instrumented approach, significantly increased the probability of stock ownership among the younger generation, especially since the implementation of the Government's saving stocks program. A higher financial literacy score was associated with a greater likelihood of investing in stocks, with a potential probability of up to 91.11% for individuals who answered all questions correctly. The likelihood decreased as the number of correct answers diminished. For those with no correct answers, the probability of investing in stocks was extremely low, at just 0.76%. A robustness test was also conducted. When the simultaneous relationship was not considered, the probabilities were notably lower. This study shows that inappropriate estimation methods will result in underestimates.

This research was conducted using a simple financial literacy instrument. However, more advanced and developed instruments have since emerged. These instruments also include topics such as investment and risk diversification. This study found that respondents were not sufficiently literate in these areas. It is important to note that this study is not intended to evaluate the effectiveness or benefits of the program in increasing KSEI's Single Investor Identification (SID).

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