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Financial Literacy, Financial Fragility, and Financial Well-being Among Generation-Z University Students in Indonesia

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Abstract

This research aims to investigate the correlation between financial literacy and financial fragility as well as financial well-being, along with identifying what factors influence these three financial components. We create an online questionnaire and distribute it to 317 university students that are part of Generation-Z students in Indonesia. The data analysis method uses the logistic regression model and marginal effect analysis. The research's findings shows that educational background of father and the behavior of recording transactions are the factors influencing financial literacy. In addition, the level of financial fragility and financial well-being has been found to be affected by the father's education, parent's income, and investment experience. It is also proven that financially literate people are capable of withstanding unexpected financial crisis. Finally, the result shows that financial literacy is a key to achieving financial well-being at an early age. Therefore, policy maker should be aware of this situation and increase financial education for young generations.

Keywords : Financial fragility, Financial literacy, Financial well-being
JEL Classification : G01, G53, I31

1. Introduction

Financial literacy is all about having the knowledge to understand financial matters, evaluate financial opportunities, make future financial choices, and to appropriately respond to changes in the global economy (Philippas & Avdoulas, 2020). In 2013, there was a questionnaire done by the Financial Services Authority of Indonesia (Otoritas Jasa Keuangan) to measure the degree of financial literacy of Indonesian people. It has been discovered that Indonesia has categorized the level of financial literacy into four levels (Iriani et al., 2021), which are well literate (21.84%), sufficient literate (75.6%), less literate (2.06%), and not literate (0.41%). However, Indonesia still has a lower financial literacy index compared with other countries in Asia-Pacific. According to Tambunlertchai (2015) Indonesia ranks 14 out of the 16 countries in Asia-Pacific, to be specific the financial literacy index of Indonesia (60) still lost to Singapore (72), Malaysia (70), Thailand (68), and Vietnam (68). It shows that although Indonesia has grown in their financial literacy index in the past few years, Indonesia still have a low level of financial literacy compared to other countries and still have room to improve their financial literacy. This study aims to analyze the influence of parent's socioeconomics and financial behavior towards financial literacy of Indonesian people.

In early 2020, a global financial crisis struck the world which was the COVID-19 crisis. It has shocked and caused both health issues and financial problems to people in the world (The Organization for Economic Cooperation and Development, 2020). One of the countries that experienced a severe financial shock was Indonesia, which caused many Indonesians to experience financial fragility as a result of COVID-19. Financial fragility can be measured by how confident you are to raise a certain amount of money if an unexpected crisis arises (Lusardi et al., 2011). In 2019, the level of unemployment rate in Indonesia reached 5.23%. While in 2020 when COVID-19 crisis struck, there's an increase in the unemployment rate in Indonesia to 7.07% (Badan Pusat Statistik (BPS), 2020). This shows that many Indonesians are unable to raise money to fulfill their daily needs during the financial crisis of COVID-19. And so, this study will be discussing how financially fragile the young generation is in accordance to COVID-19 financial crisis and to understand what factors influence the level of financial fragility.

The aims of our research is investigating the correlation between financial well-being, literacy, and fragility (Philippas & Avdoulas, 2020; Shankar et al., 2022) in Indonesia, along with identifying the impact of parent's socioeconomics and financial behavior towards these three financial components. The main result of our study shows that financial literacy is found to be influenced by father's education and the behavior of recording expenses. On the other hand, financial fragility is affected by father's education, parent's income, investment experience, and financial literacy. Our study have enough evidence to show that financial literacy have a negative impact towards the level of financial fragility. Finally, The level of financial well-being has been found to be influenced by age, father's education, parent's income, investment experience, financial literacy, and financial fragility. It is proven from our study that financial literacy have a positive impact towards the level of financial well-being, while financial fragility have a negative impact towards the level of financial well-being. The outcome of our research have similar findings from earlier studies such as Lusardi et al. (2011), Rahman et al. (2021), Nicolini et al. (2013), Philippas and Avdoulas (2020), and Shankar et al. (2022).

2. Hypotheses Development

According to Philippas & Avdoulas (2020), financial literacy is a skill to comprehend and evaluate every possibilities related to financing, make future financial decisions, and act properly to the change that happens in the global economy. Previous study defines financial literacy as the ability for making wise financial judgments and comprehending fundamental financial concepts (Chhatwani & Mishra, 2021). The study from Webley & Nyhus (2006) showed that parent's behavior including teaching financial matters to children, could have an impact in developing children's financial behavior. Philippas & Avdoulas (2020) demonstrates that education level of parents and the behavior of recording expenses influence the level of financial literacy of a student. This happens because the education level of parents will determine what jobs will they do for a living. The higher the level of education, the higher the chance of having a decent job. A decent job will certainly teach people all kinds of education including financial matters. If the parents have enough financial knowledge, it will certainly pass down to its children.

H_1: Parent's socioeconomics and financial behavior have positive influence on the level of financial literacy.

Financial fragility occurs when there is a shock to the economy that leads to financial instability (Schroeder, 2009), such as high unemployment rate, decline in the GDP, rise in uncertainty, chaos in the stock market, etc. COVID-19 crisis has shocked the world's economy and created massive problems financially. The shock has significantly strained the global financial system (The Organization for Economic Cooperation and Development, 2020). COVID-19 match several indicators of, therefore financial fragility has more than enough evidence to make someone become financially fragile. Study from Hanson & Olson (2018) suggested that parents have the strongest influence when it comes to handling financial matters on a child's or household's life. This happens because parents have the highest financial knowledge in a family which comes from their education and jobs. The higher the level of education and work experience parents have, the better equipped they will be to handle financial matters or financial crisis should it ever occur. In addition, research about financial behavior from Shankar et al. (2022) describes financial behavior as an indicator that can influence the level of financial fragility. The reason is good financial behavior such as depositing money and saving money in the bank will lead to less financial stress. Furthermore, according to Clark et al. (2020), there is a good signs that more financial knowledge in a student will result in lower chance of them being financially fragile. The reason is because those who are more financially educated have made wiser judgments or decision on spending and saving money, which has allowed them to more easily endure economic shocks or crisis.

H_2: Parent's socioeconomics and financial behavior have positive influence on the level of financial literacy.

H_3: Financial literacy have negative influence towards financial fragility.

According to Brüggen et al. (2017), financial well-being is defined as the idea that one may maintain their current and future desirable quality of life and financial freedom. Another definition from CFPB (2017) is that financial well-being refers to a condition where an individual can fulfill their financial obligations, can have confidence about their finances in the future, and be able to make decisions that enable them to have an enjoyable life. The study from Shankar et al. (2022) shows that financial behavior can influence the level of financial well-being because good financial behavior leads to less financial stress. The less financial stress a students have, the more chance that they will experience financial stability in early age. This argument is supported by the study of Smithikrai & Phetkham (2019), it is found that a good financial literacy will result in good self-control which then will increase the financial behavior of students. A good financial behavior may result in better financial stability. So, financial literacy has a positive influence on financial well-being. On the other hand, according to the study from Rahman et al. (2021) on Malaysian low-income community, it is discovered that people that experiencing financial fragility is the one that can't control the rate of his/her debt. The inability to control the rate of debt complicates one's financial well-being (Ramli et al., 2022). Therefore, the study shows that financial fragility has a negative influence to the financial well-being.

H_4: Parent's socioeconomics and financial behavior have positive influence on the level of financial well-being.

H_5: Financial literacy have positive influence towards financial well-being.

H_6: Financial fragility have negative influence towards financial well-being.

3. Method, Data, and Analysis

Sample and Data Selection.

The population for this research is the people from Generation-Z, the sample used to represent it are the university students in Indonesia, especially those who are in the batch of 2019, 2020, and 2021. For this study, the sample design used is the purposive sampling which considered as non-probability sampling. The reason because the sample of the research targets a specific class or batch of the university student which are those in the batch of 2019, 2020, and 2021. To the determine the sample size, this study refer to the guidance from Chee Haur et al. (2017) and Sekaran & Bougie (2016), where the minimum of respondents needed are 300 respondents. In this research, the method of data collection is using questionnaire. The questionnaire was created using Google Form and will be distributed online to the university students in Indonesia with the help of social media platforms including WhatsApp group, Line group, and Instagram.

Empirical Models.

In this study, the researcher uses logistic regression models because the response of the dependent variables are dichotomous or categorical (Barbić et al., 2016). Dichotomous or categorical means that the data only have two possible outcomes, either success that usually denoted as "1" and unsuccess usually denoted as "0" (Ainiyah et al., 2016).

The following are the formula used in a logistic regression model:

$$pi = \frac{e^{\beta 0} + \beta iXi}{1 + e^{\beta 0} + \beta iXi}$$

$$odd\ ratio = \frac{pi}{1 - pi} = e^{\beta 0} + \beta iXi$$

$$\log odd\ ratio = log\frac{pi}{1 - p} = \beta 0 + \beta iXi$$

Three logistic regression models have been developed for this study. The first model analyzes the likelihood of students becoming financially literate by checking the influence of parent's socioeconomics and financial behavior. The second model analyzes the likelihood of students becoming financially fragile by checking the influence of parent's socioeconomics, financial behavior, and financial literacy. The third model analyzes the likelihood of students achieving financial well-being by checking the influence of parent's socioeconomics, financial behavior, financial literacy, and financial fragility. All of the three regression models contains control variable which are "age", "gender", and "work experience". The following are the logistic regression models:

$$\log\left(\frac{p(Fli)}{1 - p(Fli)}\right) = \beta 0 + \beta 1FEi + \beta 2MEi + \beta 3FOi + \beta 4MOi + \beta 5Pli + \beta 6REi + \beta 7SMi + \beta 8IEi + B9AGi + \beta 10GDi + \beta 11WEi + \varepsilon i$$

$$\log\left(\frac{p(FFi)}{1 - p(FFi)}\right) = \delta 0 + \delta 1FLi + \delta 2FEi + \delta 3MEi + \delta 4FOi + \delta 5MOi + \delta 6Pli + \delta 7REi + \delta 8SMi + \delta 9IEi + \delta 10AGi + \delta 11WEi + \delta 12WEi + \varepsilon i$$

$$\log\left(\frac{p(FWBi)}{1 - p(FWBi)}\right) = \gamma 0 + \gamma 1FLi + \gamma 2FFi + \gamma 3FEi + \gamma 4MEi + \gamma 5FOi + \gamma 6MOi + \gamma 7Pli + \gamma 8REi + \gamma 9SMi + \gamma 10IEi + \gamma 11AGi + \delta 12GDi + \delta 13WEi + \varepsilon i$$

Where: $p(FWB_i)$= Probabilities of having Financial Well-Being; $1\text{-}p(FWB_i)$= Probabilities of not having Financial Well-Being; $p(Fl_i)$= Probabilities of becoming Financially Literate; $1\text{-}p(Fl_i)$= Probabilities of becoming Financially Illiterate; $p(FF_i)$ = Probabilities of becoming Financially Fragile; $1\text{-}p(FF_i)$ = Probabilities of not becoming Financially Fragile; Fl_i= Financial Literacy; RE_i= Recording Expense; FF_i= Financial Fragility; SM_i= Managing and Saving Money; FE_i= Father's Education; IE_i= Investment Experience; ME_i= Mother's Education; AG_i= Age (Control Variable); FO_i= Father's Occupation; GD_i= Gender (Control Variable); MO_i= Mother's Occupation; WE_i= Work Experience (Control Variable); Pl_i= Parent's Income; e_i= Error term.

In a logistic regression, every independent variables that are being tested will produce an odd ratio. This odd ratio will demonstrates how much influence the independent variable has on the likelihood that an event will happen. Another method that can be use to further strengthen the odd ratio's result is by using the marginal effect. The marginal effect analysis can evaluate how do the predicted probability vary when the independent variable's response change from 0 to 1 (Philippas & Avdoulas, 2020). Keep in mind that marginal effect calculate the difference between probability of success when the independent variable is equal 1 and equal to 0, while hold other independent variable at their means (Long & Mustillo, 2021).

$$Xi = P(Y = 1 \mid X, X_1 = 1) - P(Y = 1 \mid X, X_i = 0$$

Where X_i= independent variable; Y= Dependent variable; $P(Y=1 \mid X,X_1=1$= Probabilities on success if independent variable is 1 $P(Y=1 \mid X,X_1=0$= Probabilities on success if independent variable is 0.

4. Results

Profile of Respondents

According to the data that has been gathered, there are 317 respondents who filled out the questionnaire. The sample amounted was 317 which is enough to represent the target population of this research since the minimum respondents needed are 300 respondents (Chee Haur et al., 2017; Sekaran & Bougie, 2016). Our target respondents are university student in Indonesia who are in the batch of 2019, 2020, and 2021. Our respondents who are from batch 2019 amounted 137 respondents (43%), batch 2020 amounted 97 respondents (31%), and batch 2021 amounted 83 respondents (26%). The majority of our respondents are from the Faculty of Economics and Business where there are Management major (42%) and Accounting major (26%), the rest of the respondents comes from various faculties such as Food Technology major (15%), Psychology major (3%), Pharmacy major (3%), and other faculties (11%).

Descriptive Statistics

All of the respondent's answer are summarized and categorized between man, woman, and whole sample. In Table 1 there are 3 sections that gives all information about respondent's demographic characteristics, their parent's socioeconomics, and financial behavior characteristics, The first section of the table shows that our respondents includes 32.5% male students and 67.5% female students. The majority age of the respondents are around 17-21 years old (92.4%), the rest of the respondents are in the age between 22-26 years old (6.9%) and below 17 years old (0.6%). When it comes to working experience, about 84.2% of the respondents do not have any working experience, about 12.6% have 1-2 years of working experience, and about 3.2% of respondents that have more than 3 years of working experience.

Next section, the respondents answer about their parent's education level and employment status. About 58.7% of the respondent had a father with Bachelor's degree or Master's degree. On the other hand, about 56.8% had a mother with a Bachelor's or Master's degree. Of all the entire sample, 86.8% answer their father are either working or running own business, while 49.8% answer their mother is unemployed. The survey also asked the respondents about their parent's income, and the respondent's answer are pretty balance throughout the five answer options.

When it comes to financial behavior, the survey asked respondents about their behavior towards recording expenses, saving money, and investing money. The table shows that about 59.3% of the respondent do keep track daily cost and about 95.3% are able to manage their money and save money in their bank account. Lastly, 63% of respondents indicated that they had invested their money. Investment experience is a good habit that give indication of good financial behavior that leads to good money management.

Table 1. Respondent's Demographic, Parents Socioeconomics, Financial Behavior Answer

Variables		Female Student		Male Student		Entire Sample	
		y	%	y	%	y	%
Demographic Characteristics Gender (GD)		214	67.5	103	32.5	317	100.0
Age (AG)	< 17 years' old	1	0.30	1	0.30	2	0.60
	17–21 years' old	202	63.7	91	28.7	293	92.4
	22–26 years' old	11	3.5	11	3.50	22	6.90
	27–31 year's old	0	0.0	0	0.00	0	0.00
	> 31 year's old	0	0.0	0	0.00	0	0.00
Working Experience (WE)	Does not have any working experience	187	59.0	80	25.2	267	84.2
	1 – 2 years	21	6.60	19	6.00	40	12.6
	3 – 5 years	2	0.60	3	0.90	5	1.60
	5 – 7 years	4	1.30	1	0.30	5	1.60
	> 7 years	0	0.00	0	0.00	0	0.00
Parent's Socioeconomics Father's Education (FE)	No educations	0	0.00	0	0.00	0	0.00
	Primary school's degree	8	2.50	8	2.50	16	5.00
	Junior high school's degree	12	3.80	5	1.60	17	5.40
	Senior high school's degree	73	23.0	25	7.90	98	30.9
	Bachelor's degree	92	29.0	45	14.2	137	43.2
	Master's degree	29	9.10	20	6.30	49	15.5
Mother's Education (ME)	No educations	0	0.00	1	0.30	1	0.30
	Primary school's degree	12	3.80	6	1.90	18	5.70
	Junior high school's degree	9	2.80	5	1.60	14	4.40
	Senior high school's degree	69	21.8	35	11.0	104	32.8

Variables		Female Student		Male Student		Entire Sample	
		y	%	y	%	y	%
	Bachelor's degree	110	34.7	51	16.1	161	50.8
	Master's degree	14	4.40	5	1.60	19	6.00
Father's Occupation (FO)	Unemployed	29	9.10	13	4.10	42	13.2
	Employed or running own business	185	58.4	90	28.4	275	86.8
Mother's Occupation (MO)	Unemployed	112	35.3	47	14.8	159	50.2
Parent's Income (PI)	Under IDR. 4.500.000	58	18.3	19	6.00	77	24.3
	IDR. 4.500.000 – 7.499.000	45	14.2	26	8.20	71	22.4
	IDR. 7.500.000, – IDR. 15.000.000	45	14.2	11	3.50	56	17.7
	IDR. 15.000.000 – IDR.30.000.000	41	12.9	22	6.90	63	19.9
	More than IDR. 30.000.000	25	7.90	25	7.90	50	15.8
Financial Behavior Recording Expenses (RE)	Never	96	30.3	33	10.4	129	40.7
	Rarely	43	13.6	22	6.90	65	20.5
	Sometimes	20	6.30	12	3.80	32	10.1
	Usually	22	6.90	16	5.00	38	12.0
	Always	33	10.4	20	6.30	53	16.7
Manage and Saving Money in Bank Account (SM)	Never	10	3.20	5	1.60	15	4.70
	Rarely	4	1.30	1	0.30	5	1.60
	Sometimes	65	20.5	23	7.30	88	27.8
	Usually	63	19.9	33	10.4	96	30.3
	Always	72	22.7	41	12.9	113	35.6
Investment Experience (IE)	Never	94	29.7	23	7.30	117	36.9
	Rarely	41	12.9	17	5.40	58	18.3
	Sometimes	21	6.60	19	6.00	40	12.6
	Usually	23	7.30	19	6.00	42	13.2
	Always	35	11.0	25	7.90	60	18.9

Table 1 shows all of the respondent's answer to financial literacy questions. There are 5 questions related to interest rate, compound interest rate, time value of money, inflation, and diversification of risk. In order to determine the level of financial literacy in students, students that answer four or five questions correctly are considered to have a good financial literacy (Philippas & Avdoulas, 2020). Based on the data from the entire sample, the level of financial literacy of university students in Indonesia is 46%. If we break down all the questions, the question about diversification of risk had the highest percentage of correct answers (72.2%), followed by questions about interest rates (68.1%) and inflation (67.8%).

Table 2. Respondent's Answer towards Financial Literacy Questions

	Female Student		Male Student		Entire Sample	
	Frequency	%	Frequency	%	Frequency	%
Question 1 - Let's assume you need to buy gift for your friend but you don't have enough money. You decide to borrow IDR. 100.000,00 from your sibling with interest to be paid. Which option would you choose, if you had to repay back the loan money plus the interest to your sibling?						
IDR. 100.000,00 + 3%	145	45.7	71	22.4	216	68.1
IDR. 105.000,00	46	14.5	22	6.90	68	21.5
Question 2 - Let's assume you deposit cash for 2 years. The interest rate given by the bank is 3% per year. Suppose you didn't add and withdraw cash from your bank account, will the bank give you the same amount of money in year one and year two?						
No, the amount of money that the bank give in the second year will be more than in the first year	135	42.6	69	21.8	204	64.4
Yes, the amount of money that the bank give for both years	51	16.1	22	6.90	73	23.0

	Female Student		Male Student		Entire Sample	
	Frequency	%	Frequency	%	Frequency	%
will be exactly the same						
I do not know the answer	28	8.80	12	3.80	40	12.6
Question 3 - Assume you deposit IDR. 1.000.000,00 in your bank account and the interest rate the bank gives is 5% per year. Suppose you didn't add and withdraw cash from your bank account, what will your total cash be in your account within the next 5 years?						
The amount of money will be more than IDR. 1.250.000,00 after 5 years	99	31.2	49	15.5	148	46.7
The amount of money will be exactly IDR. 1.250.000,00 after 5 years	62	19.6	33	10.4	95	30.0
The amount of money will be less than IDR. 1.250.000,00 after 5 years	30	9.50	11	3.50	41	12.9
I do not know the answer	23	7.30	10	3.20	33	10.4
Question 4 - Imagine in the next 10 years, the price of any products you buy will be doubled and at the same time your salary will also be doubled. Is the amount of product you can buy less/equal/more than the amount you can buy now? Will the amount of product you be able to purchase is lower/equal/higher than the amount you are able to purchase now?						
Lower than	32	10.1	19	6.00	51	16.1
Equal	147	46.4	68	21.5	215	67.8
Higher than	22	6.90	7	2.2	29	9.10
I do not know the answer	13	4.10	9	2.8	22	6.90
Question 5 - Let's say you have some extra money to spare. Would you rather invest it into a single company's stock? Or do you favor spreading it among various companies' stock?						
Single company's stock	44	13.9	19	6.00	63	19.9
Various companies' stock	155	48.9	74	23.3	229	72.2
I do not know the answer	15	4.70	10	3.20	25	7.90
No Correct Answer	9	2.80	7	2.21	16	5.00
One Correct Answer	23	7.30	8	2.52	31	9.80
Two Correct Answers	26	8.20	16	5.05	42	13.2
Three Correct Answers	59	18.6	23	7.26	83	26.2
Four Correct Answers	56	17.7	23	7.26	79	24.9
Five Correct Answers	41	12.9	26	8.20	67	21.1

Table 2 shows all of the respondent's answer to financial fragility questions. There are 4 questions used to interpret whether a respondent is financially fragile or not. Each questions have 5 answer options. Option answer number 1,2 and 3 are considered as the correct answer and if a respondent answer three or four answers correctly it shows that the respondent is financially fragile. The table shows that the level of financial fragility of university students in Indonesia is 22.1%. About 76.3% are confident that they can fulfill their daily expenses during COVID-19 crisis. The majority prefer to use either own cash (15.1%) or debit cards (55.5%) to pay their expenses, while some of them tend to pay using loan (25.9%) which indicates that they are financially fragile. When it comes to income changes, about 60.9% of the respondents answer that they experience a decrease between 0 - 50% in their income.

Table 3. Respondent's Answer towards Financial Fragility Questions

No	Questions		Female Student		Male Student		Entire Sample	
			Frequency	%	Frequency	%	Frequency	%
1	How confident are you to fulfill your daily expenses	I'm sure that I couldn't	4	1.30	9	2.80	13	4.10
		I couldn't	10	3.20	5	1.60	15	4.70
		Maybe I couldn't	33	10.4	14	4.40	47	14.8

No	Questions		Female Student		Male Student		Entire Sample	
			Frequency	%	Frequency	%	Frequency	%
	during COVID-19 crisis?	Maybe I could	119	37.5	57	18.0	176	55.5
		I'm sure that I could	48	15.1	18	5.70	66	20.8
		I would not be able to pay for those expenses	5	1.60	6	1.90	11	3.50
2	How would you pay for unexpected expenses during COVID-19 crisis?	Loan money from the bank or use credit card	19	6.00	12	3.80	31	9.80
		Borrow money from friends and family	31	9.80	20	6.30	51	16.1
		Use debit card or other sort of savings	132	41.6	44	13.9	176	55.5
		Use cash	27	8.50	21	6.60	48	15.1
3	Income Changes	Decreased over 50 out of monthly income	20	6.30	14	4.40	34	10.7
		Decreased 20 – 50 out of monthly income	47	14.8	28	8.80	75	23.7
		Decreased under 20 out of monthly income	56	17.7	28	8.80	84	26.5
		Almost no change	52	16.4	23	7.30	75	23.7
		No change	39	12.3	10	3.20	49	15.5
4	Standard of Living Changes	Greatly decreased	18	5.70	8	2.50	26	8.20
		Decreased	22	6.90	16	5.00	38	12.0
		Maybe decreased	44	13.9	17	5.40	61	19.2
		A little bit decreased	55	17.4	41	12.9	96	30.3
		Do not decreased	75	23.7	21	6.60	96	30.3
	No Correct Answer		58	18.3	17	5.40	75	23.7
	One Correct Answer Two Correct Answers Three Correct Answers		66	20.8	33	10.4	99	31.2
	Two Correct Answers		47	14.8	26	8.20	73	23.0
	Three Correct Answers		23	7.30	16	5.00	39	12.3
	Four Correct Answers		20	6.30	11	3.50	31	9.80

Table 3 shows all of the respondent's answer to financial well-being questions. There are 3 questions used to determine whether a respondent achieve financial well-being or not. Each questions have 5 answer options. Option answer number 4 and 5 are considered as the correct answer and if a respondent answer two or three answers correctly it shows that respondents have financial well-being. The table shows that the degree of financial well-being at the university students in Indonesia is 60.2%. About 59.9% of the respondents are satisfied with their current financial condition. If they have to rate their overall financial situations, most of the respondents answer moderate (31.2%) and good (43.5%), only a few of the respondent that describe their overall financial situation as very bad (3.2%). Furthermore, about 74.1% of the respondents are able to cover their daily expenses.

Table 4. Respondent's Answer towards Financial Well-Being Questions

No	Questions		Female Student		Male Student		Entire Sample	
			Frequency	%	Frequency	%	Frequency	%
1	How satisfied are you about your financial condition?	No, I'm not satisfied	21	6.6	8	2.5	29	9.1
		Maybe I'm not satisfied	25	7.9	15	4.7	40	12.6
		Maybe, I'm a little satisfied	42	13.2	16	5.0	58	18.3
		Maybe I'm satisfied	70	22.1	34	10.7	104	32.8

No	Questions		Female Student		Male Student		Entire Sample	
			Frequency	%	Frequency	%	Frequency	%
		Yes, I'm satisfied	56	17.7	30	9.5	86	27.1
2	How would you rate your overall financial situations	Very bad	8	2.5	2	0.6	10	3.2
		Bad	26	8.2	21	6.6	47	14.8
		Moderate	73	23.0	26	8.2	99	31.2
		Good	93	29.3	45	14.2	138	43.5
		Very good	14	4.4	9	2.8	23	7.3
3	Cover Daily Expenses	Never	1	0.3	3	0.9	4	1.3
		Almost Never	3	0.9	6	1.9	9	2.8
		Maybe	42	13.2	24	7.6	66	20.8
		Most of the times	98	30.9	37	11.7	135	42.6
		Always	70	22.1	30	9.5	100	31.5
	No Correct Answer		29	9.1	16	5.0	45	14.2
	One Correct Answer		53	16.7	28	8.8	81	25.6
	Two Correct Answers		48	15.1	17	5.4	65	20.5
	Three Correct Answers		84	26.5	42	13.2	126	39.7

The next step is we conduct the marginal effect test to measures how much change the probability of financially literate students will be when the independent variables change from 0 to 1, despite maintaining the other independent variable at mean. Table 5. shows that student whose father holds Bachelor's degree has 0.145 higher predicted probabilities of having high financial literacy than student whose father have senior highschool degree or less. Students that develop a habit of recording daily expenses have 0.208 higher predicted probabilities to have financial literacy than those who does not have such habit. The result of the marginal effect analysis support the result of the odd ratio where parent's education and financial behavior influence on the level of financial literacy.

Table 5. Logistic Regression and Marginal Effect Result for Financial Literacy

Variable		Logistic Regression Model		Marginal Effect
		Coefficient	Odd Ratio	dy/dx
Demographic Characteristics		-0.017	0.983	-0.004
Gender (GD)				
Age (AG)	17 - 21 years old	0.506	1.659	0.114
	22 - 26 years old	-0.720	0.487	-0.163
Working Experience (WE)	Does not have any working	0.167	1.182	0.038
	3 - 5 years	0.409	1.505	0.092
	5 - 7 years	0.144	1.155	0.033
Parent's Socioeconomics				
Father's Education (FE)	Bachelor's degree	0.644**	1.904**	0.145**
Father's Education (FE)	Bachelor's degree	0.644**	1.904**	0.145**
Father's Occupation (FO)	Employed or running own business	0.097	1.102	0.022
Mother's Occupation (MO)	Employed or running own business	0.196	1.216	0.044
Parent's Income (PI)	IDR.4.500.000-IDR7.499.000	-0.370	0.691	-0.084
	IDR.7.500.000,–IDR15.000.000	0.007	1.007	0.002
	IDR15.000.000-IDR30.000.000	0.246	1.279	0.056
	More than IDR30.000.000	-0.034	0.967	-0.008
Financial Behavior				
Recording Expenses (RE)	Always	0.919**	2.507**	0.208**
Manage and Saving Money in Bank Account (SM)	Always	1.241	3.459	0.280
Investment Experience (IE)	Always	0.222	1.249	0.050
Constant		-1.719	0.179	

Goodness of Fit Test				
Hosmer and Lemeshow Test			10.36	

* represent a p-value < 0.10; ** represent a p-value < 0.05; *** represent a p-value < 0.01

The next step is we conduct the marginal effect test to measures how much change the probability of financially fragile students will be when the independent variables change from 0 to 1, despite maintaining the other independent variable at mean. Table 6 shows that students whose father holds a Bachelor's degree have 0.099 higher predicted probability of avoiding financial fragility than students whose father have senior high school degree or less. It is shown that students whose parents earn between IDR. 15.000.000,00 – IDR. 30.000.000,00 have 0.174 predicted probabilities of having low financial fragility compare to those whose parents didn't earn that much. Students who has an investment experience and have a habit of investing their money are 0.240 times more likely to avoid financial fragility than those who didn't develop these financial behavior. Last but not least, students who are financially literate have 0.140 greater predicted probabilities of avoiding financial fragility than those who are financially illiterate. The result of this marginal effect analysis support the result of the odd ratio where parent's education and income, financial behavior, and financial literacy influence on the level of financial fragility.

Table 6. Logistic Regression and Marginal Effect Result for Financial Fragility

Variable		Logistic Regression Model		Marginal Effect
		Coefficient	Odd Ratio	dy/dx
Demographic Characteristics		0.051	1.052	0.008
Gender (GD)				
Age (AG)	22 - 26 years old	-0.031	0.970	-0.005
Working Experience (WE)	1-2 years	0.140	1.150	0.022
Parent's Socioeconomics				
Father's Education (FE)	Bachelor's degree	0.642**	0.526**	0.099**
Father's Education (FE)	Bachelor's degree	0.378	1.460	0.058
Father's Occupation (FO)	Employed or running own business	-0.079	0.924	-0.012
Mother's Occupation (MO)	Employed or running own business	-0.290	0.748	-0.045
Parent's Income (PI)	IDR.4.500.000-IDR.7.499.000	-0.561	0.571	-0.087
	IDR.7.500.000,–IDR15.000.000	-0.157	0.855	-0.024
	IDR15.000.000-IDR30.000.000	-1.129**	0.323**	-0.174**
Financial Behavior				
Recording Expenses (RE)	Always	-0.238	0.788	-0.037
Manage and Saving Money in Bank Account (SM)	Always	-0.258	0.772	-0.040
Investment Experience (IE)	Always	-1.556*	0.211*	-0.240*
Financial Literacy	Literate	-0.904***	0.405***	-0.140***
Constant		0.738	2.091	
Goodness of Fit Test				
Hosmer and Lemeshow Test			8.38	

* represent a p-value < 0.10; ** represent a p-value < 0.05; *** represent a p-value < 0.01

The next step is we conduct the marginal effect test to measures how much change the probability of high financial well-being students will be when the independent variables change from 0 to 1, despite maintaining the other independent variable at mean. Table 7 shows that students who are in the age of between 22 and 26 have 0.221 higher predicted probabilities of having high financial well-being than those who are in the age under 22. Those whose father holds Bachelor's degree has 0.177 higher predicted probabilities of achieving high financial well-being than students whose father have senior high school degree or less. Furthermore, students whose parents earn more than IDR. 7.500.000,00 per month have 0.133 – 0.312 greater probabilities of having financial well- being than students whose parents earn less than IDR. 7.500.000,00.

Table 7. Logistic Regression and Marginal Effect Result for Financial Well-Being

Variable		Logistic Regression Model		Marginal Effect
		Coefficient	Odd Ratio	dy/dx
Demographic Characteristics		0.387	1.472	0.072
Gender (GD)				

Variable		Logistic Regression Model		Marginal Effect
		Coefficient	Odd Ratio	dy/dx
Age (AG)	22 - 26 years old	1.191*	3.290*	0.221*
Working Experience (WE)	1-2 years	-0.681	0.506	-0.127
Parent's Socioeconomics				
Father's Education (FE)	Bachelor's degree	0.955**	2.598**	0.177**
Father's Education (FE)	Bachelor's degree	-0.415	0.660	-0.077
Father's Occupation (FO)	Employed or running own business	-0.274	0.761	-0.051
Mother's Occupation (MO)	Employed or running own business	-0.074	0.929	-0.014
Parent's Income (PI)	IDR.7.500.000-IDR.15.000.000	0.714*	2.042*	0.133*
	IDR.15.000.000,–IDR.30.000.000	1.604***	4.971***	0.298***
	More than IDR. 30.000.000	1.679***	5.361***	0.312***
Financial Behavior				
Recording Expenses (RE)	Always	0.380	1.462	0.070
Manage and Saving Money in Bank Account (SM)	Always	0.892	2.440	0.166
Investment Experience (IE)	Always	0.785*	2.191*	0.146*
Financial Literacy	Literate	0.319**	1.376**	0.059**
Financial Fragility	Fragile	-0.879**	0.415**	-0.163**
Constant		-2.660**	0.070**	
Goodness of Fit Test				
Hosmer and Lemeshow Test			4.24	

* represent a p-value < 0.10; ** represent a p-value < 0.05; *** represent a p-value < 0.01

5. Discussion

Determinant of Financial Literacy

The result suggested that "Father's Education" and "Recording Expense" are the variables that statistically significant to influence the level of financial literacy of a student. This logistic regression model have passed the Hosmer and Lemeshow Test, indicating that this model is fit and match with the data gathered. Those with a father who holds a Bachelor's degree are 1.904 times more likely to be financially literate than those who have a father with senior high school degree or less. This shows that a father's education will influence the level of financial literacy of a student. In addition to that, students who have a habit of recording their daily expenses have 2.507 greater chance of becoming financially literate than students without such habit. It implies that a good financial behavior such as recording expenses will result in higher financial literacy.

Determinant of Financial Fragility

Table 6 shows the logistic regression result for financial fragility. The results suggest that "Father's Education", "Parent's Income", "Investment Experience" and "Financial Literacy" are the four variables that statistically significant to influence the level of financial fragility of a student. This logistic regression model have passed the Hosmer and Lemeshow Test, indicating that this model is fit and match with the data gathered. Those with a father who holds a Bachelor's degree are 0.526 times more likely not to be financially fragile than those who have a father with senior high school degree or less. Furthermore, students whose parents earn between IDR. 15.000.000,00 and IDR. 30.000.000,00 per month have 0.323 higher chance to avoid financial fragility than those whose parents earn less than IDR. 15.000.000,00 per month. This shows that parent's education and income will influence the level of financial fragility of a student. In addition, financial fragility is more likely to affect students who don't have any investment experience since investing money will improve the likelihood of avoiding fragility by 0.211 times. Lastly, financial literate students are 0.405 times more likely to avoid financial fragility than those who are not financially literate. The reason because financial literacy provides them with knowledge on how to react to unexpected crisis that leads to financial fragility. This concludes that financial literacy have negative influence on financial fragility.

Determinant of Financial Well-Being

Table 7 shows the logistic regression result for financial well-being. The results suggest that "Age", "Father's Education", "Parent's Income", "Investment Experience", "Financial Literacy" and "Financial Fragility are variables that statistically significant to impact the level of financial well-being of a student. This logistic regression model have passed the Hosmer and Lemeshow Test, indicating that this model is fit and match with the data gathered. Financial well-being is 3.290 times more likely to be experienced by students who are in the age between 22 – 26 years old than by students who are under 22. Those with a father who holds a Bachelor's degree have 2.598 higher chance to experience high financial well-being than those who have a father with senior high school degree or less. Furthermore, students whose parents earn more than IDR. 7.500.000,00 per month are 2.042 – 5.361 times more likely to experience financial well-being than students whose parents earn less than IDR. 7.500.000,00 per month. This shows that parent's education and income will influence the level of financial well-being of a student.

In addition, students who get experience or whose parents have taught them about investment have a 2.191 times greater chance of having financial well-being than students without such experience. It implies that good financial behavior such as investing money will result in having financial well-being. Financial literate student have 1.376 higher chance to achieve high financial well-being than those who are financially illiterate. On the other hand, students who are not financially fragile have 0.415 higher chance to achieve high financial well-being than those who are financially fragile. This concludes that financial literacy have positive influence on financial well-being, while financial fragility have negative influence on financial well-being.

The table also shows that students who have experience in investing money have 0.146 higher predicted probabilities to have high well-being than those who doesn't have any investment experience. Last but not least, students who are financially literate has 0.059 higher predicted probability of having high financial well-being than those who are financially illiterate. On the other hand, students who are not financially fragile have 0.163 higher predicted probabilities to have financial well-being than those who are financially fragile. The result of this marginal effect analysis support the result of the odd ratio where age, parent's education and income, financial behavior, financial literacy, and financial fragility influence towards financial well-being.

6. Conclusion, Limitations, and Suggestions

Conclusion

This study aims to investigate the level of financial literacy, fragility, as well as well- being among millennial student in Indonesia. The researcher also focus on investigating the influence of parent's socioeconomics and financial behavior as well as demographic characteristics (age, gender, and work experience) towards these three financial components. Our study shows that a university's students have 46% level of financial literacy, 22.1% level of financial fragility, and 60.2% level of financial well-being. Next, we analyze the data gathered using logistic regression and marginal effect to determine what influence these three financial components. Financial literacy has been found to be influenced by father's education and the behavior of recording expenses. While the level of financial fragility has been found to be influenced by father's education, parent's income, investment experience, and financial literacy. It is proven from our study that financial literacy have a negative impact towards the level of financial fragility. Finally, The level of financial well-being has been found to be influenced by age, father's education, parent's income, investment experience, financial literacy, and financial fragility. It is proven from our study that financial literacy have a positive impact towards the level of financial well-being, while financial fragility have a negative impact towards the level of financial well-being. This concludes our research, we hope that readers would have a better understanding of the importance of the variables influencing a student's financial literacy, fragility, as well as their well-being. We also hope that decision-makers, whether from the government or university management, will begin to be concerned about financial literacy and begin providing financial education for students at their early ages. Financial literacy is an essential key for a student to avoid financial fragility and secure financial well-being at the future.

Limitations, and Suggestions

Just like any other research, our research has it's own limitation. The sample are limited to students at a universty in Indonesia from the batch of 2019, 2020, and 2021. Also the majority of our respondent that answer the questionnaire are from the province of Jakarta and Tangerang. Furthermore, the questions asked in the questionnaire to measure financial literacy are also limited to the knowledge of interest and compound interest rate, time value of money, inflation, and risk diversification. Whilst there are other knowledge related to financial literacy that could be asked to students to better measure their financial literacy such as the knowledge about bonds, stocks, financial technology, cryptocurrency, etc. Therefore, we recommend future researchers to explore and improve this research by investigating the impact of financial technology knowledge such as cryptocurrencies and NFTs towards financial fragility and well-being of university students.

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