DEVELOPMENT AND VALIDATION OF STUDENT'S FINANCIAL ATTITUDE INSTRUMENTS

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ABSTRACT

Financial attitude is an important component in financial literacy. This study aims to develop and validate student financial attitude instruments. This study involved 50 participants and this was in accordance with the number of samples using the Rasch model analysis. Financial attitudes are measured from the dimensions of controlling monthly expenses, setting financial targets for the future, saving money (saving) every month, how to manage money, having and following a monthly spending plan, filling balances on e-money (eg ovo, go-pay, paytren).), compare deals, stay within the available budget or budget and invest regularly. The results showed that the dimensions related to the attitude of investing regularly in the context of students need to be removed because it is not in accordance with the misfit order, namely the value is outside the range of values of MNSQ, OUT.ZSTD and Point Correlation Measurement.

Keywords: Financial attitude, validity, Rasch Model

INTRODUCTION

Literacy has become a global issue, including in Indonesia. Recently, various literacy movements have emerged, including the financial literacy movement. For the Indonesian population, financial literacy has become important. Governments in various parts of the world are trying to continue to improve people's financial literacy by creating or improving national strategies, one of which is through financial education (Atkinson & Messy, 2012). However, the Indonesian government still encounters obstacles and obstacles in efforts to increase financial literacy. The National Financial Literacy Survey conducted by the Financial Services Authority (OJK) in 2013 showed that the financial literacy index for Indonesians was only around 21.8 %, which means that out of every 100 population; only 22 people were categorized as good literacy. However, there was an increase in the financial literacy index of Indonesians from 21.8 % in 20 13 to 29.7 % in 2016 (Financial Services Authority, 2017).

The 2016 Indonesian Public Financial Literacy Index by Province shows DK I Jakarta has the highest financial index at 40.0 %, while the lowest financial literacy

index is in West Papua Province at 19.3%. South Sulawesi Province has a financial index of 28.4 % (Financial Services Authority, 2017)

This situation shows that the Indonesian people, especially the people of South Sulawesi, have not fully shown how to optimize money for productive activities. In addition, the public also did not understand well the various financial products and services offered by formal financial services institutions and were more interested in other investment offers that could potentially harm them. Financial literacy according to the Organization for Economic Co-operation and Development or OECD (2016) is defined as knowledge and understanding of financial concepts and risks, along with motivation, skills and confidence to apply this knowledge and understanding in order to make more effective financial decisions, improve the financial well-being of individuals and communities and participate in the economic sector (OECD/INFE International Survey of Adult Financial Literacy Competencies, 2016) . In another view, financial literacy is defined as a measurement of a person's financial concept, the ability to manage personal finances through making appropriate short-term decisions, long-term financial planning and paying attention to economic conditions (Remund, 2010). In general, financial literacy consists of basic knowledge of finance, the ability to communicate finances, the attitude of managing personal finances. This opinion is approved by (Hung, Parker & Yoong, 2013) that there are four financial literacy, namely financial behavior, financial attitude, financial knowledge and financial capability. The four variables are correlated with each other. Financial attitudes affect financial behavior (Atkinson & Messy, 2012; Stolper & Walter, 2017).

In financial literacy, financial literacy behavior is shaped by the level of education and the level of financial knowledge and financial attitudes (Lusardi & Mitchell, 2014). Financial attitudes have also been identified as an important mediating variable in financial literacy.

In the context of financial literacy, financial attitudes refer to the psychological tendency to decide what is best after considering good and bad when making certain investment decisions (Eagly, AH, & Chaiken, 1993). Several studies have shown the importance of financial attitudes in financial literacy in influencing financial practices and behavior (Loke, 2015). Likewise some researchers such as (Agarwalla et al., 2013);

(Atkinson & Messy, 2012) and (Potrich, Mendes & Da-Silva, 2016) who state financial attitudes as a component of financial literacy.

Financial attitudes are defined as a combination of concepts, information and emotions about learning, which results in readiness to react well (Shockey, 2002). Attitude refers to how a person feels about a personal financial problem as measured by the response to a statement or opinion. Pankow (2003) defines financial attitudes as conditions, states of mind, opinions and judgments about finances. Financial attitudes are measured from the dimensions of controlling monthly expenses, setting financial targets for the future, saving money (saving) every month, how to manage money, having and following a monthly expenditure plan, filling balances on e-money (eg ovo, go-pay, paytren), compare deals, stay within the available budget and invest regularly.

The variable of financial attitudes in some literatures refers to Western studies which still require adjustment, especially in today's context, where the use of e-money as part of the implementation of financial literacy has developed. Therefore, this study aims to adjust the existing instruments as well as validate them using the scientific Rasch analysis model.

METHOD

This study involved 50 student participants in filling out a questionnaire. The number of participants or respondents is appropriate in validating the instrument using the Rasch model analysis. The financial attitude instrument uses a scale developed by Shockey (2002). The scale is formed using nine questions and arranged based on a five-point Likert scale, namely 1 = strongly disagree, 2 = disagree, 3 = doubt, 4 = agree and 5 = very high student financial management. The data from the field were then analyzed using modern analysis techniques Item Respond Theory parameter one or better known as the Rasch Model. The basic principle that underlies the Rasch model is the probability of the respondent to answer any item correctly based on the difficulty of the item and the respondent's ability (Bond & Fox, 2015 ; Boone et al., 2014)

The criteria for item validity and instrument reliability refer to the following criteria:

Item of Fit Order

Testing of the items fit starts from appraisal infit mean square (MNSQ). Based on theory, MNSQ is a comparison between an observation and expectations (Bond & Fox,

2015). The ideal value for the MNSQ is one. To see the suitability of an item, it can be determined from the infit value and outfit Mean Square (MNSQ), Point Measure Correlation (PT-MEA CORR) (Bond & Fox, 2015; Boone et al., 2014)). The MNSQ output value received is shown in table 1.

Then, to check the suitability of items, you can use the Outfit Z-Standard (Zstd) value. Z-Value standardized to provide statistical t test, which measures the probability of counting MNSQ applicable by chance. Zstd is infit min suitability statistical power of two. The item suitability acceptance value for the Z-Standard Outfit (ZSTD) is -2.0 <ZSTD <+2.0. Another criterion for checking item suitability is the Point Measure Correlation (PT-MEA CORR) value. This value is the same as the biserial point correlation on CTT. PT -MEA CORR acceptance values are 0.4 to 0.8. Thus, in this study the value of PMC b isa received is 0.4 to 0.85. PT-MEA CORR items that are negative mean that they do not measure what should be measured and are appropriately aborted.

FINDINGS AND DISCUSSION

The validation of the student financial attitude instrument is explained from the value of the fit order item, Unidimensionality, Reliability and Cronbach's Alpha, Separation and rating scale.

Based on the table 3, item 9 shows invalid or misfit because it has an Out MNSQ value outside the range 0.6 - 1.4; OUT.ZSTD values are outside the range -2 to +2 and the Point Measure Correlation values are outside the range 0.4 to 0.85. While items 1 to item 8 are said to be valid or fit because they meet the Out MNSQ, Out ZSTD and Point Measure Correlation value ranges.

Unidimensionality

The unidimensionality of the instrument is an important measure to evaluate whether the instrument being developed is able to measure what should be measured in this case is a variable or financial attitude construct. Analysis of the Rasch model uses Principal Component Analysis of the residuals, which measures the extent to which the diversity of the instruments measures what should be measured. The following is a presentation of the unidimensionality of financial attitude instruments.

From the table 3, the raw variance data value is 51.7%. This shows that the minimum unidimensionality requirement of 20% can be met. This also means that a

value of more than 40% is better. Another thing, namely the variance that cannot be explained by the instrument should ideally not exceed 15%. The above data shows unexplained variance (Unexplained variance) is all below 15%.

Reliability and Alpha Cronbach

Reliability aims to see the quality of the instrument items as a whole. While the Cronbach Alpha value (KR-20) is intended to see the consistency of interactions between respondents (person) and items as a whole. This follows the reliability value and the Cronbach Alpha (KR-20) financial attitude instrument.

Based on table 4, show reliability value of 0.93. This shows that the overall quality of the items for the measurement of financial attitudes is excellent. Likewise, the KR-20 (Cronbach Alpha) value is 0.81, this means that the interaction between the respondent (person) and the item as a whole is very good .

Grouping (Separation)

Grouping of items can be seen from the value of separation. The greater the separation value, the better the overall quality of the instrument. In more detail, the equations used to group items use the strata separation equation as follows (see table5).

Furthermore, the value of separation is substituted into the following equation

$$H = \frac{[(4 \text{ x Separation}) + 1]}{3}$$

$$H = \frac{[(4 \text{ x } 3.56) + 1]}{3}$$

$$H = \frac{[(14.24) + 1]}{3}$$

$$H = \frac{15.24}{3} = 5.08$$

From the equation, the grouping value is 5.08. This means that there are 5 groups or levels of items.

Rating Scale

The validity analysis of the rating scale is a test carried out to verify whether the rating option used is confusing to the respondent or not. In the instrument used (the financial attitude questionnaire), five answer choices are given in the form of a Likert rating for each item (from a range of strongly agree to strongly disagree). To test

whether the polytomic value or answer choice options on the instrument used are correct or not, the Andrich Threshold analysis is used.

Based on the table 6. under shows the Andrich Threshold value moving from NONE then negative and continues to lead to positive sequentially indicating that the options or options given are valid for the instrument. However, in the table, the Andrich Threshold values are not sequential, namely from -0.12 to -0.52 which should be from -0.52 to -0.12. Therefore, the options for the instrument need to be simplified into 4 options (see table 6).

CONCLUSION

Based on the results of research and discussion, it can be concluded that the financial attitude consists of controlling monthly expenses, setting financial targets for the future, saving money (saving) every month, how to manage money, owning and following a monthly expenditure plan, filling the balance on e-money (for example ovo, go-pay, paytren), compare offers and stay within the available budget.

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REFERENCES

Angela A. Hung; Andrew M. Parker & Joanne Yoong. 2013. Defining and Measuring Financial Literacy. In Final Report to ASHRAE. https://doi.org/10.2139/ssrn.1498674

Atkinson, A., & Messy, F.-A. 2012. Measuring Financial Literacy: Results of the OECD Infe Pilot Study. OECD, 15, 1–73. https://doi.org/https://doi.org/10.1787/bb2cd70c-en

Boone, W. J., Yale, M. S., & Staver, J. R. 2014. Rasch analysis in the human sciences. In Rasch Analysis in the Human Sciences. https://doi.org/10.1007/978-94-007-6857-4

Eagly, A. H., & Chaiken, S. 1993. The psychology of attitudes. Harcourt, Brace, & Janovich.

Loke, Y. J. 2015. Financial Knowledge and Behaviour of Working Adults in Malaysia. Margin, 9(1), 18–38. https://doi.org/10.1177/0973801014557392

Lusardi, A., & Mitchell, O. S. 2014. The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature, 52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

OECD/INFE International Survey of Adult Financial Literacy Competencies. 2016. Organization for Economic Co-operation and Development (OECD). www.oecd.org/finance/OECD-INFE-International-Survey-of-Adult-Financial-Literacy-Competencies.pdf

Otoritas Jasa Keuangan. 2017. Strategi Nasional Literasi Keuangan Indonesia (Revisi 2017). Otoritas Jasa Keuangan, 1–99.

Potrich, Ani Caroline Grigion., Mendes, Vieira Kelmara., & Da-Silva, W. M. 2016. Development of a financial literacy model for university students. *Management Research Review, 39*(3). https://doi.org/10.1108/MRR-06-2014-0143

Remund, D. L. 2010. Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs, 44*(2), 276–295. https://doi.org/10.1111/j.1745-6606.2010.01169.x

Stolper, O. a., & Walter, A. 2017. Financial literacy, financial advice, and financial behavior. *Journal of Business Economics, 87*(5), 581–643. https://doi.org/10.1007/s11573-017-0853-9

TABLE

Table 1. Criteria of Item Infit

	MNSQ	Information
Wright, BD, & Linacre, JM (1994)	0.8 - 2.0	MCQ (High stakes)
	0.7 - 1.3	MCQ (run of mill)
	0.6 - 1.4	Rating Scale (Survey)
	0.5 - 1.7	Clinical observation
	0.4 - 1.2	Judged (agreement encouraged)
Borg & Fox (2015)	**0.7 - 1.3**	(model fit / good fit)
	<0.7	(under fit model)
	> +1.30	(Misfit too broad)
Fischer, WPJr (20007)	<0.33	(weak)
	0.34 - 2.9	(Enough)
	0.50 - 2.0	Well
	0.70 - 1.4	Very good
	0.77 - 1.3	**Special**

Table 2. Misfit Order Item

Item	Statement	IN.MNSQ	OUT. MNSQ	IN.ZSTD	OUT.ZSTD	PTME	Information
1	Control monthly expenses	1.2177	1.0983	1.0312	0.4311	0.4602	Valid
2	Setting financial targets for the future	0.6585	0.5472	-1.6093	-1.9595	0.7102	Valid
3	Save money (save money) every month.	1.0821	0.9834	0.4511	0.031	0.4458	Valid
4	How to manage money	0.983	0.779	0.011	-0.8092	0.6056	Valid

5	Have and follow a monthly expense plan.	0.5668	0.5674	-1.9894	-1.8494	0.7239	Valid
6	Fill in the balance on e-money (eg ovo, go-pay, paytren).	0.9389	1.0702	-0.2491	0.3811	0.6759	Valid
7	Compare offers	1.0275	0.945	0.191	-0.1291	0.705	Valid
8	Stay within the budget or available budget	0.9481	0.9767	-0.1191	0.001	0.6644	Valid
9	Invest regularly	**1.5973**	**2,249**	**2.2016**	**3,5822**	**0.3968**	invalid

Table 3. Standardized Residual variance (in Eigenvalue units)

Dimensions		- Empirical -			Modeled
Total raw variance in observation	=	18.6	100.0%		100.0%
Raw variance explained by measures	=	9 .6	51.7%		50.7 %
Raw variance explained by persons	=	4.9	26.1 %		25.6%
Raw variance explained by items	=	4.8	25.6 %		25.1 %
Raw unexplained variance (total)	=	9 .0	48 .3%	100.0%	49.3%
Unxplned variance in 1st contrast	=	1.9	10.1 %	20.9 %	
Unxplned variance in 2nd contrast	=	1.6	8.7 %	18.0 %	
Unxplned variance in 3rd contrast	=	1.4	7.4 %	15.3%	
Unxplned variance in 4thcontrast	=	1.2	6.2 %	12.9 %	
Unxplned variance in 5th contrast	=	1.0	5.4 %	11.2 %	

Table 4. Reliability Values and Alpha Cronbach

	RMSE MODEL	**REAL RMSE**
Reliability (*Reliability*)	0.93	0.93
Cronbach Alpha (KR-20)	0.81	

Table 5. Grouping Value

	RMSE MODEL	**REAL RMSE**
Measure (Mean)	0.26	0.28
Standard Deviation (SD)	0.99	0.99
Separation	3.79	3.56

Table 6. Summary of Category Structure

OBSERVED CATEGORY				OBSVD SAMPLE		INFIT	OUTFIT	THRESHOLD	MEASURE
OPTION	SCORE	COUNT	%	AVRGE	EXPECT	MNSQ	MNSQ		
1	1	3	1	-0.56	-1.36	1.76	2.96	NONE	(-4.14)
2	2	26	6	-0.58 *	-0.33	0.77	0.68	-3.00	-1.78
3	3	36	8	0.82	0.76	0.99	0.95	-0.12	-0.28
4	4	246	55	2.12	2.10	0.93	1.12	-0.52	1.70
5	5	139	31	3.85	3.87	1.06	1.01	3.64	(4.75)