Advances in Social Science, Education and Humanities Research, volume 343
1st International Conference on Administration Science (ICAS 2019)

Determinants of Students Financial Literacy:

Student survey of faculty of economics Sangga Buana University, Bandung

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***Abstract*—Students must have good knowledge, attitudes, and behaviour in managing personal finance so that there is no failure in managing finances. The purpose of this study was to look at the determinants of the financial behaviour of bachelor students in the Faculty of Economics. The research sample was 100 Economy Faculty students who were still actively studying. Data collection using questionnaires via google form and testing using Logistic Regression with SPSS Version 24. The sampling method uses convenience sampling. The results showed that age, gender, GPA, residence, parental education and parental income, work experience had a significant effect on financial behaviour academic ability. The findings of this study indicate that financial literacy is a determinant of financial behaviour.**

Keywords—financial literacy; logistic regression; financial behavior; GPA; gender

I. INTRODUCTION

Financial intelligence is regarded to be qualified in terms of understanding of high financial literacy. Financial literacy is considered as the ability to read, analyse, manage, and communicate about personal finance that will ultimately have an impact on the material well-being. It is included as the ability to classify financial choices, discuss about money and financial issues, related with every life occurrence which will have implications for financial decisions, including general economic events [1]. Understanding and knowledge of personal finance is needed by humans in order to provide the precise and correct decisions in finance, so needed by everyone to use the products and appropriate financial instruments optimally. Ignorance and lack of knowledge about financial literacy become a thorny issue and a major challenge for society in Indonesia [2]. Students are an integral part of the public that have a very large number and has a significant impact on the development and changes in the nation (agent of change). Students as next and millennial generation will face the increasing complexity of the financial products, services, and markets [3]. But they were impressed to have to get more financial risk in the future than their parents. Students in principle have a choice in terms of making personal decisions regarding to finances. Students apply trial and error principle, nevertheless, this still cannot make the students become an intelligent person in the life. The students were rumoured on various issues whether they are ready to live independently, and initiate a new family reviewed by the financial side [3].

II. THEORETICAL AND FRAMEWORK

Tschache stated that financial literacy is extremely important to express some opinions [4]. Consumers who already have financial literacy can pass through difficult financial times because in principle they have a considerable amount of accumulated savings, insurance and some types of investments. Financial literacy can result in a direct relationship with the positive financial behaviour such as paying bills on time, instalment, saving and using credit cards well. Nguyen et al illustrated that financial literacy is increasingly complex in the last decade with many new financial products [5]. Therefore, to know the risks and benefits, knowledge of financial literacy has become a liability. Individuals who have the financial literacy to make effective use of financial products and services so that individuals will not be easily deceived by people who sell financial products that are not needed and in accordance with the individual. Financial literacy can improve the quality of financial services and will contribute to the positive contribution of economic growth and the welfare state. The increasing complexity of the economy, the needs of the individual must have the financial literacy to manage personal finances. Knowledge of financial literacy is extremely important for individuals, so that they are not wrong in their financial decisions. Knowledge of finance that is not intact, resulting in the loss of the individual. Lusardi and Mitchell gave an overview that financial literacy is extremely important due to several reasons [6]. Consumers who have the financial literacy to get through the difficult financial times because basically they have accumulated savings, buy insurance and investment split into several types. The financial literacy has become increasingly complex over the last few years with the introduction of new financial products. In order to understand the risks and benefits associated with a financial product, the minimum level of financial literacy has become a necessity. Individuals who have the financial literacy to make effective use of financial products and services so that individuals will not be easily deceived by people who sell financial products that are not in accordance with the individual. Financial literacy helps to improve the quality of financial services and contribute to economic growth and development of a country. The increasing complexity of the economy, the needs of individuals and financial products, and the individual must have the financial literacy to manage personal finances. Knowledge of financial literacy is very important for an individual, so that they are not wrong in making their financial decisions. The lacking knowledge of financial literacy, resulting in losses for individuals, either as a result of inflation, a decline in economic conditions both domestically and abroad, or the development system [7]. Hypothesis is a temporary answer or conclusion/is still a presumption that must be tested with the data that has been collected to give directives to the study in accordance with what was expected.

H1: Gender has positive and significant impact on the financial behaviour of students.

Gender has positive and significant impact on financial literacy [8].

H2: The place of residence has positive and significant impact on the financial behaviour of students.

Place of residence has positive and significant impact on the financial behaviour of students [9]. Students who is boarding will be more independent in the conduct of financial operators than the ones who are not in boarding. This is because the boarding students have limited funds so that they will be more careful in the management of finances.

H3: GPA has positive and significant impact on the financial behaviour of students.

Grade-point average has positive and significant impact on the financial behaviour of students [10].

H4: Education of Parents has positive and significant impact on the financial behaviour of students.

According to Ningsih et al on the family environment, financial literacy is supported by parent's education in support in the form of financial education [11]. Education of parents in the family resulted in socio-economic status of students.

H5: Income of Parents has positive and significant impact on the financial behaviour of students. Parents income resulted in an impact on the activities of the learning process and student results will be achieved [12]. The increasing capability in financial decision making is also more careful to allocate spending money earned from the income of parents.

III. METHODOLOGY

This research is quantitative in which samples were chosen depend on the number of indicators in time 5 or 10. Indicators in this study amounted to 16 so that the sample is 80 students with an error level of 5%. The sampling technique is random sampling system [13]. Data collecting method used in this study is through questionnaires in the spread through a google form. This study using logistic regression where the dependent variables is categorical [14].

The analysis model is as follows:

g(x) = β0 + β1 β2 x1 + x2 + x3 + β3 β34x4 +β5 x5

g (x) is the dependent variable in the form of categorical variables with nominal measurement scale, Xp declared independent variables, and β_{jp} is a parameter.

Information:

g (x) = 1 if good financial behaviour and 0 if bad

X1 = Gender of male 1, female 0

X2 = residence instead of boarding 1, boarding 0

X3 = GPA 1 if GPA respondents > 3.0, <3.0 is 0

X4 = Parent's Education 1 if the parents of undergraduate, 0 if the parent is not a scholar

X5 = Parents income 1 if > Rp.5.000.000, 0 if < Rp.5.000.0000

E = Standard Error

β0 = Intercept

β1 = Constant

IV. RESULT

A. Validity and Reliability of Data

Validity test used to measure aspects of a measurement accuracy [15]. The measuring instrument is regarded as valid if it can function with the right size, also has a high accuracy. This means it can identify the small differences that exist in the measured attributes. Validity of test results of the 80 students with the amount of indicator 16, all question is valid by looking significance <0.05.

Tool is used to see the questionnaires in which part of the indicators of the construct [16]. Questionnaires are reliable if the respondent's answer to the statement is consistent over time. Reliability refers to the degree of stability, consistency, predictability, and accuracy. Measurements which have good reliability is a measure that can create reliable data. Of the five variables in the test concluded all the variables are reliable with Cronbach Alpha values> 0.6.

V. ANALYSIS AND DISCUSSION

A. Significance Test of Logistic Regression Model

To test the truth of a logistic regression model revealed the formulation of hypotheses as follows:

$Ho : \beta_i = 0$ (Model no means; gender, place of residence, GPA, education of parents and income of parents does not affect the financial behaviour)

$H_1 : \beta_i \neq 0$ (Model means; gender, place of residence, GPA, education of parents and income of parents have an impact the financial behaviour)

$\alpha = 0,05$

TABLE I. OMNIBUS TESTS OF MODEL COEFFICIENTS

		Chi-square	df	Sig.
Step 1	Step	51.562	5	.000
	Block	51.562	5	.000
	Model	51.562	5	.000

Omnibus test used to test the effect of all independent variables together on the dependent variable. In the omnibus variables above shows the value of X2 goodness of fit test of 51.562 with a significance level of 0.000. If compared with the 5% significance level, the value of significance is obtained smaller so that indicates that all independent variables affect the dependent variable.

TABLE II. MODEL SUMMARY

Step	-2 log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	89.801[a]	.397	.529

[a] Estimation terminated at iteration number 6 because the parameter estimates changed by less than .001.

The above table shows Nagelkerke R^2 value of 0.529 which means that the variable of financial behaviour can be explained by the variability of the gender variable, place of residence, GPA, education of parents and income of parents amounted to 52.9%, while the remaining 47.1% can be explained by other variables.

TABLE III. CLASSIFICATION TABLE[B]

	Observed		Predicted		
			Financial Behaviour		Percentage Correct
			Bad	*Good*	
Step 1	Financial Behavior	Bad	39	13	75.0
		Good	9	41	82.0
	Overall Percentage				78.4

[b] The cut value is .500

The table above shows the prediction accuracy of logistic regression in this study amounted to 78.4%.

TABLE IV. HOSMER AND LEMESHOW TEST

Step	Chi-square	Df	Sig.
1	3.803	7	.802

Hosmer and Lemeshow test was conducted to measure whether the predicted probabilities in accordance with the observed probabilities. Chi-square test results showed no significant (Sig values> 0.05), so the probability of that predicted in accordance with the observed probabilities.

From calculation of Wald test may be written:

$$\text{Ln } \frac{p}{1-p} = -6{,}677 + 1{,}480X_1 + 2{,}227X_2 + 2{,}606X_3 + 1{,}960X_4 + 1{,}355\ X_5$$

$$\text{or } \frac{p}{1-p} = e\ (-6{,}677 + 1{,}480X_1 + 2{,}227X_2 + 2{,}606X_3 + 1{,}960X_4 + 1{,}355\ X_5)$$

$$= e^{-6{,}677} \times e^{1{,}480X1} \times e^{2{,}227X2} \times e^{2{,}606X3} \times e^{1{,}960X4} \times e^{1{,}355X5}$$

Logit regression coefficient value (B) is difficult to interpret directly, so as to interpret then we do antilog of B or rank exponentially from logit coefficients. And can be seen in the column Exp (B).

Odds ratio for gender (X1) of 4.394. Because the coefficient B is positive, so the odds ratio of good and bad financial behaviour for the respondents of male is higher than female amounted to 4.393 times good in financial behaviour .

Odds ratio for residence (X2) of 9.273. Because the coefficient B is positive, so the ratio of good and bad financial behaviour for the respondents who are not boarding is higher than the boarding students of 9.273 times good in financial behaviour.

Odd ratios for the GPA (X3) amounted to 13.552. Because the coefficient B is positive, so the ratio of good and bad financial behaviour for the respondents who have greater GPA than 3.0 than at smaller than 3.0 of 13.552 times good in financial behaviour.

Odd ratios for parent's education (X4) of 7.099. Because the coefficient B is positive, so the ratio of good and bad financial behaviour for the respondents of non-scholar of the bachelor of 7.099 times good in financial behaviour.

Odd ratio for the parent's income (X5) of 3.878. Because the coefficient B is positive, so the ratio of good and bad financial behaviour for the respondents who earn greater than Rp. 5.000.000, - of the income is less than the Rp. 5.000.000, - of 3.878 times good in financial behaviour.

Testing the hypothesis basically shows whether gender, place of residence, GPA, parent's education and parent's income have the partially impact on the financial behaviour. Based on the test results, it can be concluded that:

- *P value* for the gender variable is 0.009 less than the value $\alpha = 0,05$. This led to the rejection of Ho, which means that the gender has the impact on Financial Behaviour.
- *P value* for variable residence is 0,001 less than the value $\alpha = 0,05$. This led to the rejection of Ho, which means residence has the impact on Financial Behaviour.
- *P value* for the GPA variable is 0.004 less than the value $\alpha = 0,05$. This led to the rejection of Ho, which means GPA has the impact on Financial Behaviour.
- *P value* for parent's education variable is 0.002 less than the value $\alpha = 0,05$. This led to the rejection of Ho, which means education of parents has the impact on Financial Behaviour.
- *P value* for parent's income variable is 0.020 less than the value $\alpha = 0,05$. This led to the rejection of Ho, which means that the income of parents has the impact on Financial Behaviour.

VI. CONCLUSION

The results of calculation of SPSS showed that gender had a significant positive influence of financial behaviour and the possibility of good and bad financial behaviour for the respondents with the gender of male is higher than female of 4.393 times good in financial behaviour. After studying the curriculum content, the man reportedly reaching financial goals than women, while women reported using a budget, compare prices, and discuss money with the family more than men, young men strengthen their knowledge of existing, while girls learn more about finances in areas where they are not familiar with before the curriculum [17]. Other results showed that the residence has significant influence of the financial behaviour as well as good and bad financial behaviour for the respondents who are not in boarding is higher than the boarding students of 9.273 times good in financial behaviour. Chinese ethnic students, who live on campus, and who studied at private colleges tend to be less financial [18]. Results of the calculations of SPSS show that GPA, and the income of parents have significant positive influence on financial behaviour, this is in line with research that was conducted by Margaretha and Pambudhi, with result reveals that there is the influence of gender, age, GPA, and the income of parent's income toward the financial behaviour [19]. For the calculation shows that the education of parents have significant positive influence on financial behaviour, Student Financial Literacy (CSFLS) shows that the perceived influence of parents has a direct influence and significant on financial behaviour, have no effect on financial knowledge, and have an indirect influence and significant on financial behaviour, mediated through the financial behaviour [20].

Future studies are expected to use the sample not only the students of the Faculty of Economics and Business course but other faculties that include faculty at the Sangga Buana University. Further studies are expected to consider the questions that were quite appropriate and relevant with indicators or dimensions in financial literacy and financial behaviour in order to the answer of the respondent can prove the relationship between each variable. In further studies are expected to use other variables such as spending habits, work experience and so forth.

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