Model Development of Savings Behavior for Bali State Polytechnic Students

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***Abstract*—This research aims to determine the model development of savings behavior for Polytechnic students in terms of financial literacy, self-control, socialization of parents, peers, savings motive and income. This research is an associative study with a quantitative approach. The population in this study were 4,630 students from the three-year force of the Bali State Polytechnic. Samples taken were 98 students using proportional random sampling technique. Testing the analysis prerequisites includes tests of normality, linearity, multicollinearity and heteroscedasticity. The data analysis technique used is multiple regression analysis. The results showed that beside the peers variable is no effect in the model, there are a positive and significant impact of financial literacy, self-control, parental socialization, saving motives, and income on savings behavior of Bali State Polytechnic students.**

Keywords—saving behavior, financial literacy, financial inclusion, personal finance

I. Introduction

In macro analysis, the level of economic growth achieved by a country is measured by the development of real national income achieved by a country / region. And according to the expenditure method in calculating national income, one type of aggregate is saving. Savings can be defined as this year's income which is not spent or not used for consumption.

Following the frame of mind of the Harrod-Domar model, in a closed economy (without foreign sector) in full employment conditions, and without capital mobility, savings become very important for economic growth, whose mechanism is through investment growth. Therefore, investment can be said as a function of savings.

The higher the level of savings that can be created the greater the ability of the State to invest. Furthermore, increasing investment adds more capital and through a multiplier process results in a higher rate of economic growth and higher per capita income. The ratio of saving to yield remains unchanged. Increased income increases people's ability to save and so on.

Indonesia is one of the developing countries. In general, developing countries want to expand financial inclusion well. The government itself strongly supports the improvement of financial inclusion, namely through Presidential Regulation (Perpres) Number 82 of 2016 concerning the National Standards of Inclusive Finance [1].

Financial Inclusion is the availability of access for the community to utilize financial products and / or services in financial service institutions in accordance with the needs and capabilities of the community in order to realize prosperity [2]. The progress or decline of financial inclusion in a country is influenced by the level of public financial literacy.

Financial Literacy is knowledge, confidence, and skill, which influences attitude and behavior to improve the quality of decision making and financial management to achieve prosperity [2]. Therefore, financial literacy is important for the community to avoid economic difficulties due to wrong financial management. The Financial Services Authority (OJK) released the results of a national survey of 2016 financial literacy and inclusion levels, after the first survey in 2013. As a result, Indonesia's financial literacy index in 2016 reached 29.66 percent, an increase compared to 21.84 percent in 2013. For Indonesia's financial inclusion index in 2016 reached 67.82 percent, up from 59.74 percent in 2013. And the banking sector still dominates the level of literacy and utilization [3].

The level of financial literacy in Malaysia reaches 81 percent, Thailand 78 percent and Singapore has even reached 96 percent [4]. Understanding saving and investing among the people is still low, especially those who are consumptive become one of the obstacles in increasing savings and investment productivity [5].

Learning in higher education plays an important role in the process of forming student financial literacy. Through a combination of various teaching methods, media and learning resources that are well planned and in accordance with competencies, it is expected to be able to provide students with skills in the financial field, so that students become ready and able to face their current and increasingly complex future lives [6].

With the financial constraints, directly or indirectly it will have an impact on one of the student's life patterns, namely in terms of saving. Such problems also occur among Bali State Polytechnic students. Although Polytechnic students basically have financial knowledge, this does not fully prove that students exhibit good personal financial behavior, one of them is saving. In fact, according to data from research conducted by [7], the level of financial literacy of students in the Bali State Polytechnic Commerce field is 56 percent or it can be said that the level of financial literacy is still relatively low. Savings behavior is a positive attitude, in which is stored an extraordinary meaning, namely an attitude of restraint and honesty [8]. With the implementation of saving behavior from an early age, this behavior will be carried on to adulthood later.

Research conducted by [9] shows that the factors that influence saving behavior in students are financial literacy, parental socialization, peer influence, and self-control. [10] also mentioned that the factors that influence saving behavior in students are financial literacy, socialization from parents, influence from colleagues, and self-control. While according to [11] in his research, financial literacy factors, self control, saving motives and income are factors that influence saving behavior in students.

II LITERATURE REVIEW

A. *Savings*

Savings can be defined as part of this year's income that is not spent or used for consumption. In Banking Law number 10 of 1998, savings is a deposit whose withdrawal can only be made according to certain agreed conditions, but cannot be withdrawn by check, demand deposit and / or other equivalent equipment.

Specific withdrawal terms are intended in accordance with the agreement or agreement that has been made between the bank and the saver [12]. From this understanding it is implied that people who save have the right to recover their savings with certain conditions. Savings for someone is one of the uses of income earned. As revealed by Keynes that income is a function of consumption and savings, or formulated: $Y = C + S$. In this case Y is income, C is consumption while S is saving or savings [13]. Thus, it can be seen that the excess income for one's consumption will become one's savings.

B. *Theory of Planned Behavior*

This Theory of Planned Behavior (TPB) is a further development of the theory of reasoned action (Theory of Reasoned Action or TRA). In the theory of reasoned action (TRA) there are two components, namely attitudes toward behavior (attitude towards the behavior) and subjective norms (subjective norms). Reasoned action theory (TRA) is a theory that explains that the intention of someone to do (or not do) a behavior is a direct determinant of an action or behavior. Then Icek Ajzen developed and strengthened TRA into TPB by adding a component that did not yet exist in TRA, namely the component of perceived behavioral control. The Theory of Planning Behavior (TPB) provides the assumption that many behaviors are not all under full control of individuals, so the concept of perceived behavioral control needs to be added [14].

C. *Savings Behavior*

According to [10] saving in a psychological context is called the process of not spending money for the current period to be used in the future. In this study the definition of saving leads to a person's activities or activities to set aside and save money in the bank. Self-saving behavior requires someone to be able to discipline in matters of financial management. Savings as a saving nature can be used as a positive trait if it consistently improves a better quality of life. Saving is done for several purposes, such as to finance consumption expenses after reaching retirement, to prevent the expenditure of unexpected costs that must be spent in the future. Savings is important, if every individual has high savings, the funds raised from the community will be high. This has an effect in the long term, to increase investment activities, so that if investment increases, economic growth will also increase [8].

III. RESEARCH METHOD

The object of the present research was the Students of Bali State Polytechnic. The population comprised 4,630 students. The number of samples taken was 98 students. The recruitment of the respondents was done using accidental sampling method based on certain considerations. In this study the consideration was the registered students at force year of 2016 to 2018. Data were collected using questionnaires, observations, in-depth interviews, and documentation. The collected data were then analyzed using multiple regresion with the help of the IBM SPSS Statistics 23 program.

A. *Research Conceptual Framework*

Based on the theories and research findings that have been described above, it was possible to describe a concept and the development of hypothesis in this study. The research model can be determined as shown in Fig. 1 below:

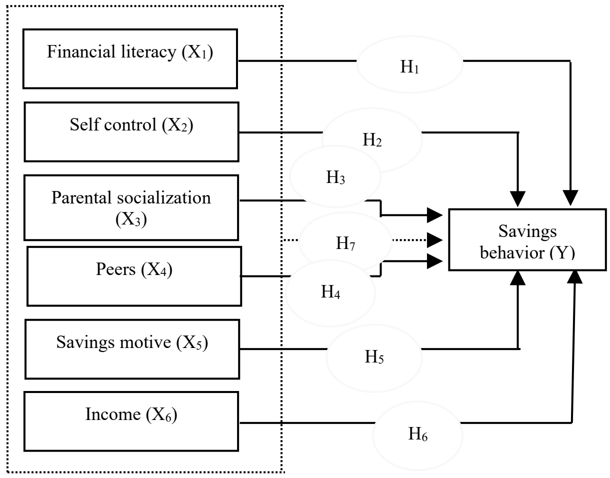

Fig. 1. Research conceptual framework.

B. *Hypothesis*

- H_1: Financial literacy will have a positive and significant effect on savings behavior;
- H_2: Self control will have a positive and significant effect on Savings behavior;
- H_3: Parental socialization will have a positive and significant effect on Savings behavior;
- H_4: Peers will have a positive and significant effect on Savings Behavior;
- H_5: Savings motive will have a positive and significant effect on Savings behavior;
- H_6: Income will have a positive and significant effect on Savings behavior;
- H_7: Financial literacy, Self control, Parental socialization, Peers, Savings motive, and Income will have a positive and significant effect on Savings behavior.

C. Measurement of The Variables

The variables in this study were measured from the constructs Financial literacy (X_1), Self control (X_2), Parental socialization (X_3), Savings motive (X_4), Peers (X_5), Income (X_6) and Savings behavior (Y). Each variable consists of several measurable indicators as shown in Table I.

TABLE I. IDENTIFICATION OF RESEARCH VARIABLES

Variables	*Measurable Indicators*
1. Financial literacy (X_1)	- General knowledge of personal finance ($X_{1.1}$)
	- Investment kknowledge ($X_{1.2}$)
	- Savings and debt knowledge ($X_{1.3}$)
	- Insurance knowledge(X_{14})
2. Self control (X_2)	- Ability to control behavior. ($X_{2.1}$)
	- Ability to control stimulus ($X_{2.2}$)
	- The ability to anticipate an event or event ($X_{2.3}$)
	- The ability to interpret events or events ($X_{2.4}$)
	- Ability to make decisions ($X_{2.5}$)
3. Parental socialization (X_3)	- Discipline planting ($X_{3.1}$)
	- Freedom and harmony ($X_{3.2}$)
	- Appreciation ($X_{3.3}$)
	- Exemplary ($X_{3.4}$)
4. Saving motive (X_4)	- Careful ($X_{4.1}$)
	- Future survey ($X_{4.2}$)
	- Profit calculation ($X_{4.3}$)
	- Improving living standards ($X_{4.4}$)
	- Freedom ($X_{4.5}$)
	- Speculation ($X_{4.6}$)
	- Heritage ($X_{4.7}$)
	- Mind ($X_{4.8}$)
5. Peers (X_5)	- Social interaction ($X_{5.1}$)
	- Ecouragement and peers support ($X_{5.2}$)
	- Provide new experiences ($X_{5.3}$)
	- Peer habits ($X_{5.4}$)
6. Income (X_6)	- Transfer of parents ($X_{6.1}$)
	- Scholarship ($X_{6.2}$)
	- Side jobs ($X_{6.3}$)
7. Saving behavior (Y)	- Future needs (Y_1)
	- Savings decision (Y_2)
	- Austerity measures (Y_3)

IV. RESULT AND DISCUSSIONS

A. Assessment of The Measurement

The measurement shows how each indicator relates to its variable. There are several tests that can be used to see the significance of each indicator making up a construct, namely test of validity and test of reliability.

Validity test is used to get the level of validity of an instrument in order to get the accuracy between the data that actually occurs in the object data that can be collected by the researcher. According to [16], the minimum requirement to be considered fulfilling high validity requirements if r is greater or equal to 0.3. Testing the validity of the instrument used product moment correlation technique from Karl Pearson. From the results of the calculation of the validity test, all items in the questionnaire statement on the variables of Financial literacy, Self control, Parental socialization, Peers, Savings motive, Income, and Savings behavior with a value of r greater than 0.3, were valid.

The variable reliability test was carried out Cronbach Alpha from the indicator block. Variables are said to be reliable if the Cronbach Alpha values are greater than 0.600. Table II shows that the variables Financial literacy (X_1), Self control (X_2), Parental socialization (X_3), Savings motive (X_4), Peers (X_5), Income (X_6) and Savings behavior (Y) were reliable.

TABLE II. RELIABILITY AND CRONBACH ALPHA COEFFICIENTS

Variables	*Alpha Cronbach*
Savings behavior (Y)	0.807
Financial literacy (X_1)	0.896
Self control (X_2)	0.835
Parental socialization (X_3)	0.807
Savings motive (X_4)	0.835
Peers (X_5)	0.935
Income (X_6)	0.835

B. Hypothesis Testing

Analysis prerequisite test used is normality test, linearity test, multicollinearity test, and heteroscedasticity test. First, the results of the normality test show the value of symp. Sig more or equal to 0.05, it can be concluded that the data tested is normally distributed. Second, Linearity test results show a significance value of more than 0.05, so that the independent and bound variables have a linear relationship. Third, the results of the multicollinearity test show that the VIF value found is less than 4 and the tolerance value is more than 0.1. Because the VIF value is less than 4, it can be concluded that there is no multicollinearity between the independent variables. Fourth, the results of the heteroscedasticity test show a sig value of more than 0.05. Because the sig value is greater than 0.05, it can be concluded that heteroscedasticity does not occur.

To find out the effect of Financial literacy (X_1), Self-control (X_2), Parental socialization (X_3), Peers (X_4), Savings motive (X_5) and Income (X_6) towards student Savings behavior (Y) was carried out using multiple linear regression models. Partial test or t test is used to determine the effect of partial independent variables on the dependent variable. Then for the Simultaneous test or the F test is used to determine whether or not the H_7 hypothesis is accepted, by looking at F-count and sig.

TABLE III. REGRESION RESULTS

Variables	*Coefficients*	*t-value*	*Sig.*
Financial literacy	0.119	2.086	0.043
Self control	0.207	3.533	0.000
Parental sozialization	0.219	3.584	0.000
Peers	0.021	0.316	0.761
Savings motive	0.202	5.955	0.000
Income	0.000000952	2.102	0.042
Constant	2.111		
R^2	0.448		
R	0.671		
F test	38.629		
Sig.	0.000		

Based on the regression analysis line, the multiple regression lines can be stated as follows:

$$Y = 2.111 + 0.119X_1 + 0.207 X_2 + 0.219 X_3 + 0.021 X_4 + 0.202X_5 + 0.000000952X_6 + e \quad (2)$$

The multiple linear regression equation can be explained from the equation shows that the constant number (a) has a positive sign that is equal to 2.106 meaning if the Financial literacy (X_1), Self control (X_2), Parental socialization (X_3), Peers (X_4), Savings motive (X_5), Income (X_6) is considered constant, then the Savings behavior (Y) will be 2.111 units.

The coefficient value of variable X_1 is 0.119 which means that if the Financial literacy is increased by one unit, the value of Savings behavior will increase by 0.119. The coefficient value of the variable X_2 is 0.207 which means that if Self control is increased by one unit then the value of Savings behavior will increase by 0.207.

The coefficient value of the variable X_3 is 0.219 which means that if the Parental socialization is increased by one unit then the value of Savings behavior will increase by 0.219. The variable coefficient of X_4 is 0.021, which means that if Peers is increased by one unit then the value of Savings behavior will increase by 0.021.

The value of the X_5 variable coefficient is 0.202 which means that if the Savings motive is increased by one unit then the value of the Savings behavior will increase by 0.202. The X_6 variable coefficient value is 0.000000952 which means that if the Income is increased by one unit, the value of Savings behavior will increase by 0.000000952.

Based on the results of the partial calculation of the influence of Financial literacy on Savings behavior obtained a regression coefficient of 0.119. At a significance level of 5%, it can be seen that t-count is 2.086 with a significance value of 0.043, because the regression coefficient has a positive value and significance value less than 0.05, the H_1 hypothesis was accepted. The results of this study are supported by research conducted by [13] which shows that financial literacy has a positive and significant influence on Saving behavior. The results of his research show that students who have greater knowledge of personal finance tend to have effective saving behavior. Furthermore, it is supported by research conducted by [11] where one of the variables, namely Financial literacy, has a significant effect on probability of saving variables among students.

The effect of Self-control on saving behavior obtained a regression coefficient of 0.207. At a significance level of 5 percent, it can be seen that t-count is 3.533 with a significance value of 0.000, because the regression coefficient has a positive value and a significance value less than 0.05, the H_2 hypothesis was accepted. The results of this study are supported by research conducted by [11] which shows that the self-control variable has a positive and significant effect on the probability of saving and the amount of savings. Research according to [16], there is a significant effect of Self control on economical behavior. In the study, researchers found that people were more likely to save if they were able to control themselves through the application of budgeting and valuation of economic costs. Furthermore, the research conducted by [9] also showed that partial and simultaneous self control had a significant positive effect on saving behavior.

The influence of Parental socialization on Savings behavior obtained a regression coefficient of 0.219. At a significance level of 5 percent, it can be seen that t-count is 3.584 with a significance value of 0.000, because the regression coefficient has a positive value and significance value less than 0.05, the H_3 hypothesis was accepted. The results of this study are supported by research conducted by [9] which shows that Parental socialization partially and simultaneously has a significant positive effect on saving behavior. Furthermore, research conducted by [10] which shows that socialization of parents has the greatest influence on saving behavior, where parents play an important role in ensuring their children to shape saving behavior.

Peers influence on Savings behavior obtained a regression coefficient of 0.021. At a significance level of 5 percent, it can be known that t-count is 0.316 with a significance value of 0.761, because the regression coefficient has a positive value and significance value more than 0.05, the H_4 hypothesis was not accepted. The results of this study are supported by research conducted by [9] where peers variable do not significantly influence savings behavior. This was due to a lack of habit of discussing financial management issues among students.

The effect of the Savings motive on Savings behavior obtained a regression coefficient of 0.202. At a significance level of 5 percent, it can be seen that t-count is 5.955 with a significance value of 0.000 because the regression coefficient has a positive value and significance value less than 0.05, the H_5 hypothesis was accepted. According to the research results of [18] there are also differences in motives for saving. The results of this study are supported by research conducted by [10] which shows that the saving motive variable has a positive and significant effect on the probability of saving and the amount of savings.

The influence of Income on Savings behavior obtained a regression coefficient of 0.000000952. At the significance level of 5 percent, it can be seen that t-count is 2.102 with a significance value of 0.042, because the regression coefficient has a positive value and significance value less than 0.05, the H_6 hypothesis was accepted. The results of this study are supported by research conducted by [17] which found the fact that saving behavior correlated with several variables, one of which was income growth. Besides this research is supported by [11] which shows that income variables have a positive and significant effect on the probability of saving and the amount of savings.

Simultaneously the influence of Financial literacy, Self-control, Parental socialization, Peers, Savings motive and Income towards Savings behavior, at a significance level of 5 percent obtained a value of F-count of 38,629 with a significance value of 0,000. Because the significance value of F less than 0.05, the H_7 hypothesis was accepted. The results of multiple regression testing indicate that the coefficient of determination (R^2) is 0.448 or 44.8 percent. The coefficient of determination shows the amount of effective contribution from the six independent variables on the dependent variable. The effective contribution means Financial literacy (X_1), Self-control (X_2), Parental socialization (X_3), Peers (X_4), Savings motive (X_5) and Income (X_6) affects 44.8 percent of Savings behavior (Y) while the remaining 55.2 percent influenced by other variables not examined in this study.

Based on analysis mentioned above, the model development of savings behavior for Bali State Polytechnic students as shown in Fig. 2.

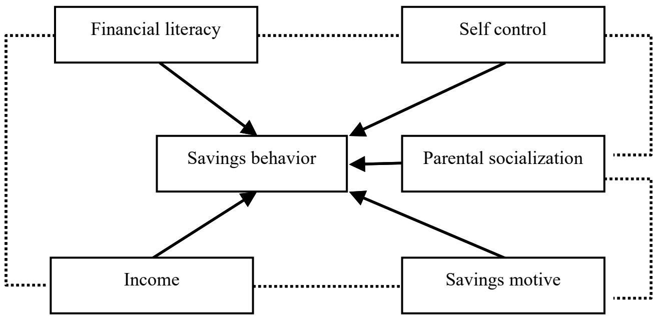

Fig. 2. Model development of savings behavior.

V. Conclusion

On the basis of the discussion above, it can be concluded that: (1) there is a positive and significant impact of Financial literacy on Savings behavior; (2) there is a positive and significant influence of Self control on Savings behavior; (3) there is a positive and significant influence of Parental socialization on Savings behavior; (4) there is a positive and significant influence of Saving motif on Savings behavior; (5) there is a positive and not significant influence of Peers on Savings behavior; (6) there is a positive and significant influence of Income on Savings behavior; (7) there are a positive and significant influence of Financial literacy, Self control, Parents socialization, Savings motive, Peers, and Income on Savings behavior; The suggestions that can be given are (1) it is expected that there will be counseling or seminars on the importance of personal finance education for students, this is so that early students have knowledge of personal finance so that they can be smart students, can manage finances well, so they can develop good and applicable savings behavior into his daily life and can have a prosperous life and not experience financial difficulties in the future; (2) students are able to maintain and improve psychological aspects, namely the ability to control behavior so that it is not easily affected by the negative impacts of the surrounding environment, including consumption behavior; (3) students should cultivate sharing about their economic activities with their parents to prevent deficit cash flow; (4) students should pay attention to the limits of good and bad behavior to do. Do not let associations with peers affect life which leads to hedonism and consumptive behavior; (5) students can continue to maintain a high saving motive, because basically without any saving motives, individuals tend to be lazy to do saving activities and prefer to spend money in the short term; (6) students must be wise in using their income; (7) further researchers who want to research and develop similar research, the authors suggest that considering the variation of the sample to be studied and of course with other variables not examined in this study.

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