FINANCIAL BEHAVIOR ANALYSIS OF COCONUT FARMERS IN BIREUEN REGENCY

Akhmad Baihaqi¹, Muhammad Ramadhani², Bagio³, Edy Marsudi⁴

¹Program Studi Agribisnis, Fakultas Pertanian, Universitas Syiah Kuala
²Pusat Riset Pembangunan Pedesaan Dan Pertanian Berkelanjutan, Universitas Syiah Kuala
³Mahasiswa Program Studi Agribisnis, Fakultas Pertanian, Universitas Syiah Kuala
⁴Program Studi Agribisnis, Fakultas Pertanian, Universitas Teuku Umar

Email: ¹baihaqi@unsyiah.ac.id, ³ramadhanimuhammad286@gmail.com, ⁴bagio@utu.ac.id, ⁷edymarsudi@unsyiah.ac.id

Abstract

Bireuen Regency is one of the areas in Aceh Province which has a superior commodity to be cultivated compared to other commodities such as coconut. The existence of consumptive behavior of coconut farmers is caused by a person's lack of understanding of how to manage finances in a good and right way. For this reason, a deep understanding of farmer behavior in managing their finances, as well as their interest in being involved in formal financial institutions. The purpose of this study was to determine education, financial knowledge, income, financial attitudes and use of financial institutions influence the financial management behavior of coconut farmers in Bireuen District. The sampling method used the slovin method and the sample for this study was 100 coconut farmers in South Peusangan District, Juli and Jeumpa determined the research area by purposive sampling. The analytical method used is ordinal logistic regression analysis with the help of SPSS 22.0 software. The results of the study concluded that the financial behavior of coconut farmers which showed the variables of education, financial knowledge, income, financial attitudes and use of financial institutions had a significance <0.05 on the management behavior of coconut farmers in Bireuen Regency. In the education variable of coconut farmers belonging to the high school (SMA) level of education, the financial knowledge variable explains that coconut farmers have fairly good financial knowledge,

Keywords: Financial Behavior, Ordinal Logistic Regression, Coconut

1. INTRODUCTION

Aceh Province is one of the provinces in Indonesia which has a large enough agricultural land. The area of agricultural crops in Aceh is used by the community to open plantation and agricultural land. The agricultural sector has the potential to improve Aceh's economy because it is one of the people's sources of livelihood. The management of potential agricultural commodities as the main source of livelihood aims to gain profit. Therefore, farmers will focus on working on these commodities intensively. Farmers will tend to choose commodities that generate the most income in order to obtain large profits (Fauzi, et al, 2021). Thus, one of the plantation areas cleared by the people of Aceh is a coconut plantation. Land for coconut plants is usually used for land that is on the coast or close to the beach. According to BPS (2021), Aceh Province has an area of 102,951 hectares of coconut plantations with a production of 149,575 tonnes.

Bireuen Regency is one of the areas in Aceh Province which has a superior commodity to be cultivated compared to other commodities such as coconut. Bireuen has a community coconut area in 2022 of 16,570 Ha (15.8%) with the highest production produced, namely 15,417 tons (10.3%) in Aceh. Thus, the coconut commodity is a source of income for most people in Bireuen Regency.

Based on the income received by coconut farmers, most coconut farmers tend to have consumptive behavior habits. This consumptive behavior is also caused by a person's lack of
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understanding of how to manage finances in a good and right way (Bambang, 2015). In Bireuen Regency it shows that financial behavior in terms of public consumption expenditure is higher for food consumption than non-food. The level of consumption expenditure patterns is very dependent on the family's ability to manage their income and this consumption pattern will be related to their financial behavior.

To improve financial behavior, it is realized that it is not an easy thing, considering that the main problem faced by farmers is their lack of knowledge of knowledge in financial management, therefore efforts to "force" them to manage limited funds through the use of financial products and services are becoming a problem. thing to do. For this reason, a deep understanding of farmer behavior in managing their finances, as well as their interest in being included in formal financial institutions needs to be formulated. In addition, various obstacles that may arise need to be optimally collaborated so that a comprehensive strategy can be formulated to increase farmers' interest in using the products or services of formal financial institutions, as a basis for increasing financial inclusion.

2. LITERATURE REVIEW
2.1 Behavioral Finance
Financial behavior is a person's ability to plan, manage, budget, control, store, search and manage daily financial funds in meeting the necessities of life in accordance with the income received (Anugrah, 2018). Financial management behavior is related to the effectiveness of fund management, in which the flow of funds must be directed according to a predetermined plan. The indicators according to Arianti (2020) are the types of financial planning and budgeting owned, techniques for preparing financial planning, saving activities, insurance activities, retirement and unexpected expenses, investment activities, credit/debt, and bills, monitoring of financial management, and evaluation of financial management.

2.2 Factors Influencing Financial Behavior
a. Financial Knowledge
Financial knowledge is an ability to understand, review and manage finances in order to be able to make the right spending decisions, and to be able to formulate prioritized needs and other urgent needs to avoid financial problems (Rahmawati, 2020).

b. Income
Income is the amount of income received by a person based on his performance, both cash and non-monetary income during a certain period of time, whether daily, weekly, monthly or yearly (Pardede, 2020).

c. Financial Attitude
Attitude is a picture that can be seen from a person's personality either in the form of a person's view of a situation or object or physical or non-physical actions (Marsh, 2008).

d. Education
According to Lusardi (2014) education is a process for someone to learn something that has not been understood. Principles and financial instruments in making a wise financial decision very much depend on one's level of education.

3. IMPLEMENTATION METHOD
3.1 Research Time and Place
This research was conducted in an area that has a relatively high productivity of the coconut commodity in Bireuen Regency in December 2021, which was carried out in three sub-districts, namely Juli, Jeumpa and Peusangan Selatan Districts. The location of the research was determined by purposive sampling with the consideration that the majority of the people in the selected sub-districts work as coconut farmers.
3.2 Research Design

The data collection method was carried out using a questionnaire method. This data collection technique is carried out by compiling structured questions that are closed in nature with the answers provided and must be filled in by the respondent by selecting one of the available answers. In compiling the questionnaire, the variables are broken down into indicators and then the indicators are broken down into questions or statements. The measurement scale used to measure question or statement indicators on the independent and dependent variables is to use a Likert scale. The Likert scale is a tool used to classify variables to be measured so that there are no mistakes in determining data analysis using this scale (Azwar, 2010).

3.3 Determination of Population and Sample

3.3.1 Population Determination

The population in this study are farmers who own and manage coconut plants located in three sub-districts in Bireuen Regency, namely Juli, Jeumpa and Peusangan Selatan Districts. The number of coconut farmers in the area was based on sub-districts, namely in Jeumpa Subdistrict it reached 1,184 farmer families, then in Juli District there were 2,143 farmer families and in Peusangan Selatan District there were 4,798 farmer families and was one of the central coconut productions so that a total of 8,125 coconut farmers were obtained.

3.3.2 Sampling

The research sample was obtained using the probability sampling technique, namely random sampling which provides equal opportunities for each element or member of the population to be selected as a member of the sample. The sampling technique was carried out by simple random sampling. The measurement of the number of samples was carried out using the slovin method, which is a sampling technique where the formula for calculating the number of samples is minimal if the behavior of a population is not known with certainty (Sugiyono, 2010). In this study, from the results of the calculation of the slovin formula with an error rate of 10%, the number of samples includes 99 people so that it can be completed as many as 100 farmers as the number of samples that will be used in this study in three sub-districts, namely Jeumpa, Juli and Peusangan Selatan sub-districts in Bireuen Regency.

3.4 Data Analysis Technique

In this study using quantitative research and using a questionnaire as a tool to collect data and using a modified Likert scale from 1-5. Data processing using SPSS 22 software. The analysis technique used is ordinal logistic regression, namely a statistical model that describes the relationship between the dependent variable (Y) and more than one independent variable (X), where the dependent variable (Y) has an ordinal measurement scale (Hosmer and Lemeshow, 2000). The ordinal logistic regression test does not require the assumption of normality of the independent variables and also ignores heteroscedasticity, so the ordinal logistic model is formed as follows:

\[
\text{Logit} (Y_{j-1}) = \ln \left( \frac{Y_{j-1}}{1-Y_{j-1}} \right) = \Theta_{j-1} + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k
\]

4. RESULTS AND DISCUSSION

4.1 Characteristics of Respondents

In this study, the number of respondents was 100 coconut farmers with the number of male respondents as many as 82 people with a percentage of 82% while female respondents only numbered 18 people with a percentage of 18%. At the age level, the number of respondents who dominated was aged 40-59 years, namely as many as 65 people from all respondents so that it could be concluded that the average coconut farmer in the study area was classified as still of a productive age. For the level of education, the most respondents in this study were senior high schools (SMA) with 34 respondents.
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The plantation area owned by respondents is dominated by only <1 ha with a total of 50 farmers and this will affect income which shows that the most income of coconut farmers is Rp. 1,000,000-Rp. 3,000,000 with a percentage of 41% of the total all respondents.

4.2 Parameter Analysis of Ordinal Logistics Regression Model
A. Goodness Test Model (Goodness of Fit)
H0 in this test is a model that is produced according to the data, in other words the model is feasible for use in research. If H0 fails to be rejected, then it can be said that the model obtained is in accordance with the data. The following are the results of the model goodness-of-fit test:

<table>
<thead>
<tr>
<th>Table 4.1 Model Goodness Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
</tr>
<tr>
<td>Pearsons</td>
</tr>
<tr>
<td>Deviance</td>
</tr>
</tbody>
</table>

Source: Primary data processed using SPSS 22, 2022

Based on the table above, it is known that the Chi-Square value of the Pearson method is 626.704 and the deviation is 518.402 with a degree of freedom of 523. The test criterion is to reject H0 if the significance is less than 0.05 (Sig <0.05). Pearson value of 626.704 with a significance (0.987> 0.05) and a deviation value of 518.402 with a significance (1.000> 0.05). That is, the ordinal logistic regression model fits the observational data. Then the decision taken is to fail to reject H0 which means the logit model is feasible to use.

B. Nagelkerke R Square test
In general, Nagelkerke's value is greater than Cox and Snell's value. The results of Nagelkerke's analysis can be seen in the following table:

<table>
<thead>
<tr>
<th>Table 4.2 Nagelkerke R Square test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox and Snell</td>
</tr>
<tr>
<td>0.814</td>
</tr>
</tbody>
</table>

Source: Primary data processed using SPSS 22, 2022

Based on the table above, it can be seen that the value of Mc Fadden's coefficient of determination is 0.562 while the Cox and Snell's coefficient of determination is 0.814 and Nagelkerke's coefficient of determination is 0.816 or 81.6%. In this test we will choose the highest R-Square value, namely Nagelkerke. The Nagelkerke coefficient is 81.6% which means that the independent variables in the form of education, financial knowledge, income, financial attitudes and use of financial institutions affect financial behavior while 18.4% is influenced by other factors not included in the model test.

C. Parallel Lines Test
H0 in the Parallel Lines test is a model that produces the same slope regression coefficient for all categories of coconut farmers' financial behavior. If H0 fails to be rejected, then the assumption of parallel lines can be said to be fulfilled.

<table>
<thead>
<tr>
<th>Table 4.3 Parallel Lines Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>Null Hypothesis general</td>
</tr>
</tbody>
</table>

Source: Primary data processed using SPSS 24, 2022
Based on the table above, the results of the parallel lines test show that the Chi-Square value is 64.26 and the p-value is 0.876. Then the decision taken is to fail to reject H0 because the p-value > α. Thus, at the 95% level of confidence it can be said that the slope coefficient is the same for all response variables.

D. Wald test

H0 in this test is a certain independent variable that does not significantly influence the financial behavior of coconut farmers. If H0 is successfully rejected, it can be said that the independent variable significantly influences the financial behavior of coconut farmers.

Table 4.4 Partially Significant Parameter Test

<table>
<thead>
<tr>
<th>predictor</th>
<th>Estimates</th>
<th>std. Error</th>
<th>Coefficient</th>
<th>Wald</th>
<th>Df</th>
<th>Sig.</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (1)</td>
<td>11,802</td>
<td>2,599</td>
<td>2,599</td>
<td>20,622</td>
<td>1</td>
<td>0.000</td>
<td>13,450</td>
</tr>
<tr>
<td>Constants (2)</td>
<td>12,578</td>
<td>2,503</td>
<td>2,503</td>
<td>25,255</td>
<td>1</td>
<td>0.000</td>
<td>12,219</td>
</tr>
<tr>
<td>Education (X1)</td>
<td>0.392</td>
<td>0.181</td>
<td>0.181</td>
<td>4,681</td>
<td>1</td>
<td>0.030</td>
<td>1.198</td>
</tr>
<tr>
<td>Financial Knowledge (X2)</td>
<td>0.158</td>
<td>0.042</td>
<td>0.042</td>
<td>13,912</td>
<td>1</td>
<td>0.000</td>
<td>1.042</td>
</tr>
<tr>
<td>Revenue (X3)</td>
<td>0.189</td>
<td>0.093</td>
<td>0.093</td>
<td>7.96</td>
<td>1</td>
<td>0.027</td>
<td>1.097</td>
</tr>
<tr>
<td>Financial Attitude (X4)</td>
<td>0.208</td>
<td>0.049</td>
<td>0.049</td>
<td>18,179</td>
<td>1</td>
<td>0.000</td>
<td>1.050</td>
</tr>
<tr>
<td>Use of Financial Institutions(X5)</td>
<td>0.029</td>
<td>0.097</td>
<td>0.097</td>
<td>9,022</td>
<td>1</td>
<td>0.028</td>
<td>1.101</td>
</tr>
</tbody>
</table>

Source: Primary data processed using SPSS 24, 2022

Based on the table above, it can be seen that the results of Wald's parameter test explain that the independent variables Education (X1), Financial Knowledge (X2), Income (X3), Financial Attitude (X4), Use of Institutions (X5) have a significant effect on the financial behavior of coconut farmers in Bireuen Regency because it has a p-value smaller than 0.05 so the decision taken is to reject H0. The logit function equation can be written as follows:

\[
\text{Logit } [P (Y_i \geq 1 | X_i)] = 11.802 + 0.392 X1 + 0.158 X2 + 0.189 X3 + 0.208 X4 + 0.029 X5
\]

\[
\text{Logit } [P (Y_i \geq 2 | X_i)] = 12.578 + 0.392 X1 + 0.158 X2 + 0.189 X3 + 0.208 X4 + 0.029 X5
\]

Based on table 4.4, it can be interpreted so that it can be seen how big the influence of the predictors is. Interpretation of the model is done using the odds ratio. The odds value can be determined by looking at the Exp value (coefficient) of each variable.

E. T test (Partial Test)

From Table 4.4 it can be interpreted that the influence of the variables of education, financial knowledge, income, financial attitudes and the use of financial institutions partially on the financial behavior of coconut farmers is as follows:

1. Education (X1)

Statistically the partial test, the results of the analysis on the education variable (X1) have a sig value of 0.030. This value can be interpreted as smaller than the significance level of 0.05. So, the decision taken is to reject H0 and accept H1, which means that education has a significant effect on the financial behavior of coconut farmers in Bireuen District. The education coefficient value is 0.392. To facilitate interpretation, the palindromic invariance trait is used, resulting in an odds ratio of exp (0.392), which is 1.479, which means that there is an increased tendency of 1.479 times to obtain better financial behavior for coconut farmers in Bireuen Regency who have education than coconut farmers who do not have education.

The research results are supported by several previous studies. One of the studies conducted by Anas (2020) concluded that demographic variables consisting of income level, age, education level, risk preference dummy variables, and distance from financial institutions also have a
significant effect on financial literacy variables at a significance level of 5%. Income level, education level and risk preference have a positive and significant partial effect on financial literacy variables.

2. Knowledge of Finance (X2)

Statistically for the partial test, the results of the analysis on the financial knowledge variable (X2) have a sig value of 0.000. This value can be interpreted as smaller than the significance level of 0.05. So, the decision taken is to reject $H_0$ and accept $H_2$, which means that financial knowledge has a significant effect on the financial behavior of coconut farmers in Bireuen District. The financial knowledge coefficient value is 0.158. To facilitate interpretation, the palindromic invariance trait is used, resulting in an odds ratio of $\exp(0.158)$, which is 1.171, which means that there is an increased tendency of 1.171 times to obtain better financial behavior for coconut farmers in Bireuen Regency who have financial knowledge than coconut farmers who do not have financial knowledge.

The results of this study are in line with Arianti’s research (2018) which shows that financial knowledge has a significant effect on financial behavior.

3. Revenue (X3)

Statistically the partial test, the results of the analysis on the income variable (X3) have a sig value of 0.027. This value can be interpreted as smaller than the significance level of 0.05. So the decision taken is to reject $H_0$ and accept $H_3$, which means that income has a significant effect on the financial behavior of coconut farmers in Bireuen District. The value of the income coefficient is 0.189. To facilitate interpretation, the palindromic invariance trait is used, resulting in an odds ratio of $\exp(0.189)$, which is 1.208, which means that there is an increased tendency of 1.208 times to obtain better financial behavior for coconut farmers in Bireuen Regency who have high income than coconut farmers who have low income.

The results of this study are in line with Brilianti’s research (2019) which states that income attitudes have a significant positive influence on financial behavior. This shows that there are differences in financial behavior based on income levels.

4. Financial Attitude (X4)

Statistically the partial test, the results of the analysis on the financial attitude variable (X4) have a sig value of 0.000. This value can be interpreted as smaller than the significance level of 0.05. So the decision taken is to reject $H_0$ and accept $H_4$, which means that financial attitudes have a significant effect on the financial behavior of coconut farmers in Bireuen Regency. The financial attitude coefficient value is 0.208. To facilitate interpretation, the palindromic invariance trait is used, resulting in an odds ratio of $\exp(0.208)$, which is 1.231 which means that there is an increasing tendency of 1.231 times to obtain better financial behavior for coconut farmers in Bireuen Regency who have a financial attitude than coconut farmers who do not have a financial attitude.

The results of this study are in line with Baihaqi’s research (2022), which states that the financial attitude in the fairly good category has a significant effect on the financial behavior of farmers. This shows that the better the attitude of Arabica coffee farmers in Central Aceh District towards money, the better their management will be. his finances.

5. Use of Financial Institutions (X5)

The institution uses variable (X5) and has a sig value of 0.028. This value can be interpreted as smaller than the significance level of 0.05. So, the decision taken is to reject $H_0$ and accept $H_5$, which means that the use of institutions has a significant effect on the financial behavior of coconut farmers in Bireuen District. The financial attitude coefficient value is 0.029. To facilitate interpretation, the palindromic invariance trait is used, resulting in an odds ratio of $\exp(0.029)$ which is 1.029 which means that there is an increased tendency of 1.029 times to obtain better
financial behavior for coconut farmers in Bireuen Regency who use bank and non-bank financial institutions in transact.

The results of this study are in line with Anas' research (2020), which suggests that the use of financial institutions can affect financial behavior. Where demographic variables consisting of income level, age, education level, risk preference dummy variable, and distance from financial institutions also have a significant effect on financial literacy variables at a significance level of 5%. Income level, education level and risk preference have a positive and significant partial effect on financial literacy variables. Distance from financial institutions has a significant negative effect, while age has no significant effect on financial literacy variables. As much as 43.8% of the variation in the financial literacy variable is explained by the independent variables used in the model, while the remaining 56.2% is explained by other variables.

5. CONCLUSION AND SUGGESTIONS

5.1. CONCLUSION
Based on the results of calculations and analyzes that have been carried out, it can be concluded that:

1. Based on the results of ordinal logistic regression analysis of the factors that influence the financial behavior of coconut farmers, it shows that the variables of education, financial knowledge, income, financial attitudes and use of financial institutions have a significance <0.05 on the management behavior of coconut farmers in Bireuen Regency.
2. The variable interval results show that the education variable of coconut farmers belongs to the high school level of education, the financial knowledge variable explains that coconut farmers have fairly good financial knowledge, the income variable is classified as the medium category while the financial attitude variable indicates that they have a fairly good financial attitude as well as the variable use of financial institutions explaining that coconut farmers using financial institutions belong to the fairly good category.

5.2. SUGGESTIONS
Based on the results of the research, there are things that need to be done further, including:

1. It is expected that related institutions will provide counseling to coconut farmers regarding the importance of family financial planning such as recording household income and expenditure so that they can find out the total amount of income and expenditure so that coconut farmers can anticipate the possibility of financial problems occurring in the future.
2. Based on the results of the study it is known that income has a positive and significant effect on the financial behavior of coconut farmers, from these results it is suggested that farmers be more responsible for the income they receive such as saving on daily expenses, buying something according to needs, and setting aside income for savings.
3. Researchers suggest that coconut farmers should pay more attention while increasing their financial knowledge, for example using health insurance products for childbirth costs, education insurance for children, and investing so that in old age they can lead a prosperous life. Opening financial insights can lead farmers to make better financial decisions.

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