Financial Literacy and Its Impact on the Income Level of Chili Farmers in Rural Indonesia

Gigih Yudo Sekti1*, Syafrial1, Hery Toiba1, Dwi Retnoningsih1,2

1Department of Socio-Economics, Faculty of Agriculture, University of Brawijaya, St. Veteran, Malang (65145), Indonesia.
2Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung 912, Taiwan.

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ABSTRACT

The financial literacy level determines the economic condition of every social stratum. In other words, when farmers experience failure in regulating their economic activities, it is most likely due to their low financial literacy level. The study aims to identify the financial literacy level of chilli farmers in Rural Areas, analyze the factors that influence the financial literacy level, and analyze the impact of financial literacy on increasing the income of chilli farmers in Rural Areas. This study uses Propensity Score Matching (PSM) method to analyze the impact of financial literacy. The results of the study provide information that (1) The majority of chilli farmers' financial literacy in Rural Areas is at a high level with 65% of the total respondent, (2) The existence of financial literacy in Rural Areas has a positive impact on increasing the income of chilli farmers with a comparison that farmers at high literacy levels have higher incomes of Rp. 65,384,503 compared to farmers who have low literacy levels, and (3) The results of the analysis of factors that influence financial literacy state that the factors of age, education level, land area, land status, farming experience, and family responsibilities have a relationship with financial literacy, but the gender factor cannot be identified statistically.

Keywords: financial literacy; farmer's income; probit regression; propensity score matching

How to cite:

1. Introduction

Red chilli commodities are classified as having high economic value. However, red chilli commodities require intensive farming management, have a high risk of crop failure and fall in productivity, and have perishable characteristics to impact farmer production and income. Financial managers in agricultural activities aim to ensure how much profit can be obtained in a period of time by calculating the cost of production because the cost of production is used as one of the considerations in making economic decisions in farmer households. According to Salam (2018), the business of cayenne pepper cultivation will also develop if it can manage costs effectively and efficiently. This business, of course, must also be able to compete with similar businesses through distinctive features that can be highlighted.

The initial foundation of economic activity is deciding to do an activity well based on the goals to be achieved. An individual tends to make good decisions when he knows and understands the options available to the individual, in line with the statement of Oseifuah E. et al. (2018), which states that understanding financial literacy is an essential skill for individuals, families, and the economy. It is because understanding finance contributes positively to a better financial decision-making process (Yustika et al., 2014 and Jain et al., 2022). Therefore, when a person has adequate financial literacy, it will significantly affect the welfare of his life.

According to a survey from the Financial Services Authority (2014), only 38.03% of people understand financial literacy, which can be interpreted that out of 100 Indonesians; only 38 people...
understand financial literacy. Although it has exceeded the target set by the government in Presidential Regulation no. 82 of 2016 concerning the National Strategy for Financial Inclusion (SNKI) of 35%, financial literacy is a problem that must be addressed immediately so that people's lives can be improved.

Houston (2010) and Khan et al., (2022) explains that financial literacy is a component of human resources that can be used in financial activities to increase lifetime utility, namely improving one's financial well-being. The low level of welfare can be measured by the number of children who drop out of school because there is no money, families who live under bridges because they do not have shelter, scavengers and homeless people around, and other problems. With this understanding, it can be concluded that a person's high or low level of financial literacy affects his economic condition.

If it is aligned with the condition of farmers, then when farmers experience failure in planning their economic activities, it is likely due to their low level of financial literacy. Failure to plan for farmers' economic activities can impact the income received. In line with the statement of Yuwono M. et al. (2017), farmers' income is not routine every month but is more seasonal following the harvest pattern of the commodities planted. Therefore, farmers need to make monthly financial management plans so that their income can be divided equally for their daily needs within a certain period.

Houston (2010) states that financial literacy measures identify the human resources needed to engage in appropriate financial behaviour because appropriate financial behaviour can keep a person away from negative externalities that affect one's financial well-being. Someone who wishes prosperous life in his finances must have high financial literacy and good skills in managing finances. Because good financial management is the primary key to achieving a healthy financial condition to avoid financial problems, financial problems can occur not only because of income alone but can arise if there is an error in financial management, such as an error in the lack of financial management.

Many studies on the impact of financial literacy on individual income levels have been carried out, one of which is Carman, G. K., & Zamarro (2017), who found that households with high financial literacy had higher income levels and food security. However, there have been many studies on the impact of financial literacy on income levels. However, the focus of the study only discusses the financial literacy level in general. This condition means that few studies still examine the financial literacy level, with the focus of the study on the financial literacy level of farmers. Therefore, this study examines the impact of financial literacy on the income level of chilli farmers in Rural Areas.

2. Theoretical Underpinning

2.1. Financial Literacy

Remund (2010) states that financial literacy is a measurement of a person's understanding of financial concepts, and having the ability and confidence to manage personal finances through making appropriate short-term decisions, long-term financial planning, and paying attention to events and economic conditions. Houston (2010) said financial literacy includes awareness and knowledge of financial instruments and their applications in business and life.

According to Lusardi A (2007), financial literacy is financial knowledge to achieve prosperity. Financial literacy occurs when individuals have the skills and abilities to utilize existing resources to achieve the expected goals (Houston, 2010). A series of processes or activities to increase the knowledge, skills, and confidence of consumers and the broader community to manage their finances well.

According to the Financial Services Authority (2014), a person's financial literacy level is divided into four types, namely:

a. **Well Literate.** At this stage, a person has knowledge and beliefs about financial service institutions and financial products and services, including features, benefits and risks, rights and obligations related to financial products and services, and has skills in using financial products and services.

b. **Sufficient Literate.** At this stage, a person has knowledge and beliefs about financial service institutions and financial products and services, including features, benefits and risks, rights and obligations related to financial products and services.

c. **Less Literate.** At this stage, a person only knows financial service institutions, products, and services.

d. **Not Literate.** At this stage, a person only knows this stage, does not have knowledge and beliefs about financial service institutions and financial products and services,
and does not have the skills to use financial products and services from financial service institutions, products and services financial services.

Houston (2010), states that financial literacy is conceptualized as having two dimensions knowledge (personal financial knowledge) and use (personal finance applications).

1) Knowledge (personal finance knowledge)
Total knowledge is acquired through education and/or specialized experience related to important personal finance concepts and products.

2) Use (personal finance application)
Ability and confidence to effectively apply or use knowledge related to personal finance concepts and products.

Figure 1. Concept of Financial Literacy
Source: Houston (2010)

Based on previous research and adjusted to the conditions that occur at the research location, some factors influence farmers' decisions in taking financial services, including:

a) Length of education. Someone with a high level of education makes it possible to plan finances with various available sources of funds. According to Aziz (2021), the higher the level of education owned by business actors, the higher their literacy level.

b) Gender. Puspita et al. (2021) stated that men tend to have a higher level of financial literacy than women do.

c) Age. According to Yuniarti (2019), the older one is the level of maturity and strength a person will be more mature in thinking and working. Age is one factor that can affect an individual's knowledge level, including knowledge about finance. The older they get, the more their grasping power and mindset will develop so that more and more knowledge is gained.

d) Land area. The larger the area of land that is managed, the more excellent the opportunity to take financial services because it requires a large amount of capital. Falo & Nubatonis (2017) show that the area of land cultivated by farmers is influenced by land ownership owned by farmers, which also affects the productivity of the farming undertaken. The fertile and extensive land will motivate farmers to improve their performance efficiently and effectively.

e) Land status. A person who rents land for business does not escape the rental fee, so the production costs incurred are more significant than someone who works on his land. The greater the production costs incurred, the greater the possibility of taking financial services (Mulyaqin et al., 2017).

f) Farming experience. The longer a person's farming experience, the more willing he is to increase his productivity. According to Aziz (2021), when an individual's business has been running for a long time, his literacy level will also increase.

g) The number of family dependents. The number of dependents is the number of people in a farming family. According to Yuniarti (2019), it was found that the number of dependents owned by a family affects the family's ability to make financial decisions because it is assumed that when someone who is married and has children tends to have a high level of literacy. It is due to the higher the literacy level of a person, the better the ability to carry out family financial planning.

2.2. Production Cost

The definition of production costs, according to Hansen & Mowen (1997), are costs associated with manufacturing goods and providing services. Meanwhile, according to Usry & Hammer (1999), production costs are termed as manufacturing costs, namely the sum of three cost elements: direct material costs, direct labour costs, and overhead. According to Mulyadi (1999), production costs are costs associated with processing raw materials into finished products that are ready for sale. From the above understanding, production costs are costs related to the processing of raw materials into products that are ready for sale consisting of raw material costs, direct labour costs, and factory overhead costs benefit an increase in
future profits. According to Mulyadi (1999), the cost of production is the sacrifice of economic resources measured in units of money that have occurred or are likely to occur to earn income. The cost of production, according to Hansen & Mowen (1997), is representative of the number of goods completed in a certain period.

2.3. Income

According to Harnanto (2019), income is “an increase or decrease in assets and a decrease or decrease in company liabilities as a result of operating activities or the procurement of goods and services to the public or consumers in particular. According to Sochib (2018), income is an inflow of assets from delivering goods and services carried out by a business unit during a specific period. For the company, the income earned from the primary operations will add to the value of the company’s assets that, in essence, will also increase the company’s capital. However, for accounting purposes, the addition of capital resulting from delivering goods or services to other parties is recorded separately under the income account.

The existence of definitions from several researchers related to income, it could be concluded that income is a condition that indicates the movement of assets that enter the transfer of goods and services carried out by a business unit during a specific period caused by operating activities or procurement of goods or services to the public or consumers.

3. Research Methods

3.1. Research Approach

This research on financial literacy used a quantitative approach. The quantitative approach was chosen because it focused on discussing the financial literacy level and the magnitude of its influence on the income level, which was presented in numbers and required a measurement scale for the financial literacy indicators asked of respondents.

3.2. Sampling Technique

The respondent determination technique used was simple random sampling, a random sampling technique so that each case or element in the population had an equal chance of being selected as the research sample. Based on the Slovin formula, the number of samples needed in this study was 60 chilli farmers. However, when there was insignificant data, the research sample was made into 70 samples for preventive measures.

3.3. Data Source

This study used primary and secondary data obtained from interviews and studies of supporting literature. The data to be analyzed were respondent characteristics data, respondents' financial literacy index data, and respondents' income data in Rural Areas. The location selection was done intentionally and based on the most significant production results published by the Central Statistics Agency, where for 2019, the Rural Area produced chilies of 435,528 tons (Badan Pusat Statistik, 2020).

3.3. Data Analysis

The data obtained was qualitative and processed using the STATA application as computer input. This study uses several data analysis methods, including descriptive statistical analysis, financial literacy index analysis, probit regression analysis, and Propensity Score Matching (PSM) analysis. Descriptive statistical analysis was an analytical method that aims to provide an overview of the object to be studied. The descriptive statistical analysis method described the financial literacy level and income level of respondent farmers in Rural Areas.

The following data analysis method that was used to analyze the impact of financial literacy on income levels was Propensity Score Matching (PSM). PSM evaluate the impact of financial literacy level on farmers’ income. Three categories of research variables used in this PSM analysis method, including treatment, income, and outcome variables. The treatment variable is the financial literacy level, which categorized into low and high categories. At the same time, the income variables consist of gender, age, and length of education, land area, land ownership status, farming experience, and the number of family dependents. Finally, the outcome variable, namely farmers’ income.

The first step in the PSM analysis method was to estimate the propensity score using the probit regression model. The variables used to estimate the propensity score for treatment were the dependent variable (y) and the socio-economic variables as the independent variable (x). Mathematically the probit model can be written as follows:

\[ d = \alpha + \beta_1a + \beta_2e + \beta_3t + \beta_4l + \beta_5e + \beta_6f + \epsilon \] (1)

Information:
df\text{Fl} = \text{dummy Financial Literacy Level with a value of 0 for low literacy levels and a value of 1 for high literacy levels}
\alpha = \text{constant}
\beta_3 - \beta_6 = \text{regression coefficient}
age = \text{last age (years)}
edu = \text{length of education (years)}
fd = \text{number of dependents (person)}
exp = \text{farming experience (years)}
la = \text{land area (hectare)}
l\text{s} = \text{land status, dummy leased land (1) and own land (0)}
e = \text{standard error}

The ATT calculation was carried out to obtain the value of the treatment effect. The ATT value was the difference in the average value of the outcomes between the treatment and non-treatment groups.

\tau = E[R_4 - R_0 | I = 1] \quad \text{..............}(2)

Table 1. Descriptive Research Statistical Analysis

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Std. Dev.</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>7.49</td>
<td>42.61</td>
<td>27</td>
<td>64</td>
</tr>
<tr>
<td>Education</td>
<td>2.30</td>
<td>8.78</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Land area</td>
<td>0.32</td>
<td>0.37</td>
<td>0.05</td>
<td>1.5</td>
</tr>
<tr>
<td>Land Status</td>
<td>0.49</td>
<td>0.6</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Farming experience</td>
<td>8.02</td>
<td>17.08</td>
<td>3</td>
<td>35</td>
</tr>
<tr>
<td>Family Dependents</td>
<td>1.15</td>
<td>2.6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Income (IDR)</td>
<td>79200000</td>
<td>78.055.566</td>
<td>8.160.000</td>
<td>356.250.000</td>
</tr>
<tr>
<td>Financial Literacy Value</td>
<td>26.29</td>
<td>64</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Dummy Value of Financial Literacy</td>
<td>0.47</td>
<td>0.67</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

According to descriptive statistical analysis data in the study, it provides information that the average age of the respondents in the study is 42 years old, with the youngest age being 27 years old and the oldest being 64 years old. The average education of the respondents in the study was in junior high school (SMP), with the lowest education being elementary school (SD) and the highest being high school graduates (SMA). Respondents' average land area is 0.37 hectares, with a minimum area of 0.05 hectares and a maximum land area of 1.5 hectares. The average respondent's chilli farming experience is 17 years, with the lowest farming period being three years and the longest farming 35 years. The average income owned by the respondents is IDR 78,055,566 per hectare during one planting period, with the lowest income owned by IDR 8,160,000 per hectare during one planting period and the highest income owned by respondent farmers amounting to IDR 356,250,000 per hectare during one planting period.

\begin{align*}
E[R_4 | I = 1, p(Z)] &= E[R_4 | I = 1, p(Z)] - E[R_0 | I = 0, p(Z0)] \quad \text{..............}(3)
\end{align*}

4. Result and Discussion

4.1. Descriptive Statistical Analysis

Descriptive statistical analysis is an analytical method that aims to provide an overview of the object to be studied. Descriptive statistics are used to analyze data by describing the data collected as it is without the intention of making generalization conclusions (Sugiyono, 2015).

The descriptive statistical analysis method described the financial literacy level, socio-economic variables, and income levels of respondent farmers in Rural Areas—the descriptive statistical analysis of the research is presented in the following table.

Table 2. Analysis of the Financial Literacy Level of Chili Farmers in Rural Area

<table>
<thead>
<tr>
<th>Information</th>
<th>Score</th>
<th>Quantity (people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Literacy</td>
<td>51-100</td>
<td>46</td>
</tr>
<tr>
<td>Low Literacy</td>
<td>0-50</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

The analysis of the financial literacy level of chilli farmers in Rural Areas is classified as a low to high literacy level when viewed from the results of data analysis. Farmers belonging to low literacy levels are 241 people with scores between 0 to 50. Farmers with low financial literacy levels
are indicated to still not understand the concept of financial literacy in the form of knowledge of money calculations, interest rates, inflation, the time value of money, and illusions caused by money. In addition, the chilli commodity, which is classified as one of the horticultural commodities with high risk in production and financing, requires business actors to manage their production and financial activities to produce continuously. With this risk, a farmer must be able to decide how much costs must be incurred for chilli farming activities in the next period. Yushita (2017) states that financial literacy is a basic need for everyone to avoid financial problems. Financial difficulties can arise if there is an error in financial management (mismanagement). On a personal level, individuals can save more and manage risk better. There may even be a general equilibrium effect: increased household demand for financial services can increase risk sharing, reduce economic volatility, increase intermediation, and accelerate overall financial development. It can facilitate competition in the financial services sector and a more efficient allocation of capital in society. However, this condition does not rule out the possibility that farmers with low literacy scores can already implement their financial management (financial literacy related to knowledge, attitudes, and behaviour).

4.3. The Impact of Financial Literacy on The Income of Chili Farmers

The following data analysis method is Propensity Score Matching (PSM) to analyze the impact of financial literacy on income level. Three categories of research variables are used in the PSM analysis method: treatment, income, and outcome variables. The treatment variable is the financial literacy level which will be categorized into a low category level and a high category level. At the same time, the income variables consist of gender, age, length of education, land area, land ownership status, farming experience, and several family dependents. Finally, the outcome variable, namely farmers' income. The following are the results of the research analysis

Table 3. Propensity Score Matching Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample</th>
<th>Treated</th>
<th>Controls</th>
<th>T-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>inc</td>
<td>Unmatched</td>
<td>93710573.9</td>
<td>46064898.5</td>
<td>2.45</td>
</tr>
<tr>
<td>ATT</td>
<td></td>
<td>93710573.9</td>
<td>28326070.9</td>
<td>2.29</td>
</tr>
</tbody>
</table>

The results of the analysis of the impact of financial literacy on farmers' income levels using the propensity score matching method in the table provide information that before the matching of the differences in income levels of chilli farmers with low literacy levels and high literacy levels has a difference of 47645675.4 which means that chilli farmers with low literacy levels have a higher income than those with low literacy levels, with a value of IDR 47,645,675,-. After matching, the difference in income between chilli farmers with high literacy levels has a value of IDR 65,384,503,-. By matching the data, the financial literacy of chilli farmers provides information about the impact given to the income level of chilli farmers of IDR 17,738,827,-. In other words, financial literacy in chilli farmers can have implications for increasing income during planting time.

Table 4. Financial Literacy Impact on Farmers Income

<table>
<thead>
<tr>
<th>Matching Method</th>
<th>Treatment</th>
<th>Control</th>
<th>ATT</th>
<th>Std. Err.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearest Neighbor Matching</td>
<td>47</td>
<td>10</td>
<td>335,000,000</td>
<td>87,600,000</td>
<td>3830***</td>
</tr>
<tr>
<td>Radius Matching</td>
<td>47</td>
<td>16</td>
<td>344,000,000</td>
<td>83,800,000</td>
<td>4098***</td>
</tr>
<tr>
<td>Kernel Matching</td>
<td>47</td>
<td>16</td>
<td>341,000,000</td>
<td>121,000,000</td>
<td>2816**</td>
</tr>
<tr>
<td>Stratification</td>
<td>47</td>
<td>16</td>
<td>343,000,000</td>
<td>154,000,000</td>
<td>2224**</td>
</tr>
</tbody>
</table>

It follows the theory of life span development proposed by Baltes in 1987 with the discussion that when the family's financial literacy level is lower, the financial welfare is also improving. On the other hand, financial welfare also decreases when the family's financial literacy level is lower. Families with a good level of financial literacy can make good financial decisions to achieve their level of financial well-being. Lusardi & Mitchell (2007) revealed that someone with knowledge of...
financial management would undoubtedly have a better future.

In line with this, Garg & Singh (2018) believe financial literacy is essential because it can equip individuals to make quality financial decisions to improve their financial well-being. Sukmawati & Rizkillah (2020) shows the relationship between the financial governance of farming families on the welfare of farming families, also influenced by farmers' income. However, no more than six per cent of farmers make household spending plans and run them orderly (Yuwono et al., 2017). Yuwono et al. (2017) also show the low level of financial inclusion, financial literacy level, and use of financial institution product services by Indonesian farmers.

### 4.4. Factors Affecting The Financial Literacy of Chili Farmers

Probit regression analysis in this study aims to determine the factors influencing the financial literacy level of chilli farmers in Rural Areas. The financial literacy level in this study is denoted by dummy variables 0 and 1, which means that if it is 0, then the literacy level is low because it has a value of 0 to less than 50. At the same time, the literacy level with a dummy value of 1 means a high literacy level because it has a value of more than 50 to 50, 100. The following are the results of the probit regression analysis in the study.

**Table 5. Probit Regression Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Coef</th>
<th>Std.Err.</th>
<th>z</th>
<th>P&gt;</th>
<th>I z</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.12926</td>
<td>0.0402</td>
<td>-3.22</td>
<td>0.001*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.30279</td>
<td>0.0119</td>
<td>2.55</td>
<td>0.011*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land area</td>
<td>0.00023</td>
<td>0.0008</td>
<td>2.6</td>
<td>0.009*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Status</td>
<td>0.71981</td>
<td>0.4085</td>
<td>1.76</td>
<td>0.078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farming experience</td>
<td>0.08692</td>
<td>0.0832</td>
<td>2.27</td>
<td>0.023*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Dependents</td>
<td>-0.07405</td>
<td>0.1913</td>
<td>-0.38</td>
<td>0.707</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cons.</td>
<td>1.04446</td>
<td>1.7018</td>
<td>0.71</td>
<td>0.475</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of obs</td>
<td>=</td>
<td>=</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR chi2 (6)</td>
<td>=</td>
<td>=</td>
<td>31.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi2</td>
<td>=</td>
<td>=</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>=</td>
<td>=</td>
<td>0.3543</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * 5% Significance

The output results show that the result of Pseudo R2 is 0.354. It indicates that the independent variable can explain the dependent variable by 35.4%. In other words, only 35.4% of the variation in the dependent variable can be explained by the model. Gujarati (2003) argues that in the logistic regression model, the main things that must be considered are: the significance of the model indicators, the significance of the independent variables, and the direction of the coefficients of these variables. At the same time, the pseudoR² is not prioritized.

The analysis results in table 4 also explain that of the seven variables tested, four are significant at the 5% level, and variables that have significance at the 5% level include age, education level, land area and farming experience. In addition to providing information about the level of significance, the analysis results also provide information about the value of the coefficient owned by each variable. Coef is the coefficient value each independent variable owns after being regressed with the dependent variable. The gender variable was omitted because it had an undefined result. After all, according to the respondents' profiles, financial literacy did not change by gender at the baseline level. However, it was determined that advanced financial literacy was more common in men than women. Similarly, men tend to take more risks than women. However, marital status does not alone affect risk appetite (Aren & Zengin, 2017). The following is a breakdown of each variable that affects financial literacy.

**a. Age**

The results of the probit regression analysis that have been carried out produce a significance value of 0.002; the value is smaller than 0.05 or 5% and has a negative coefficient value. It means that age significantly affects the financial literacy level of chilli farmers in rural areas. This study illustrates that as the age of farmers increases, their literacy level will decrease. It is due to the tendency of farmers over 45 years of age who need...
help understanding the concept of financial literacy, such as understanding calculations, interest rates, inflation, the time value of money, and the illusion of money. In contrast to farmers over the age of 45 years, it is easier to understand the concept of financial literacy. This condition provides a distance for young and old farmers regarding understanding the concept of financial literacy. Nurhayani (2019) understand that individuals in the productive age range usually have higher financial literacy than those above the productive age. It is due to their knowledge and ability to think logistically.

b. Level of Education

The results of the probit regression analysis that have been carried out have a significance value of 0.020; the value is smaller than 0.05 or 5% and has a positive value. It means that the education level significantly affects the financial literacy level of chilli farmers in Rural Areas. The education level factor in this study illustrates that when one unit adds the chilli farmer’s education factor, it will cause an additional one unit to the farmer’s financial literacy level. The higher the individual takes education, the more likely they will understand a concept. This condition also applies to individuals' understanding of financial literacy concepts such as understanding of calculations, interest rates, inflation, the time value of money, and the illusion of money. However, it is also possible for individuals with lower levels of education to understand the concept of financial literacy. According to Aziz (2021), the higher the level of education owned by business actors, the higher their literacy level.

c. Land Area

The results have been carried out to produce a significance value of 0.011; the value is smaller than 0.05 or 5% and has a positive coefficient value. It means that land area significantly affects the financial literacy level of chilli farmers in Rural Areas. The land area factor in this study illustrates that land in farming is an essential production factor. Without ignoring land quality, land area is a determining factor for the size of the results obtained from farming activities and affects farmers’ income. The more extensive the land area farmers own, the higher the income will be obtained. The existence of this condition requires the ability of farmers to manage their finances so that farming activities run continuously. Financial managerial is part of the concept of financial literacy, so it can be concluded that when there is an addition of one unit to the farmer's land area factor, it will add one unit to the level farmer's financial literacy level. Falo & Nubatonis (2017) show that the area of land cultivated by farmers is influenced by land ownership owned by farmers, which also affects the productivity of the farming undertaken. The fertile and extensive land will motivate farmers to improve their performance efficiently and effectively.

d. Land Status

The probit regression analysis found a significance value of 0.078; the value is smaller than 0.1 or 10% and has a positive coefficient value. Land status significantly affects the financial literacy level of chilli farmers in Rural Areas. The land status factor in this study describes the ownership status in the form of property rights and agricultural land rental rights. Land status can be used as a benchmark to determine the financial literacy level of farmers because farmers who have their land status need to understand land requirements and allocate funds to renew their land ownership status. In contrast to farmers whose land is leased, the farmer only needs to consider the cost of renting the land. A person who rents land for business does not escape the rental fee, so the production costs incurred are more excellent than someone who works on his land. The greater the production costs incurred, the greater the possibility of taking financial services (Mulyaqin et al., 2017).

e. Farming Experience

The analysis has been carried out to produce a significance value of 0.026; the value is smaller than 0.05 or 5% and has a positive coefficient value. It means that farming experience significantly affects the financial literacy level of chilli farmers in Rural areas. The farming experience factor in the study illustrates that the more one's farming experience increases, the higher the financial literacy level one has. The length of time can measure farming experience respondent farmers carry out farming activities. Farmers with more farming experience have a more mature capacity to act so that in each activity, they will be more careful, and farmers with farming experience have a lot of knowledge and skills about financial literacy. According to Aziz (2021), when an individual's business has been running for a long time, his literacy level will also increase. The longer a person pursues a business, will affect his productivity, so efficiency is increased and able to reduce production costs and increase income.

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f. **Family Dependents**

The probit regression analysis shows a significance value of 0.739; the value is more significant than 0.1 or 10% and has a negative coefficient value. It means that family dependents do not significantly affect the financial literacy level of chilli farmers in Rural Areas. The family-dependent factor in the study illustrates that the more the existing family dependents, the less the financial literacy level owned by the farmer. The number of dependents in the family significantly contributes to determining a person's behaviour in his field of business. The greater the number of dependents of a farmer's family, the sweeter a person will try because he is driven by a sense of responsibility towards his family members. Besides, family responsibilities are also a burden that must be borne in preparing for household needs. According to Yuniarti (2019), it was found that the number of dependents owned by a family affects the family's ability to make financial decisions because it is assumed that when someone who is married and has children tends to have a high level of literacy. It is due to the higher the literacy level of a person, the better the ability to carry out family financial planning.

5. **Conclusion**

Based on the results of this study, the following conclusions can be drawn: The level of financial literacy of chilli farmers in Rural areas is indicated to have a high value in the range of 51-100, as many as 65.71% of chilli farmer respondents in Rural Areas. Furthermore, as many as 34.29% of respondents, chilli farmers, have low financial literacy. Farmers with low literacy indicate that they still do not understand the concept of financial literacy in the form of knowledge of money calculations, interest rates, inflation, the time value of money, and the illusions caused by money.

The financial literacy of chilli farmers in Rural Areas has a positive impact on increasing their income of chilli farmers in Rural Areas. With the comparison after matching, the difference in income between chilli farmers with high literacy levels and chilli farmers with low literacy levels has a value of 65384503, which means that the level of Farmers' financial literacy has a positive impact on the income level of chilli farmers. It is indicated by chilli farmers with high literacy levels having higher incomes than those with low literacy levels with a value of Rp. 65,384,503.-. By matching the data, it can be concluded that financial literacy in chilli farmers provides information about the impact given to the income level of chilli farmers of Rp. 17,738,827.-. In other words, financial literacy in chilli farmers can have implications for increasing income during planting time.

The factors influencing the financial literacy of chilli farmers in Rural Areas are age, education level, land area, land status, farming experience, and family responsibilities. The results show that age has a significant negative relationship to financial literacy, education level has a significant positive relationship to financial literacy, land area has a significant positive relationship to financial literacy, land status has a significant positive relationship to financial literacy, and farming experience has a positive relationship. A significant positive relationship between financial literacy and family dependents has an insignificant negative relationship with financial literacy.

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22. https://doi.org/10.32938/ag.v2i02.268


