**LEVEL OF FINANCIAL LITERACY AND ITS INFLUENCING FACTORS AMONG DAIRY FARMERS IN PANGALENGAN DISTRICT BANDUNG**

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**ABSTRACT**

Research on the level of financial literacy of farmers is needed to measure their ability to manage finances to improve their level of welfare. This study aims to analyse the level of financial literacy of dairy farmers and the factors that influence it and see its relationship with farmers' preferences in facing risks. This research was conducted in Pangalengan District, Bandung Regency using descriptive analysis method, multiple regression analysis, and Pearson correlation test. The number of respondents in this study was 77 farmers spread across three villages in Pangalengan District, Bandung Regency. The results showed that the financial literacy level of the majority of farmers (77%) was in the less literate category, especially in the financial behaviour component. Factors that can affect the financial literacy of farmers are income, age, education level, ownership of other jobs, and distance to financial institutions. While the variables of length of farming and gender do not influence the level of financial literacy of farmers and prove a positive relationship between the level of financial literacy with their preferences in facing risks.

***Keywords****: financial literacy, dairy farmers, dairy farm risk*

**BACKGROUND**

Animal husbandry is one of the agricultural subsectors that has an important role in fulfilling the community's animal protein needs. One type of livestock that can contribute to meeting the needs of the community related to animal protein is dairy cows whose main product is milk. Dairy cows are the largest contributor in meeting the need for milk as milk producers compared to other types of livestock such as goats, sheep and buffalo.

Based on Table 1, West Java Province is the second largest dairy milk producer after East Java. Based on data from the Ministry of Agriculture (2022), West Java has a dairy cattle population of 110,005 heads with milk production of 300,198 tons in 2022. Table 1 shows that West Java province is one of the most productive provinces in producing dairy milk in Indonesia.

**Table 1.** Total dairy cattle population and milk production of productive dairy cows by region in 2022

|  |  |  |
| --- | --- | --- |
| **Province** | **Milk production (tons)** | **Cow population (heads)** |
| D.I. Yogyakarta | 3.885 | 3.265 |
| Sumatera Utara | 8.980 | 5.287 |
| Jawa Tengah | 103.547 | 101.288 |
| Jawa Barat | 300.198 | 110.005 |
| Jawa Timur | 543.687 | 282.364 |

Source: Direktorat Jenderal Peternakan dan Kesehatan Hewan, 2022

Bandung Regency is the region with the second largest dairy cattle commodity in West Java after West Bandung Regency. Based on BPS West Java data (2022), Bandung Regency has a dairy cattle population of 26,097 heads, which is still below West Bandung Regency with 39,101 heads. It is concluded that in 2022, around 21% of the dairy cattle population in West Java will come from Bandung Regency. Meanwhile, the largest dairy cattle population in Bandung Regency comes from Pangalengan Subdistrict, which reaches 3,625 heads for males and 10,655 heads for females.

The dairy cattle population in Pangalengan Subdistrict is managed directly by farmer households who join the South Bandung Livestock Cooperative (KPBS). Based on data from the Department of Agriculture (2022) in Table 2, Pangalengan subdistrict has the highest number of dairy cows in Bandung District with 14,280 head.

 **Table 2.** Dairy cattle population of Bandung Regency by subdistrict 2022

|  |  |  |
| --- | --- | --- |
| **Subdistrict** | **Dairy cattle population (head)** | **Total (head)** |
| **Male** | **Female** |
| Pangalengan | 3.625 | 10.655 | 14.280 |
| Cilengkrang | 813 | 3.501 | 4.314 |
| Kertasari | 261 | 1.800 | 2.061 |
| Pasir Jambu | 753 | 1.234 | 1.987 |
| Arjasari | 84 | 863 | 947 |

Source: Dinas Pertanian Kabupaten Bandung, 2022

However, in the range of 2021-2022 the livestock sector received a disaster that had quite an impact on farmers. The cloven-hoofed animal husbandry sector including cattle, goats, sheep, buffalo, pigs and deer can be affected by foot and mouth disease (FMD) caused by the FMD virus of the Pocornaviridae family and the genus Apthovirus (Adjid 2020; Mohamad et al. 2022). Outbreaks reach a mortality rate in livestock of more than 50% if the virus continues to develop in the heart muscle of younger animals (Gulbahar et al. 2007). Based on data from the Directorate of Livestock and Animal Health (PKH) of the Ministry of Agriculture (Kementan), the peak of FMD infected animals in Indonesia was in June 2022 with 13,518 cases. The disease is long-lasting and attacks the bones, mammary glands, and dairy products of farm animals.

This outbreak affects all regions in Indonesia, including the dairy farming sector in KPBS Pangalengan District. The high level of losses due to FMD outbreaks, especially reducing farmers' milk production, causes farmers' income, which is mainly from milk production, to decrease dramatically.

As a result of farmers' income falling dramatically, and expenses for feed that must still be incurred, causing farmers to lose money. On the other hand, farmers also have to finance family needs, which causes farmers to try to manage their finances well. The impact of FMD can cause farmers to switch professions from farming because they consider the high losses. In Figure 3, based on KPBS data, there is a drastic decrease in the number of farmers in 2022, which is the peak of FMD in Indonesia.

**Figure 1.** Number of active farmers at KPBS Pangalengan 2019 – 2023

Figure 1 shows a drastic decrease in active farmers at KPBS in 2022 by 230 people from 2021. This shows that when the FMD outbreak peaks in Indonesia in 2022, it can significantly reduce the number of active farmers. FMD causes huge losses for farmers so they prefer to switch professions or no longer manage their farming business because when their livestock are affected by FMD, their income tends to be lower than their expenses.

The large number of inactive dairy farmers in KPBS Pangalengan Sub-district after FMD is an indication that dairy farmers in Pangalengan Sub-district are not prepared to deal with the risks associated with FMD outbreaks. Dairy farmers are also faced with a variety of risks that may have an impact on livestock farming such as damage to milk quality, decreased cow productivity, livestock disease, feed availability, milk price fluctuations, feed availability, and death of livestock which causes farmers to prefer to avoid existing risks as is the case when there is an FMD outbreak, many farmers prefer to avoid increasing losses by not continuing their farming business. Farmers need large capital and assets to be able to run their farm operations and must have good financial management skills to be able to minimize losses due to the risks that are present. This is in line with prospect theory, where individuals will be more sensitive to losses than gains when making decisions, therefore individuals tend to think about the level of loss that may occur first, the higher the loss that may occur will make individuals tend to avoid making these decisions (Kahneman and Tversky 1979).

This is also a concern for the government and financial institutions to provide access to financing and training in managing finances for farmers as widely as possible so that farmers can manage their finances better and improve their financial literacy. Currently, animal husbandry, which is included in the agricultural sector, already has a variety of financing programs provided by the government and financial institutions.

However, not all available financing programs have been accessed by farmers, due to the low level of financial literacy of farmers. Counseling related to improving financial literacy in Pangalengan Sub-district has never been carried out by the government or related institutions, thus increasing the possibility that the level of financial literacy of farmers in Pangalengan Sub-district is at a low level.

Financial literacy can help farmers to manage farm finances more effectively and assist in making better decisions regarding investments, savings and expenses especially in the face of emergencies such as the previous FMD outbreak. Until now, little research has been done to measure and analyze the level of financial literacy in the livestock sector. Therefore, research on the level of financial literacy of dairy farmers and the factors that influence it needs to be conducted.

**RESEARCH METHODS**

This research was conducted in three cooperative service centers (TPK) of KPBS, Pangalengan District, Bandung Regency, West Java Province. The selection of this location is done by considering the distance of the TPK to the center of financial institutions located in Pangalengan Subdistrict, the first is Pangalengan TPK which has the closest distance to financial institutions, then Cipanas TPK which has a medium distance, and Wates TPK which has the farthest distance. It also considers data from the Bandung Regency Agriculture Office that Pangalengan Sub-district is the sub-district with the largest number of dairy cattle in Bandung Regency (DISTAN 2022). Data collection was conducted from September 2023 to January 2024.

The type of research used in this study is a quantitative approach and uses primary data supplemented by secondary data. Primary data was obtained through filling out questionnaires and in-depth interviews with respondents. Secondary data uses data obtained from literature studies from various sources, such as books, journals, government agencies, international institutions, and other literature related to the topic of this research.

In conducting this study, the authors used a population of farmers from data on the number of farmers in the three KPBS cooperative service places (TPK) provided by KPBS which amounted to 306 farmers. In determining the minimum amount of sampling in this study, the authors used the Slovin formula. The Slovin formula is a formula commonly used in determining the number of samples in a study that is assumed to represent the entire population, where the Slovin formula sets the allowable error limit when determining the sample in percentage form and is indicated in the letter *e* (Sugiyono 2017).

Based on the Slovin formula, the author must obtain a sample of 76 respondents, but in determining the number of samples taken in each TPK applying proportional random sampling techniques, the author took 77 respondents to be studied. According to Sugiyono (2006) this sampling technique is taken randomly and does not pay attention to the strata of the population. Using this technique, the number of respondents from each TPK was obtained and the aim was to ensure that farmers from each TPK were represented by the number of respondents. The distribution of the number of sample farmers in each TPK is presented in Table 3.

**Table 3.** Number of samples by TPK

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **TPK** | **Number of farmers (people)** | **Percentage (%)** | **Number of samples (people)** |
| 1 | Pangalengan | 39 | 12,75 | 10 |
| 2 | Cipanas | 204 | 66,67 | 51 |
| 3 | Wates | 63 | 20,59 | 16 |
| Total | 306 | 100 | 77 |

**Calculation of Financial Literacy Score**

Sourced from the OECD, there is a combination of three indicator components used in measuring a person's financial literacy score (Atkinson and Messy 2012), namely:

1. The financial knowledge indicator is evaluated based on each respondent's number of accurate responses to eight questions covering topics such as understanding the basic laws of banking, inflation, diversification, risk and return, as well as the time value of money and related concepts. Those taking the survey will be given a score of 1 for correct answers and a score of 0 for incorrect or unknown answers.
2. The financial behavior indicator is assessed by the total intensity of individuals based on a total of ten behavioral statements that measure individual behavior related to accuracy in managing personal and business finances, prudence in deciding the use of financial products and services, making decisions on the selection of financial products and services after knowing the information, accuracy in paying bills, saving or investment activities in the past year, and loans to meet needs. Respondents will get a score of 4 if they answer on a scale of 4, score 3 if they answer on a scale of 3, score 2 if they answer on a scale of 2, and score 1 if they answer on a scale of 1.
3. The financial attitudes indicator is measured from the total score of respondents' answers in the form of individual assessments of eleven statements relating to farmers' beliefs and views on long-term spending or savings, short-term financial planning, readiness to face investment risks, future concerns, and ways to meet needs. When asked to rate their level of agreement, respondents could choose among four possible options: strongly disagree (4), disagree (3), agree (2), and strongly agree (1).

In this study, the authors measured the financial literacy level of farmers using Chenn and Volpe's (1998) theory. This implies that the financial literacy components mentioned above are the result of the score of each question. A person's financial literacy level can be determined by the following formula:

|  |  |  |
| --- | --- | --- |
|  | $Financial literacy index= \frac{Index X\_{1}+Index X\_{2}+Index X\_{3}}{3}$  | (1) |

where:

|  |  |  |
| --- | --- | --- |
| Index $X\_{1}$ | = | Financial knowledge index |
| Index $X\_{2}$ | = | Financial behaviour index |
| Index$ X\_{3}$ | = | Financial attitudes index |

**Descriptive analysis**

Descriptive analysis refers to a way of analyzing data used by researchers to study the factors under study (Muljono 2012). To understand and evaluate the level of financial literacy among farmers, this study uses descriptive analysis based on respondents' responses to the questionnaire questions provided.

The respondents' financial literacy level refers to the four levels of financial literacy listed in SNLIK OJK (2022), namely well literate, sufficient literate, less literate and not literate. In this research, the author tries to give weight to each level based on the correct answer score in filling out the questionnaire, namely the number of correct answers divided by the total score, then the value is obtained. All three aspects of financial literacy-knowledge, behavior and attitude-are covered in this survey. Table 4 shows the distribution of financial literacy levels of the studied farmers.

**Table 4.** financial literacy levels

|  |  |
| --- | --- |
| **financial literacy levels** | **Index** |
| Well literate | 24,25 – 30,00 |
| Sufficient literate | 18,50 – 24,24 |
| Less literate | 12,75 – 18,49 |
| Not literate | 7,00 – 12,74 |

**Multiple linear regression analysis**

Regression analysis is a statistical procedure for analyzing the relationship between dependent variables (dependent) and independent variables (independent). If the regression model uses two or more independent variables, the study uses multiple regression analysis (Malhorta 2004). Multiple regression models and the least squares method or what can be known as Ordinary Least Square (OLS) in this study are applied to analyze various factors that can have an influence on financial literacy, especially on farmers.

The non-independent variable used in this study is the financial literacy index and the independent variables in this study are income, age, gender dummy, latest education level, ownership of another occupation other than livestock farming dummy, distance to the nearest financial institution, and length of farming business. The classical assumption test in the form of normality test and heteroscedasticity test aims to determine the best model that can describe the actual condition of the financial literacy of farmers. The general model of multiple linear regression of financial literacy function used is as follows:

|  |  |
| --- | --- |
| $financial literacy index\_{i} = β\_{0 }+ β\_{1}Income\_{i}+β\_{2}Age\_{i}+β\_{3}dummyGender\_{i}+ β\_{4}Education\_{i}+β\_{5}dummySideHustle\_{i}+β\_{6}Distance\_{i}+ β\_{7}FarmBusinessDuration\_{i}+ε\_{i}$  | (2) |

Where,

|  |  |  |
| --- | --- | --- |
| $$financial literacy index\_{i}$$ | = | Farmer Financial Literacy Index, |
| $$Income\_{i}$$ | = | Income (million rupiah/month), |
| $$ Age\_{i}$$ | = | Age (years), |
| $$ dummyGender\_{i}$$ | = | Gender dummy (1= male, 0= female), |
|  |  |  |
| $$ Education\_{i}$$ | = | Last Education (1= SD / Equivalent, 2= SMP / Equivalent, 3= SMA / Equivalent, 4= Diploma / S1 / S2) |
| $$dummySideHustle\_{i}$$ | = | Dummy of ownership of another occupation other than livestock farming (1= own, 0= do not own), |
| $$ Distance\_{i}$$ | = | Distance to the nearest financial institution (km), |
| $$ FarmBusinessDuration\_{i}$$ | = | Length of farming business (years), |
| $$β\_{0}-β\_{7}$$ | = | Coefficient, |
| $$ ε\_{i}$$ | = | Error Term |

**RESULT AND DISCUSSION**

Dairy farmers in Pangalengan Subdistrict are members of the South Bandung Livestock Cooperative (KPBS). Through KPBS, farmers receive financial services that can be used. Since 1993, KPBS has collaborated with PT. Bank Perkreditan Rakyat (BPR) Bandung Kidul to provide financial services for farmers and the general public in Pangalengan Subdistrict. The existence of cooperation between KPBS and PT BPR Bandung Kidul provides convenience and relief for dairy farmers who are dealing with farm business financing problems. PT BPR Bandung Kidul is located next to the KPBS Main Office in Pangalengan District, Bandung Regency.

All farmers who are members of KPBS indirectly become customers of PT BPR Bandung and will have savings. Savings provided by PT BPR Bandung Kidul have a relief in administrative costs of Rp1,000 per month. In addition, when farmers deposit milk every day, it will be directly deducted to be used as savings in the bank if the milk price is rounded below Rp5,000, so that each farmer will have a balance that will continue to grow every milk deposit.

PT BPR Bandung Kidul also provides credit services for farmers and the general public. Credit given to KPBS members can be used for the purchase of cows, expansion of grass land, cage repairs, and so on. Farmers who have credit to PT BPR Bandung Kidul can pay their bills through deductions from each milk stor, so that it will make it easier for farmers to pay credit and avoid bad credit. BPR provides relief for farmers, namely lower credit interest than for the general public, which is 12 percent per year while for the general public it is 21 percent per year.

**Financial Literacy Level of Dairy Farmers**

The level of financial literacy of dairy farmers studied has been determined through the completion of questionnaires by 77 farmers in Pangalengan sub-district. The level of financial literacy of dairy farmers in Pangalengan Sub-district is shown in Table 5.

|  |  |  |
| --- | --- | --- |
| **category** | **Number of farmers (people)** | **Total** |
| **Pangalengan** | **Cipanas** | **Wates** |
| Well literate | 0 | 0 | 0 | 0 |
| Sufficient literate | 3 | 41 | 15 | 59 |
| Less literate | 6 | 9 | 1 | 16 |
| Not literate | 1 | 1 | 0 | 2 |
| literacy index | 20,67 | 17,82 | 16,90 | 18,01 |

**Table 5.** Financial literacy level of dairy farmers in Pangalengan sub-district

The results of the analysis in Table 5 show that the level of financial literacy of farmers in the three research locations is on average at the less literate level of 59 respondents, of which 3 people from Pangalengan TPK, 41 people from Cipanas TPK, and 15 people from Wates TPK. The average financial literacy index owned by Pangalengan TPK farmers is 20.67 (moderately literate), for Cipanas TPK is 17.82 (less literate), and for Wates TPK is 16.90 (less literate). The low level of financial literacy of farmers is influenced by the components of financial literacy, namely knowledge, behavior, and attitude. It is concluded that dairy farmers in Pangalengan Sub-district have not paid attention to the importance of having good financial literacy, and also added by other factors that can affect the low level of financial literacy of farmers. The high number of farmers who are classified at the less literate level needs attention from the government and related institutions because until now it is believed that a good level of financial literacy can improve welfare.

The low financial literacy of farmers is caused by the low index of components that build the financial literacy of farmers. Based on Table 6, it shows that the financial behavior component is in a condition that needs attention because 74% of the farmers studied were in the low category on this component. The financial behavior component assesses farmers in terms of managing business and personal finances such as making savings/investment habits, paying loan/credit bills on time, and recording expenses and income. Factors that influence the low financial behavior of farmers based on the results of the interviews are at the point of investment/saving behavior, preparation and recording of financial reports, and rarely separating personal and farm business finances. Farmers tend to choose to save in the form of cows rather than saving in banks because they consider their distance to visit the bank is not close, in terms of business records farmers also rarely do bookkeeping of their business cash flow. Farmers tend to lack concern in terms of managing finances better because they apply habits that have been commonly applied. In the financial knowledge and attitude component, the average farmer is in the middle category.

**Table 6.** Financial literacy components of dairy farmers in Pangalengan sub-district

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Component** | **Index** | **Percentage of farmers (%)** |
| 1. | Financial knowledge | 0,00 – 2,00 | (Low) | 0 |
|  |  | 3,00 – 5,00 | (Medium) | 49 |
|  |  | 6,00 – 8,00 | (High) | 51 |
| 2. | Financial behaviour | 10,0 – 19,90 | (Low) | 74 |
|  |  | 20,0 – 29,90 | (Medium) | 23 |
|  |  | 30,0 – 40,00 | (High) | 3 |
| 3. | Financial attitudes | 11,0 – 21,90 | (Low) | 0 |
|  |  | 22,0 – 32,90 | (Medium) | 86 |
|  |  | 33,0 – 44,00 | (High) | 14 |

Based on the results of farmers' answers after conducting interviews, the authors have mapped the average answers of farmers on each component of financial literacy that has been linked to the characteristics of farmers so as to describe the condition of the financial literacy component of farmers on each characteristic. Farmer characteristics grouped by the author include age, gender, final education level, length of farming business, cooperative membership, ownership of jobs other than farming, and income level (Table 7).

Table 7 maps the age characteristics of farmers based on the score of each component that builds financial literacy. In each component of financial literacy, especially in the financial behavior component, younger farmers have a higher average score than older farmers. This is because the older the farmer, the less interested they are in paying attention to their financial management. Younger farmers tend to have more capability in managing finances properly and regularly, and also younger farmers also have an interest in improving their financial literacy better than older ones, this is contrary to the hypothesis which states that older farmers will have more experience in managing their farms including in managing their finances.

Furthermore, on gender characteristics, male farmers have a higher average score on the financial knowledge and attitude components, while women excel in the financial behavior component (Table 7). Male farmers tend to have good knowledge in finance so that in responding to statements related to finance, so that in responding to statements related to financial conditions, male farmers will be able to answer well. However, male farmers also tend to be lazier than women in managing their finances well, it is rare to find male farmers who keep financial records and also rarely do routine saving behavior. On the other hand, women will be more careful in managing the finances of their farming business including their family finances.

The level of education has a big effect on the score of the financial literacy component of farmers. As evidenced by the score in each component, farmers who graduated from Diploma / S1 / S2 have the highest score, while those who only graduated from elementary school / equivalent have the lowest score (Table 7). This is because the higher the education, the more understanding of financial literacy they will have. However, dairy farmers in Pangalengan sub-district are dominated by elementary school graduates, which greatly affects their low level of financial literacy.

In the characteristics of the length of business owned by farmers, it cannot be determined which range has advantages in the financial literacy component, because there is no significant difference in the score of the financial literacy component in each range of length of farming business (Table 7). This shows that the length of farming business owned by farmers cannot describe the level of financial literacy of farmers, because it is possible that old farmers and new farmers have the same level of financial literacy. There are other factors that may be more influential in determining the score on the financial literacy component.

**Table 7**. Average condition of financial literacy components based on respondent characteristics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Characteristic** | **Description** | **Knowledge score** | **Behavior score** | **Attitude score** |
| Age | <40 | 5,75 | 21,45 | 30,95 |
|  | 40-60 | 5,40 | 18,22 | 29,18 |
|  | >60 | 4,67 | 18,00 | 28,33 |
| Gender | Male | 5,54 | 17,36 | 29,78 |
|  | Female | 4,54 | 19,31 | 28,09 |
| Education | SD / Equivalent | 5,02 | 17,34 | 28,65 |
|  | SMP / Equivalent | 5,31 | 19,89 | 30,10 |
|  | SMA / Equivalent | 5,44 | 21,78 | 31,11 |
|  | Diploma / S1 / S2 | 7,00 | 34,00 | 33,00 |
| **Table 7.** Average condition of financial literacy components based on respondent characteristics (continued) |
| **Characteristic** | **Description** | **Knowledge score** | **Behavior score** | **Attitude score** |
| Length of business | 0 - 10 | 5,63 | 19,81 | 29,72 |
|  | 11 - 20 | 5,42 | 19,89 | 30,05 |
|  | >20 | 5,34 | 18,51 | 29,29 |

**Factors Affecting the Financial Literacy Level of Farmers**

The level of financial literacy of dairy farmers is influenced by several factors. Factors that can affect the level of financial literacy of farmers were formulated and tested using the Ordinary Least Square (OLS) method through the Stata application. The test results produced an R-Squared value of 0.529 or 52.9% which shows that the variation in the factors tested can explain the level of financial literacy of farmers, the remaining 47.1% is explained by other variables. The test results also produced a probability value of 0.000 (very small) which indicates that the regression model tested as a whole is statistically significant.

Factors that can significantly influence the level of financial literacy index of farmers include income, age, latest level of education, dummy for other job ownership, distance to the nearest financial institution, and risk preference. While the dummy factors of gender and length of farming business have no significant effect (Table 8).

It can be seen from Table 8 that there is a positive coefficient on the farmer's income level variable at the 1 percent real level of 0.150 which indicates that every increase in the farmer's income level by 1 million, the financial literacy index will increase by 0.150, ceteris paribus because increasing income will increase individual awareness in managing their finances better and can also increase interaction with financial institutions. This is consistent with the findings of Ravikumar et al. (2013) and Definit et al. (2013) which also prove that individuals who have high income levels will also have higher financial literacy and vice versa for individuals who have lower income levels.

**Table 8.** Estimation results of factors affecting the level of financial literacy of dairy farmers in Pangalengan sub-district.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | ***Coef.*** | ***Std. Err*** | **P>|t|** |
| Income (million rupiah/month) | 0,150\*\*\* | 0,031 | 0,000 |
| Age (years) | -0,049\*\* | 0,020 | 0,018 |
| Gender *dummy* | 0,687 | 0,558 | 0,223 |
| Last Education Level | 0,902\*\*\* | 0,270 | 0,001 |
| Other Occupation dummy | 0,623\* | 0,372 | 0,098 |
| Distance to Nearest Financial Institution (km) | -0,222\*\*\* | 0,071 | 0,003 |
| Length of Farming Business (years) | 0,016 | 0,020 | 0,428 |
| *R-Squared* |  |  | 0,529 |
| *Prob (F-Statistik)* |  |  | 0,000 |
| Description: | \*) significant at the real level α=10%\*\*) significant at the real level α=5%\*\*\*) significant at the real level α=1% |

The age variable has a negative effect on the level of financial literacy of farmers at a real level of 5 percent with a coefficient of 0.049, meaning that the financial literacy index will decrease by 0.049 every one year increase in farmer age. In this case it can be concluded that the level of financial literacy of farmers decreases with age even though a good level of financial literacy is needed both young and old, this is because farmers in the younger generation have a superior ability to adapt to technological and educational developments, making it possible that farmers in the younger generation will have more ability in terms of more up-to-date financial management compared to farmers in the older generation (Santoso et al. 2020). However, the results in this study contradict the research hypothesis and findings of Afriza and Priminingtyas (2017) which state that age has a positive effect on the level of financial literacy because individuals with older ages have more life experience and tend to have a better understanding of money matters, so their level of financial knowledge can be positively correlated with their age. The findings in this study contradict the hypothesis because younger farmers are better able to understand and adapt to information related to the evolving financial management system than older farmers who apply the financial management system only based on experience.

The gender dummy variable has no significant effect on the level of financial literacy. Seen in Table 8, the probability value of the gender dummy variable is greater than the 10 percent real level. These results indicate that differences in the gender of the farmers studied do not have a significant impact on their level of financial literacy. Pesudo (2013) also shows that gender does not have a significant impact on the level of financial literacy because gender differences of respondents do not guarantee a better level of financial literacy. However, based on SNLKI OJK 2016, it shows the influence of gender differences on the level of financial literacy because it is shown that men have a higher financial literacy index of 39.94 and women of 36.13.

The variable of the last education level of the breeder has a positive and significant effect on the level of financial literacy index at a coefficient of 0.902 with a real level of 1 percent. These results indicate that the higher the level of the last education taken by farmers will increase their financial literacy index by 0.902.

This shows that the higher the last education of farmers will have a level of financial literacy of farmers because the higher the level of education taken by individuals will increase their understanding of the components of financial literacy. This result is different from the results of Nurhidayanti and Anwar's research (2018) which found that the level of education has no significant effect on the level of financial literacy because they found the fact that not all respondents who have low education have a low level of financial literacy.

The other job dummy variable shows a coefficient of 0.623 at a real level of 10 percent. The other job dummy variable has a significant effect on the level of financial literacy of farmers, where every farmer who has a job other than farming will have a higher financial literacy index of 0.623 than farmers who only rely on their livestock business. When farmers have other jobs, it will increase income other than that generated from farming and will increase the total income of the farmer's household which must be used in daily life so that it allows farmers to have good financial management skills. Research by Cahyono et al. (2006), Shalahudin and Susanti (2014) also found that variable ownership of side jobs will increase income and improve financial literacy.

The distance to the nearest financial institution (km) variable has a negative and significant coefficient on financial literacy. The test results produced a coefficient of 0.222 at a real level of 1 percent, which means that every increase in the distance of farmers to the nearest financial institution by 1 kilometer will reduce the level of financial literacy by 0.222. This shows that the greater the distance of farmers to financial institutions will reduce their level of financial literacy and vice versa because the greater the distance of farmers to financial institutions will reduce their interaction with products and services provided by financial institutions because financial literacy also assesses the extent to which individuals use and interact with available financial products and services, especially from PT BPR Bandung Kidul which is a bank owned by all farmers in KPBS. Yarasevika (2016) and Ravikumar et at. (2013) also proved that the level of individual financial literacy is influenced by the distance to the nearest financial institution.

The variable length of farming business (years) has no significant effect on the level of financial literacy of farmers because the probability is above the real level of 10 percent (Table 8) which shows that the longer the farming experience of farmers does not really affect the level of financial literacy because both farmers who have just started a business and farmers who have been long, on average, will have the same way of managing farming businesses including financial management due to the business they are engaged in is a hereditary business, so there is no significant difference in the financial literacy index of farmers who have been long with those who are still new. This result is not in line with Aziz (2021) who said that the level of individual financial literacy is influenced by the length of business or experience he has gone through. There is no significant difference in the financial literacy index of farmers whose farming business is new and old, because the average farmer encountered is low in the financial behavior section because it is rare to find those who make records and save in banks.

**CONCLUSION AND SUGGESTION**

**Conclusion**

1. The majority of dairy farmers in Pangalengan sub-district studied, 77%, are in the less literate category. The average financial literacy index owned by Pangalengan TPK farmers is 20.67 for Cipanas TPK of 17.82 and for Wates TPK of 16.90.
2. The financial behavior component is in a condition that needs more attention because 74% of the farmers studied were in the low category at the level caused by the low concern of farmers on saving/investment habits, preparation and recording of financial statements, and rarely separating personal finances and farm businesses. In the financial knowledge and attitude component, the average farmer is in the middle category at its level (>50%).
3. The results of the analysis of factors that affect the level of literacy are the variables of income, age, the last level of education, dummy ownership of other jobs, and distance to the nearest financial institution. While the variable length of farming business and gender dummy have no influence on the level of financial literacy of farmers.

**Suggestion**

1. KPBS can provide programs in the form of training and mentoring on a regular basis for farmers related to recording farm cash flows and preparing financial reports. KPBS can provide awards for farmers who are able to attend training and complete the final project of the program well.
2. The government, financial institutions, and KPBS work together to continue to provide access and financial services to farmers in order to increase farmer interaction with financial products by placing PT BPR Bandung Kidul ATM machines in every village in Pangalengan District and PT BPR Bandung Kidul must be more active in interacting with farmers so that farmers are more concerned with available financial products and institutions.
3. Suggestions for further research using this topic so that researchers are more exploratory in choosing other factors that are thought to affect the level of financial literacy.

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