Journal of Agricultural Socio-Economics (JASE)
eISSN 2745-6897 | pISSN 2745-6889
Volume 5 Issue 2 (2024) Page 118-126
DOI: http://dx.doi.org/10.33474/jase.v5i2.22952
Submitted: 11-11-2024 | Accepted: 12-12-2024 | Published: 31-12-2024

Analysing of financial literacy among self-owned oil palm farmers in the tidal land environment of Barito Kuala Regency, South Kalimantan

Yusuf Azis[1*], Hartoni Hartoni[1], Karimal Arum Shafriani[1], Jeemoni Gogoi[2]
[1]University of Lambung Mangkurat, Banjarmasin, Indonesia
[2]Assam Agricultural University, Assam, India

* Correspondent Author Email: yusuf_azis@ulm.ac.id

Abstract. This study aims to assess the level of financial literacy and examine the influencing factors among independent oil palm smallholders operating in the tidal land areas of Barito Kuala Regency, South Kalimantan, Indonesia. Despite the region's significant agricultural potential, particularly in oil palm cultivation, local farmers often face financial vulnerability due to limited financial knowledge. Using a sample of 100 respondents selected through simple random sampling across Wanaraya, Tamban, and Barambai Districts, the study evaluates financial literacy based on the Organisation for Economic Co-operation and Development (OECD) framework and applies binary logistic regression to identify key determinants. The Wald test analysis confirms that income, formal education, proximity to financial institutions, and individual risk preferences significantly influence financial literacy among the respondents. Specifically, higher income and more years of formal education are associated with increased likelihood of being financially literate. A shorter distance to financial institutions also positively affects literacy, suggesting that physical access to financial services supports better financial understanding. Additionally, individuals with higher risk preferences tend to have greater financial literacy, potentially due to increased engagement with financial decision-making. Conversely, age was found to have no significant effect, which confirms that financial literacy is not inherently tied to a person's age or life stage. Instead, it is determined by exposure to financial knowledge, access to resources, and engagement with financial practices, factors that vary regardless of age. While the study is limited by its regional scope and sample size, it offers critical insights for policymakers and stakeholders in promoting targeted financial education programs for rural agricultural communities. The findings emphasize the need for accessible, context-specific financial literacy initiatives to enhance the economic resilience of smallholder farmers in underdeveloped regions.

Keywords: Financial Literacy, Tidal Land, Oil Palm Farmers, Binary Logistics Regression

INTRODUCTION

Financial literacy is a whole process of increasing knowledge, skills, and confidence in consumers and society so that the ability to manage personal finances well emerges. Yushita (2017) in her research stated that financial literacy is very important for someone not to have financial problems. A person's financial well-being can be achieved if appropriate and healthy financial decisions are made through financial literacy (Sugiharti & Maula, 2019). Financial literacy significantly impacts farmers' access to microcredit programs and their ability to manage finances effectively (Anwar, 2022).

Oil palm farmers play a crucial role in many economies yet often face financial challenges. Improving their financial literacy is essential to empower them to make informed decisions about their income, savings, and investments. By understanding basic financial concepts, these farmers can better manage their finances, increase their income, and improve their overall quality of life. Research into the financial literacy of oil palm farmers can identify knowledge gaps and develop targeted interventions to address them. Media literacy in oil palm farming is also important, with farmers demonstrating medium levels of technical skill and critical understanding but basic levels of communication skills (Yulida et al., 2019; Rahman et al., 2022). The financial well-being of oil palm farmers has a ripple effect on their communities and the broader economy. When farmers have strong financial skills, they are more likely to invest in their businesses, create jobs, and contribute to local development. Research in this area can provide valuable insights into the factors influencing financial decision-making among rural populations and inform the development of more inclusive financial systems. Sustainable agricultural practices are becoming increasingly important in the face of climate change and growing global demand for food. Oil

palm farmers with a strong financial management understanding are better equipped to adopt sustainable practices, such as agroforestry and organic farming. By improving their financial literacy, these farmers can access the resources they need to transition to more sustainable production methods and build more resilient livelihoods.

In fact, people in South Kalimantan have a composite financial literacy index (36.22%) which is still lower than the composite financial literacy index (38.03%) nationally (Otoritas Jasa Keuangan, 2019). According to the results of Indonesia's 2024 national financial literacy and inclusion survey (SNLIK), it shows that the financial literacy index in rural areas (59.25%) tends to be lower than the financial literacy index in urban areas (69.71%). The SNLIK results also show that the lower the level of education, the tendency is for the person's level of financial literacy to be lower. According to the SNLIK results, it is clear that the composite financial literacy index for farmers, breeders, planters, fishermen are 57.97%, with the Sharia financial literacy index still being very low, namely 23.72%. Overall, these figures show that the sharia financial literacy index for farmer work is the lowest index number compared to other types of work categories (Otoritas Jasa Keuangan (OJK), 2024).

Agriculture and rural areas are two things that have many connections. Most people in Indonesia who live in rural areas tend to work in the agricultural sector. The agricultural sector is in the second top position among other sectors in contributing to GRDP figures in South Kalimantan (BPS, 2024), even in terms of labor absorption in South Kalimantan, the agricultural sector is the sector that provides the most employment opportunities among other sectors, which is around 30.07% of the total workers in South Kalimantan in 2021(Fatchur et al., 2023). Suryanto et al., (2020) in their research, stated that the poor population in South Kalimantan is dominated by people who work in the agricultural sector. South Kalimantan BPS data (2024) shows that 51.22% of the poor population over the age of 15 years are found in the agricultural sector, while the non-agricultural sector contributes 48.57%.

As stated by Ullah et al. (2016), the uncertain and low income of farming families can result in multiple issues, especially during crop failures. This underscores the vital significance of strong financial literacy in farming households to effectively address present and upcoming financial requirements. Sivakumar et al. (2013) discovered that farmers provided with training and information regarding financial management practices demonstrate greater agricultural financial literacy. Socio-economic elements like age, educational attainment, agricultural experience, income from farming, duration of relationship with a bank, landholding, frequency of bank visits, and ownership of bank accounts greatly affect farmers' financial literacy

Barito Kuala Regency, as part of the administrative area within South Kalimantan Province, is the district with the most extensive potential for tidal swamp land. The enormous potential of tidal swamp land is directly proportional to the majority of people who work in the agricultural sector (Hartoni et al., 2023; Hartoni & Shafriani, 2023; Septiana et al., 2023; Shafriani & Hartoni, 2021; Yulianti et al., 2023). According to Badan Pusat Statistik Kabupaten Barito Kuala (2024a), based on the results of the 2023 Agricultural CENSUS, it shows that agricultural business households (RTUP) in Barito Kuala Regency are 56,385 (RTUP), of which there are 9,499 RTUP for plantation commodities. One of the plantation commodities that is widely cultivated in Barito Kuala Regency is oil palm. The area planted with oil palm in Barito Kuala Regency in 2023 will be 6,276 hectares, producing 17,056,924.44 tons (Badan Pusat Statistik Kabupaten Barito Kuala, 2024b). There are many households in the agricultural business of plantation crop commodities in Barito Kuala Regency; of course, it is a concern for bank and non-bank financial institutions to make farmers become customers or provide credit assistance in financing their plantation businesses. Various programs from the government and financial institutions in Indonesia have been channeled into financing programs for the people, especially in the agricultural sector.

Although the government and financial institutions offer many agricultural financing products, there has been an increase in the development of net-performing loans in the agricultural sector in the last three years. In December 2021, the total non-performing loans in the agricultural sector amounted to 6,518 billion rupiahs, experiencing a relatively high increase until in December 2023, it rose to 9,271 billion rupiahs (Otoritas Jasa Keuangan (OJK), 2023). The effectiveness of various agricultural financing programs cannot be separated from the level of financial literacy of a farmer as the program target (Sivakumar et al., 2013). Based on this description, this research aimed to analyze the level of financial literacy and the factors that influence it among independent oil palm farmers in the tidal land environment of Barito Kuala Regency.

METHODS

2.1 Research Location

The research was conducted in Barito Kuala Regency. The location for this research was determined deliberately, with the consideration that this location is an area with the most extensive potential for tidal land in South Kalimantan. Then it was narrowed down again to the areas of Wanaraya District, Barambai District, and Tamban District as the districts with the most farming households planting oil palm plantation commodities on tidal swamp land (Badan Pusat Statistik Kabupaten Barito Kuala, 2024a).

2.2 Research Data

This research uses a quantitative approach through logical procedures to collect, analyze and report data in numerical form (Plano Clark & Creswell, 2015). The data used comes from the subjects of this research, namely independent oil palm farmer households, which were taken by direct interviews with the independent oil palm farmer households. The number of respondents taken was 100 respondents consisting of 47 farmers in Wanaraya District, 27 farmers in Tamban District and 26 farmers in Barambai District. The sample size in research is determined based on considerations, namely that the research sample size is generally 30 to 500 samples, and this size is considered sufficient to represent the population (Sekaran & Bougie, 2017). The data collection technique used is the simple random sampling method using random numbers, so that all independent oil palm farmers have the same opportunity to be sampled in this research.

2.3 Data Analysis Method

Analyzing the level of financial literacy of independent oil palm farmers in the tidal land environment in Barito Kuala Regency in this research through measuring the financial literacy index. Referring to the Organization for Economic Co-operation and Development (OECD) states that there are 3 indicator components that are combined to be used to measure a person's financial literacy index (Atkinson & Messy, 2012), namely:

1. Financial literacy index regarding financial knowledge which is assessed by the sum of the response scores from sample farmers who answered correctly from the total score of 6 questions related to knowledge about the principles of calculating interest from banks, knowledge about the time value of money, knowledge about definition of inflation, knowledge of general bank rules, knowledge of diversification, knowledge of risk, and knowledge of profits.
2. Financial literacy index regarding financial behavior which is assessed by the sum of the sample farmers' response scores from the total score on seven questions regarding carefulness in making decisions when purchasing goods/services, accuracy in making bill payments, level of accuracy in managing personal finances, carefulness in setting long-term financial goals and efforts to achieve them, ownership of the family budget, savings and investment activities in the past year, making decisions about which financial product to choose after knowing information about the financial product , as well as credit/loans to meet needs.
3. Financial literacy index regarding financial attitudes which is assessed by the sum of the scores answered by sample farmers from the total score on three questions regarding attitudes towards spending or saving money in the long term and planning regarding finances in the short term.

The level of financial literacy of independent oil palm farmers is assessed through an index compiled based on responses to a series of questions about the components of financial literacy described above. The Formula 1 used in calculating the financial literacy index as follows:

$$ILK = \frac{Indexs\ X_1 + Indexs\ X_2 + Indexs\ X_3}{3} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

where:

Indexs X_1 = Index of financial knowledge
Indexs X_2 = Index of financial behaviour
Indexs X_3 = Index of financial attitudes

The index for each component above is calculated first, so that you can see the range between 0 (not or poorly literate) to 1 (fairly or well literate). In principle, the method for compiling this index follows the following mathematical model Formula 2:

$$ILK = \sum_{i=1}^{3} Ii: Ii = \frac{Xi - Min\ Xi}{Max\ Xi - Min\ Xi} \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

where:

Ii	=	Index component ILK of i (i = 1,2,3)
Xi	=	Indicator of component ILK of i
Max Xi	=	Maximum value of Xi
Min Xi	=	Minimum value of Xi
ILK	=	Index of financial literacy

Analyzing the factors that influence the financial literacy of independent oil palm farmers in the tidal land environment of Barito Kuala Regency using binary logistic regression analysis. This binary logistic regression approach is used to analyze the influence of dependent variables in the form of dichotomous variables or on a binary scale on one or more independent variables that have a categorical or continuous scale. Binary logistic regression determinations are formed through a value E (Y=1|x) as P, with P denoted as follows in Formula 3 (Hosmer Jr et al., 2013):

$$P = \left[\frac{\exp(g(x))}{1+\exp(g(x))}\right] \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Model transformation is carried out to create an initial regression function model, so that it becomes a linear function as follows in Formula 4 (Agresti, 1999):

$$logit\ [\pi(x)] = \ln\left[\frac{P}{1-P}\right] = \beta_0 + \beta_1 Pn + \beta_2 Up + \beta_3 Pf + \beta_4 Jk + \beta_5 Pr \ldots\ldots (4)$$

where:

Pn	=	Income (Ten Thousand IDR per month)
Up	=	Age of Farmer (years)
Pf	=	Formal Education (years)
Jk	=	Distance of Financial institution (tens Kilometers)
Pr	=	Risk of Preferences (scale = 1 strongly dislike, 2=dislike, 3=neutral, 4=like, 5=like very much)
$\beta_0 - \beta_5$	=	Coefficient Estimates

Testing the simultaneous influence of all independent variables through G-test statistics.
The hypothesis tested is (Hosmer Jr et al., 2013):

H_0 : $\beta_1 = \beta_2 = \ldots = \beta_i = 0$
H_1 : there is at least one $\beta i \neq 0$, i = 1,2, ..., p

Statistic G-test defined in Formula 5:

$$G = -2 \ln\left[\frac{L_0}{L_p}\right] \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

where L_0 is the function before the independent variable is entered, and Lp is the function where the independent variable has been entered. The null hypothesis is rejected if $G < X^2_{(\alpha,v)}$ or *sig.* > real test level (α) (Hosmer Jr et al., 2013). To test the influence of each independent variable on the dependent variable using Wald test statistics. The Formula 6 used in the Wald test statistics is:

$$W = \frac{\beta j}{SE(\beta j)} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6)$$

The null hypothesis (H_0) rejected if $W > Z_{\alpha/2}$ or $sig. < \alpha$

Odds Ratio is a value used in interpreting a binary logistic regression model. The Odds Ratio in this research is the ratio of the probability that a farmer is fairly or well literate with the probability that the farmer is not or insufficiently literate, based on the independent variables used in the binary logistic regression model. The Odds ratio value is exp(βi) from the coefficient βi itself. The Odds Ratio formulation is formulated in the form of the following mathematical model as follows (Formula 7):

$$Odds\ Ratio = \frac{P}{1-P} = \exp[\alpha + \beta x] e^{\alpha} (e^{\beta})^{x} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (7)$$

The value of the Odds ratio is on a numerical scale, so the way to interpret it is that an increase of one unit of the independent variable increases the possibility of financial literacy being better by the Odds Ratio times.

RESULT AND DISCUSSION

3.1 Financial Literacy Level of Independent Oil Palm Farmers

The results of the analysis of financial literacy among independent oil palm farmers in the tidal land environment of Barito Kuala Regency show that only 38 percent of farmers have adequate/good financial literacy, the remaining 62 percent of farmers are still not/not well financially literate. The average financial literacy index for independent oil palm farmers in the tidal area is 0.4373. The distribution of independent oil palm farmers in the tidal land environment based on the level of financial literacy is presented in Table 1.

Table 1. Distribution of independent oil palm farmers in tidal areas based on financial literacy level

No	Categories	Percentage (%)
1	Not Literate	11
2	Less literate	51
3	Fairly Literate	20
4	Well Literate	18

Source: Author's computation (2024)

3.2 Components of Financial Literacy of Independent Oil Palm Farmers

The results of the component analysis of financial literacy ranging from knowledge, behavior to financial attitudes, the most dominant in forming a financial literacy index for independent oil palm farmers in tidal land environments is financial attitude. The average financial literacy index for the three components is presented in Table 2.

Table 2. Average index for each component of financial literacy of independent oil palm farmers in the tidal land environment

No	Categories	Index avarage
1	Financial knowledge	0.355
2	Financial behaviour	0.452
3	Financial attitudes	0.505

Source: Author's computation (2024)

Based on the data presented in Table 2, it shows that the average index on financial attitude as part of the financial literacy component is greater than the other components, namely with an average index of 0.505. Meanwhile, the average index for financial knowledge is the component with the lowest average index, namely only 0.355. The average index for the financial behavior component is 0.452. Highest Average Index means the respondents hold positive attitudes towards financial matters. They may have a growth mindset, believe in the importance of saving and investing, and have a general optimism about their financial future. Lowest Average Index indicates a lower level of financial knowledge among your respondents. They may lack understanding of basic financial concepts such as interest rates, inflation, and diversification. Intermediate Average Index for 0.452 means a moderate level of financial behavior. While respondents may engage in some positive financial behaviors, such as budgeting or saving, they may not consistently apply sound financial practices.

3.3 Factors Affecting Farmers' Financial Literacy Levels

Testing with a binary logistic regression model uses a Chi-Square number based on the difference between -2 log likelihood obtained before the independent variable is in the model, and -2 log likelihood resulting from the independent variable that has been entered into the binary logistic regression model. The test used is a test using maximum likelihood. The results of the analysis carried out in this research through the Omnibus Tests of Model Coefficients found that the model that had been prepared could be

said to be suitable for further analysis. This is indicated by the sig. value which is smaller than the real test level at α = 5 percent, with a Chi-Square value of 101.620.

The Cox & Snell R Square and Nagelkerke R Square values are used to measure the ability of variations in independent variables to explain variations in dependent variables. These values can also be called Pseudo R-Square. The results of the tests carried out resulted in the Nagelkerke R Square value being 0.867. This means that 86.7 percent of the variation in the dependent variable can be explained by independent variables through the binary logistic regression model, while the remaining 13.3 percent is explained by other factors not included in the binary logistic regression model.

Next, a goodness of fit test (GOF) was carried out to calculate the Hosmer & Lemeshow Chi-Square value, namely a test carried out to ensure that the model prepared was correct or not. The Hosmer & Lemeshow Chi-Square value in this research model is 13.53, with a sig.- or p-value of 0.019. The p-value is then compared with the value of α = 5 percent which results in the conclusion that H0 is rejected because the p-value has a value that is smaller than the value of α, so it can be concluded that there is at least one independent variable that has a real influence on the level of financial literacy of coconut farmers. self-supporting oil palm in the tidal land environment of Barito Kuala Regency.

Table 3. Results of Wald test analysis of factors influencing palm oil financial literacy

Independent Variable	Coeffisient	Wald	p-value	Odds Ratio
Constant	-24.398	5.028	0.025	0.000
Income (Pn)	0.215	54.936	0.026*	1.240
Farmers' age (Up)	0.135	0.135	0.713	1.145
Formal Education (Pf)	0.054	4.920	0.027*	1.056
Distance to financial institution (Jk)	-0.222	3.933	0.047*	0.801
Risk Preference (Pr)	0.495	5.729	0.017*	1.640

Source: Author's computation (2024)

Based on the results of the data analysis presented in Table 3, it is clear that there are four factors that influence the level of financial literacy among independent oil palm farmers in the tidal land environment of Barito Kuala Regency. The four factors consist of income, length of formal education, distance to financial institutions and risk preferences.

Income as a factor that influences the level of financial literacy of independent oil palm farmers in tidal land environments. This is proven by the p-value of 0.026, which means it is smaller than the real test level (α = 0.05). This is in accordance with research conducted by Aggarwal et al (2014) which explains that farmers who have high incomes have better financial literacy compared to farmers who have low incomes. The odds ratio value for this income factor is 1.240, which means that every ten thousand rupiah increase in independent oil palm farmer household income will provide an additional opportunity for the farmer household to become financially literate (fairly or well) by 1.240 times. This indicates that increased economic resources allow farmers to obtain financial information and enhance their financial skills, reinforcing the idea that financial literacy is partly influenced by economic capability. In practical terms, efforts to boost farmer incomes may also elevate financial literacy, resulting in better financial choices and increased economic resilience within tidal land farming communities.

Farmer age is a factor that has no real influence on the level of financial literacy of independent oil palm farmers in tidal land environments. This is proven by the p-value of 0.713, which means it is greater than the real test level (α = 0.05). This is in accordance with research conducted by Aggarwal et al (2014) which explains that there is no real influence between the age of the farmer and the level of financial literacy of the farmer himself. While age does not significantly impact financial literacy statistically, it continues to be a vital contextual element in the development of financial education initiatives. Various age groups might prefer different learning methods, information sources, and perceptions of risk, even if their fundamental financial knowledge is alike. Younger farmers could be more open to financial tools that are digital, whereas older farmers might favor in person training or community focused methods.

Length of formal education is a factor that has a real influence on the level of financial literacy of independent oil palm farmers in tidal land environments. This is proven by the p-value of 0.027, which means it is smaller than the real test level (α = 0.05). This is in line with research conducted by

Sivakumar et al (2013) which explains that farmers with higher education show a better level of financial literacy compared to farmers with less education. The odds ratio value for the length of formal education factor is 1.056, which means that every time an independent oil palm farmer's formal education level increases, it will provide an additional opportunity for the farmer's household to become financially literate (fairly or well) by 1.056 times. Farmers who have achieved higher education levels are more inclined to utilize digital tools such as mobile banking, access online financial services, and participate in wider social networks that promote knowledge exchange. These indirect routes indicate that education enhances personal cognitive skills while also improving access to vital financial systems.

One element that significantly affects the degree of financial literacy of independent oil palm growers in tidal land environments is the distance to financial institutions. The p-value of 0.047, which is less than the actual test level ($\alpha = 0.05$), demonstrates this. This is consistent with studies carried out by Sivakumar et al (2013) which explains why the farmer's degree of financial literacy and the distance to the nearest financial institution to his home are actually negatively correlated. The odds ratio value for the length of formal education factor is 0.801, meaning that the likelihood that an independent oil palm farmer's household will become financially literate (fairly/well) will decrease by 0.801 times for every ten kilometers that separates their home from a financial institution. The effort to enhance rural financial literacy must address spatial barriers through innovative solutions such as mobile banking services, digital financial education platforms, and localized financial outreach initiatives to ensure that geographic isolation does not perpetuate financial exclusion.

Risk preference is a factor that has a real influence on the level of financial literacy of independent oil palm farmers in tidal land environments. This is proven by the p-value of 0.026, which means it is smaller than the real test level ($\alpha = 0.05$). This is in accordance with research conducted by Atkinson & Messy (2012) which explains why those with a risk-averse attitude typically have lower levels of financial literacy than those with a risk-taking attitude. With an odds ratio value of 1.640 for this preference factor, independent oil palm farmer families' likelihood of becoming financially literate (fairly or well) improve by 1.640 times for every increase in their Likert scale attitude toward risk. The results indicate that farmers with a higher tolerance for risk are more proactive in seeking information, experimenting with financial products, and adapting to complex financial decisions. This relationship highlights the behavioral dimension of financial literacy, suggesting that beyond cognitive skills, fostering a balanced risk-taking attitude could be essential in designing effective financial education programs aimed at independent farmers in tidal regions.

CONCLUSION

In the coastal region of Barito Kuala Regency, the majority of independent oil palm farmers 62 percent remain categorized as not or less financially competent. In the tidal land environment of Barito Kuala Regency, independent oil palm producers have an average financial literacy rating of 0.4373. The most important factor in determining the financial literacy score of independent oil palm producers in the Barito Kuala Regency's tidal land environment is their financial attitude. In the tidal land setting of Barito Kuala Regency, the degree of financial literacy among independent oil palm farmers is influenced by four factors namely risk preferences, distance to financial institutions, length of formal schooling, and income. Moreover, referring to the results of the data analysis on the dominant average literacy in financial attitudes, several important implications can be drawn. First, the significant gap between financial attitude and financial knowledge suggests the presence of a knowledge gap. While individuals may demonstrate positive attitudes toward financial management, they often lack the practical knowledge necessary to translate these attitudes into effective action. Second, behavioral barriers may impede the application of financial knowledge despite positive attitudes. Factors such as procrastination, impulsive decision-making, and limited self-control can undermine financially responsible behavior. Third, educational interventions are necessary to bridge the knowledge gap. Targeted financial education programs can empower individuals with the skills and confidence needed to make informed financial decisions. Fourth, there are policy implications that warrant attention. Policymakers should consider initiatives that not only promote financial literacy but also encourage responsible financial behavior across diverse communities. In addition, structural barriers, such as limited access to financial infrastructure and disparities in educational quality, must be addressed to create an environment conducive to financial empowerment. Strategic investment in integrated financial education, improved

rural financial access, and behavioral innovation will be essential for building resilient, financially capable farming communities that can adapt to future economic challenges.

REFERENCES

Aggarwal, N., Gupta, M., & Singh, S. (2014). Financial Literacy among farmers: Empirical evidence from Punjab. *Pacific Business Review International*, *6*(7), 36–42. http://www.pbr.co.in/2014/2014_month/jan/4.pdf

Agresti, A. (1999). Modelling ordered categorical data: recent advances and future challenges. *Statistics in Medicine*, *18*(17-18), 2191–2207. https://doi.org/10.1002/(SICI)1097-0258(19990915/30)18:17/18%3C2191::AID-SIM249%3E3.0.CO;2-M

Anwar, S. (2022). Peranan financial literacy terhadap perilaku petani dalam mengelola keuangan (Studi pada Petani Desa Semamung). *Khatulistiwa: Jurnal Pendidikan dan Sosial Humaniora*. https://doi.org/10.55606/khatulistiwa.v2i1.481

Atkinson, A., & Messy, F. A. (2012). *Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study*. OECD Working Papers on Finance, Insurance and Private Pensions. https://www.oecd.org/en/publications/measuring-financial-literacy_5k9csfs90fr4-en.html

Badan Pusat Statistik Kalimantan Selatan. (2024). *Produk Domestik Regional Bruto Provinsi Kalimantan Selatan Menurut Lapangan Usaha 2019-2023*. Retrieved from https://kalsel.bps.go.id/id/publication/2024/04/04/cb750da3888901125145eb53/produk-domestik-regional-bruto-provinsi-kalimantan-selatan-menurut-lapangan-usaha-2019-2023.html

Badan Pusat Statistik Kabupaten Barito Kuala. (2024a). *Hasil Pencacahan Lengkap Sensus Pertanian 2023*. Retrieved from https://baritokualakab.bps.go.id/id/publication/2024/08/16/54e5452471a03dc76fe69ffd/hasil-pencacahan-lengkap-sensus-pertanian-2023---tahap-ii-usaha-pertanian-perorangan--utp--tanaman-pangan-kabupaten-barito-kuala.html

Badan Pusat Statistik Kabupaten Barito Kuala. (2024b). *Kabupaten Barito Kuala Dalam Angka 2024*. Retrieved from https://baritokualakab.bps.go.id/id/publication/2024/02/28/0d30668edf36b255dff1888c/kabupaten-barito-kuala-dalam-angka-2024.html

Fadlianur, A., Romano, R., & Baihaqi, A. (2024). Analisis Pengetahuan Keuangan Petani Kelapa Sawit: Studi Deskriptif di Kabupaten Nagan Raya. *Jurnal Ilmiah Mahasiswa Pertanian*, *9*(3), 97-103. https://doi.org/10.17969/jimfp.v9i3.31451

Fatchur, R. F., Dewi, Y. N., & Muhammad, F. (2023). Poverty Probability of Agricultural Workers in South Kalimantan. *Russian Journal of Agricultural and Socio-Economic Sciences*, *135*(3), 60–71. https://doi.org/10.18551/rjoas.2023-03.08

Hartoni, Ditahardiyani, & Shafriani, K. A. (2023). Penyuluhan Tentang Potensi Lahan Pekarangan Untuk Peningkatan Pendapatan Dan Keragaman Pangan Petani Di Lahan Pasang Surut Desa Sawahan Kabupaten Barito Kuala. *Buletin Udayana Mengabdi; Vol 22 No 1 (2023): Buletin Udayana Mengabdi*. https://doi.org/10.24843/BUM.2023.v22.i01.p06

Hartoni, H., & Shafriani, K. A. (2023). The Food Security of Households Paddy Rice Farmers in Tidal Land Barito Kuala Regency. *Tropical Wetland Journal*, *9*(1), 32–37. https://doi.org/https://doi.org/10.20527/twj.v9i1.115

Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression*. New Jersey: John Wiley & Sons.

Otoritas Jasa Keuangan (OJK). (2024). *Survei Nasional Literasi dan Inklusi Keuangan (SNLIK)*. Retrieved from https://ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Survei-Nasional-Literasi-dan-Inklusi-Keuangan-(SNLIK)-2024.aspx

Otoritas Jasa Keuangan (OJK). (2019). *Survei Nasional Literasi Keuangan*. Retrieved from https://ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Survei-Nasional-Literasi-dan-Inklusi-Keuangan-2019.aspx

Otoritas Jasa Keuangan (OJK). (2023). *Statistik Perbankan Indonesia - Desember 2023*. https://ojk.go.id/id/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Pages/Statistik-Perbankan-Indonesia---Desember-2023.aspx

Plano Clark, V. L., & Creswell, J. W. (2015). *Understanding research: A consumer's guide*. Pearson Education

Rahman, C. A. M., Abdul Rauf, U.A., & Sinniah, S. (2024). Oil Palm Smallholders Entrepreneurs And Financial Literacy: Technology Adoption. *Journal of Applied Engineering and Technological*

Science (JAETS). https://doi.org/10.37385/jaets.v6i1.6168

Sekaran, U., & Bougie, R. (2017). *Metode penelitian untuk bisnis: Pendekatan pengembangan-keahlian* (Ed. 6). Jakarta: Salemba Empat.

Septiana, N., Hartoni, H., & Shafriani, K. A. (2023). Peningkatan kapasitas wanita tani melalui pemanfaatan media online sebagai alat promosi produksi jeruk lahan pasang surut desa sawahan barito kuala. *Jurnal Abdi Mas Adzkia*, *3*(2), 60–67. http://dx.doi.org/10.30829/adzkia.v3i2.14735

Shafriani, K. A., & Hartoni, H. (2021). The Risk Analysis on the Siam Banjar Orange Supply Chain Distribution Channel in Barito Kuala Regency. *Tropical Wetland Journal*, *Vol 7 No 1 (2021): Wetland Agricultural Issue*, 10–16. http://dx.doi.org/10.20527/twj.v7i1.103

Sivakumar, S. D., Jawaharlal, M., Palanichamy, N. V., & Sureshkumar, D. (2013). Assessment of farm financial literacy among jasmine growers in Tamilnadu, India. *Assessment*, *3*(13), 67–76. https://www.iiste.org/Journals/index.php/DCS/article/view/9413/9635

Sugiharti, H., & Maula, K. A. (2019). Pengaruh literasi keuangan terhadap perilaku pengelolaan keuangan mahasiswa. *Accounthink: Journal of Accounting and Finance*, *4*(2). https://doi.org/10.35706/acc.v4i2.2208

Suryanto, R., Yanti, N. D., & Ferrianta, Y. (2020). Factors Affecting Low Income of The Non-Smallholder Paddy Farmers in South Kalimantan. *IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)*, *13*(7), 46–52. https://dx.doi.org/10.9790/2380-1307024652

Ullah, R., Shivakoti, G. P., Zulfiqar, F., & Kamran, M. A. (2016). Farm risks and uncertainties: Sources, impacts and management. *Outlook on Agriculture, 45*(3), 199-205. https://doi.org/10.1177/0030727016665440

Yulianti, M., Hartoni, H., & Shafriani, K. A. (2023). Penyuluhan terhadap petani mengenai peningkatan pendapatan melalui produksi tanaman semusim tumpang sari di lahan jeruk belum menghasilkan di desa sawahan. *Jurnal Abdi Mas Adzkia*, *3*(2), 67–75. https://doi.org/http://dx.doi.org/10.30829/adzkia.v3i2.14744

Yulida, R., Rosnita, R., Sayamar, E., Kusumawaty, Y., & Andriani, Y. (2019). Analysis of Media Literacy Levels of Palm Oil Farmers in Riau Province, Indonesia. *Asian Social Science*, *15*(11), 48. https://doi.org/10.5539/ass.v15n11p48

Yushita, A. N. (2017). Pentingnya literasi keuangan bagi pengelolaan keuangan pribadi. *Nominal Barometer Riset Akuntansi Dan Manajemen*, *6*(1), 11–26. http://dx.doi.org/10.21831/nominal.v6i1.14330