

Determinants of Farmer's Financing Participation in Sharia Microfinance Institutions

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Abstract

This study aims to analyze the determinants of farmer participation in sharia microfinance institutions. The study area covers Siak Regency and Bengkalis Regency, Riau Province. There were as many as 30 respondents in Siak and 32 respondents in Bengkalis. The probit regression model is used to explain the factors that influence farmer participation in sharia microfinance institutions. Most of the financing taken by farmers is wakalah wal mudh'arabah and very little is borrowed in the form of wakalah wal mush'araka. The results showed that the factors that influence farmer participation are education, dependency ratio, value of liquid assets owned, and farmers' income. The farther the farmer's house is from the location of the sharia microfinance institution, the less opportunity to participate. Other independent variables included in the model have no significant effect on farmers' opportunities to participate in sharia microfinance institutions in the two districts.

Keywords: *participation, sharia microfinance institutions, mudh'arabah, mush'araka*

JEL: *G21, G29, P25*

A. INTRODUCTION

Agriculture has always been a fascinating subject for a country with such a large population as Indonesia. This sector employs more than 60% of the population and has the potential to reduce rural poverty. Many rural poor rely heavily on smallholder

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agriculture for income and food security. Low agricultural productivity remains the main problem in many developing countries. Increased use of input is beneficial for the modernization of the agriculture sector. This required input, such as fertilizers, mechanization services, and seeds, is necessary needed. That's a key factor, formed on the availability of timely and adequate financing. Additionally, the majority of farmers have limited capital, limiting the agricultural sector's mobility (Hermawan & Andrianyta, 2013). Constraints to access to formal financial institutions exacerbate poverty by causing farmers to be trapped by money lenders (Syarif, 2019; Yoko & Prayoga, 2019).

Farmers have to face various risks along the farming chain. These risks are a source of uncertainty for farmers' income (Ridhwan et al., 2014; Shafiai, 2017). To realize financing products that favor farmers, financial institutions must understand this farming pattern. Their income is earned according to their harvest time (Asaad, 2011). The limited participation of farmers in Sharia Microfinance Institutions (SMIs) is the main challenge in the agricultural production process. Availability of capital determines the distribution of financing. In Islam, financing activities are not only about conventional capital flows. Indeed, it must regulate the results of profit sharing and methods to avoid usury which is nothing but the principal value in the Islamic business in Indonesia (Juwana et al., 2014).

In 2000, Indonesia faced a microfinance revolution that led to several microfinance institutions (MFIs). MFIs are initiatives undertaken by the government, private sector, non-governmental organizations, and development partners to increase financing participation in rural Indonesia (Bhanot & Bapat, 2015). However, it is still difficult for farmers to obtain financing due to high-interest rates, inappropriate loan disbursement, ineffective payment schedules that do not suit the seasonal nature of agriculture, and high transaction costs. This situation is common in developing countries. Many small farmers apply for loans but rejected or limited loans (X. Chen et al., 2019). Capital becomes the potential to build agricultural production facilities (Parvin et al., 2020).

It's as if SMIs are only looking for profit, but that is the purpose of running a business. Indeed, that is the risk, therefore there must be a mutually beneficial solution for both parties (Wulandari et al., 2017). Islamic Microfinance Institutions (IKM) recommend several innovative lending approaches in finding solutions to financing gaps in rural areas. Several SMIs in Riau provide financing through savings and loan facilities and collect deposits. Policymakers have facilitated participation in adequate

and affordable SMIs in rural areas. However, smallholders still fail to obtain loans due to various factors, both internal and external problems that can or have not been resolved. The problems that small farmers face are usually poor financial reports. Not many SMIs provide loans as well as help small farmers overcome the problems they face.

Sharia financial institutions are founded on the principle of community welfare, which results in stable social conditions. As a result, SMF places a premium on raising funds for more efficient financing (Yanuar & Rosita, 2013). Abdullah et al. (2020) asserts that sharia financial institutions efficiently and effectively mobilize resources for the benefit of the real economy.

Sharia financial institutions facilitate economic mechanisms in the real sector through Islamic-based business activities (investment, purchase, lease, and others). Islamic law regulates Sharia principles by requiring banks and other parties to enter into agreements to deposit funds and/or finance business activities or other activities consistent with the sharia values of the Islamic religion (Otoritas Jasa Keuangan, 2016)

The principle of risk sharing is a suitable principle for farmers who always face farming risks (Khasanah et al., 2013). By sharing risk, SMI can stimulate economic growth and entrepreneurial activity to address poverty and inequality, ensure financial and social stability, and promote equitable human capital development. SMI and farmers share their income and losses equitably. The development of Islamic financing in Indonesia is expected to provide financing solutions for the agricultural sector (Utama et al., 2019).

The products offered by sharia financial institutions refer to Islamic values that are fair and without interest. One of the most significant differences between conventional banks and sharia banks is in credit products (conventional banks) and financing (sharia banks). Credit loans are different, meaning that customers borrow money from financial institutions for each of their needs at a certain interest rate. The financing of Islamic financial institutions means financing all customer needs with an agreed contract, either a profit-sharing contract, a sale and purchase contract or a lease agreement.

Several previous studies identified a number of barriers to finance access, including a lack of appropriate product structures within banks, insufficient financial literacy or education, and religious barriers (Allen et al., 2016; Kostov et al., 2015). According to Sain et al. (2016), Islamic banking can increase financial institution

participation. Muslim communities may face financial exclusion as a result of their religious beliefs and their opposition to usury as practiced in conventional banking (Mylonidis et al., 2019; Sain et al., 2016). Trimulato (2017) and Darwanto et al. (2019) identified *musyarakah* contracts as the most appropriate Islamic banking financing for small businesses (including farmers) in his research.

Darwanto et al. (2019) stated that the agricultural sector's capital shortage can be resolved by establishing a linkage program between sharia banking, SMI, and farmers. *Wakalah wal mudárabah*, *wakalah wal musháraka*, *wakalah wal murabahah*, atau *wakalah wal ijarah* are all possible financing arrangements. Rural banks and cooperatives *baitul maal wat tamwil* finance farmers when they need it and offer flexible payment schedules in terms of time and amount. Farmers can repay their debts following the sale of their crops (Meutia et al., 2017).

There is a dearth of research on rural development in Riau in terms of SMI and the determinants of farmer participation in SMI. This article contributes to filling the literature gap by conducting a study of SMI in Riau. The purpose of this study was to determine the factors that influence farmers' participation in Sharia Microfinance Institution (SMI) financing in the Siak and Bengkalis Regencies of Riau Province.

B. THEORITICAL

Sharia Microfinance Institutions (SMIs) in Development

Islamic financial institutions emerged along with the widening economic gap. Sharia principles encourage people's welfare and reduce inequality. The core value of justice is the main characteristic of Islamic banking, which prohibits usury and other exploitative elements such as *gharar*, *maysir*, fraud, bribery, reduction of scales, taking assets with crime, and transactions of illicit goods (Saleem, 2013). Public awareness in running a sharia finance-based business must continue to exist. SMIs aim to make farmers financially prosperous and able to run the agricultural venture in the upstream sector (I. R. Santoso et al., 2019). Indeed, uphold the long-term benefit of the people (Nasution et al., 2017).

Many studies have analyzed the relationship between SMI and economic development (Yüksel & Canöz, 2017). (Ariani et al., 2020) states that Islamic finance has a significant effect on Gross Domestic Product as financial inclusion in Indonesia. Even SMI has a role in helping society as a whole to prevent the global financial crisis (Mukhlisin & Komalasari, 2018). Akram et al (2020) stated that financing from

financial institutions plays a role in agricultural productivity, and the trend of lending by farmers is gradually increasing farmers' income. In Vietnam, research conducted by Lam et al (2019) found that access to financial institutions and productivity growth had a positive relationship between subsistence food crop farmers. According to Djoumessi et al (2018) it has a significant impact on efficiency. Das (2018) has studied the impact of financing on poverty reduction in terms of access to formal, semi-formal, and informal finance.

The current phenomenon is that small farmers rely on informal financing participation such as family, friends, local moneylenders, and others (Ali et al., 2020). These moneylenders enter the agricultural value chain, such as input suppliers, buyers, and traders (Mori, 2017). Sudan and Bangladesh recorded the highest number of *mudharabah* financing while Malaysia, Indonesia, and Pakistan recorded the highest *musháraka* (partnership) financing (Abdul Razak & Abdul-Wahab, 2018). Indonesia maintains a dual system of regulatory frameworks that take into account conventional and Islamic financial systems. Indonesia must adopt a regulatory framework taking into account socio-political-economic conditions (Syarif, 2019).

Determinants of farmer participation in microfinancial institutions

Sharia Microfinance Institutions (SMIs) should deal with the potential demand for financing because poor farmers as the largest part of the Islamic community and the *maqashid syari'ah* viewpoint, placing human protection from poverty is one of the goals (Yadav & Sharma, 2015). Currently, the demand for SMIs services by rural communities is increasing (Abdullah et al., 2020). Asutay (2013) states that the foundation of Islamic financial institutions should not only enforce the prohibition of usury (interest), but also be related to socio-economic development issues. Leaman (2015) also argues that Islamic banking is expected to not only focus on sectors that are considered to be able to provide more benefits for institutions and capital owners, but also consider other sectors that have the potential to improve people's welfare.

Khan dan Malik (2020) juga Kumar et al (2021) found that smallholders are often ignored because they are considered risky. SMI issues financing with the principle of risk-sharing. Farmers understand the rules because they have to face various risks (Ridhwan et al., 2014). The financing product issued by SMI allows farmers to choose the option of lump-sum payment or installments (Hemtanon & Gan, 2020). Significant variables to increase farmer participation in SMI are the

distance from the farmer's house to the service office, the cost of funds, and the farmer's view of the credit interest system (Yoko & Prayoga, 2019). Factors that influence farmer participation in SMIs are socio-economic characteristics of farmer households, including age, the number of family members, income (Hananu et al., 2015). In a study conducted by Kosgey (2013), bank distance, loan duration, loan processing, and loan size and interest rates. Farmer education level is the main factor determining participation in SMIs to obtain loans (Fonke, 2021).

Hananu et al. (2015) found that age, the number of family members, and income affect participation in SMI. Similarly, Kosgey (2013) states that the main factors influencing participation in MFI are household income, family size, bank distance, loan duration, loan process, and loan size. Hananu et al (2015) and Kosgey (2013) revealed that educated family heads imply better knowledge, farming skills, and information about SMI. Another factor that is closely related to family size and family income is the dependency ratio (Hemtanon & Gan, 2020). Hananu et al. (2015), Kosgey (2013) and Sebatia et al. (2014) state that gender has a significant influence on farmer participation. Another fact is that women tend to have a higher participation in MFI than men.

In the study of Linh et al (2020), territorial reach is the most important determinant of participation in agricultural finance institutions. Farmers' access to information on financing sources plays an important role in reaching formal financial institutions. Chandio and Jiang's research (2017) found that residence or distance between lenders/distance to financial institutions had a significant effect on farmer participation in SMIs. Other factors such as collateral and loan guarantees are important. Saqib et al (2018) see that collateral increases the likelihood of households paying for financing. According to Rahman et al (2014) lack of collateral is the main reason for the inability of farmers to obtain SMIs financing.

There is no doubt that SMI acceptance in the agricultural sector is actually high but still needs some improvement. Financial institutions should adopt effective marketing techniques to sensitize and attract farmers to SMIs. The reason is that the majority of farmers are villagers. They do not have a high level of education and lack knowledge about the products and services offered by SMIs for the agricultural sector. SMIs should adopt easy procedures and requirements for providing loans to poor farmers (Hassan et al., 2012).

C. METHODOLOGY

Sample and Data Collection

Study on farmer credit participation to SMI was conducted in Riau Province, including villages in Siak Regency, and villages in Bengkalis Regency. Respondents are calculated on the concept of accuracy and trust using the formula provided by Sarantakos (2013):

$$n = \frac{pqz^2}{E^2} \quad (1)$$

Primary data were obtained through direct one-on-one interviews. Twenty-four respondents who are not financing recipients are used as the control in the model. Respondents were 62 farmers consisting of 30 farmers (18 participating in SMI and 12 not participating) respondents from Siak and 32 (20 participating in SMI and 12 not participating) respondents from Bengkalis. The checklist and interview guide were tailored to the objectives of the study. The researcher collected secondary data from searching the available literature reviews.

Analysis method

Quantitative methods are used in data analysis. Qualitative information provides explanatory notes for quantitative information. Quantitative data were analyzed using T-tests, F-ratios, and descriptive statistics (percentages and means). To estimate the factors that influence farmers' participation, apply a probit regression model.

The study by Asante-Addo et al (2017) and Jeyakumar and Sundaram (2018) stipulates that farmer household participation. The dependent variable assumes a binary value of ($D = 1$) if a household participates and ($D = 0$) if a household does not participate. The choice of explanatory variables used is based on theory, previous research, and data availability. The literature shows that the participation of farmers in SMI is influenced by several factors, such as age, gender, education, dependency ratio, farm size, distance, liquid assets, and income. These factors are important in two ways because they can affect the demand for household financing, and potential lenders tend to base their assessment of borrowers' creditworthiness on these characteristics. The probit regression model is used to determine the factors that have a significant influence on farmers' participation in SMI in the study area. This method was chosen because it is a standard analysis method when the dichotomous outcome variable

(Hosmer, Lameshow, & Sturdivant, 2013) is measured to have a value of 1 or 0, where 1 = parity and 0 = not participating.

$$A_i^* = \beta_0 + \sum_{i=1}^n \beta_i X_{ki} + \varepsilon \quad (2)$$

Where β_0 is the intercept term, and $\beta_1, \beta_2, \beta_3 \dots \beta_i$, are the coefficients associated with each variable descriptors $X_1, X_2, X_3, \dots X_i$. The likelihood that farmers will participate is represented by:

$$P_i = \frac{e^{U_i}}{1 + e^{U_i}} \quad (3)$$

Participation in SMI is 1, then $(1 - P_i)$ is the probability that farmer participation is 0. Opportunity ($A = 1$ versus $A = 0$) to be used can be defined as the ratio of the probability that farmers have the participation (P_i) with non-participation probability $(1 - P_i)$, namely $\frac{P_i}{1 - P_i}$. Taking the natural log, predictive equations for growers to- i is expressed as: where P_i indicates the probability that the $to-i$

$$A = \ln\left(\frac{P_i}{1 - P_i}\right) = \ln \ln odds = \beta_0 + \sum_{i=1}^n \beta_i X_{ki} + \varepsilon = A_i^* \quad (4)$$

Where $A * i$ is also referred to as the log of the *odds ratio* that supports farmer participation.

The selection of explanatory variables used is based on theory, previous research, and data availability. The literature shows that smallholder farmers' access to SMIs is influenced by several factors, such as age, gender, education level, dependency ratio, farm size, and distance to SMI, liquid assets, and income. These determinants are important in two ways because they can affect household financing demand, and potential lenders tend to base their assessment of a borrower's creditworthiness on these characteristics.

D. RESULTS AND DISCUSSION

In the study area, there are several SMIs, including Siak Jaya Sharia, BMT Islamic Siak, and BMT Bina Swadaya. This SMIs has not yet fully reached rural areas, where many farmers need financing, savings, and other Islamic financial services. Among formal financial institutions, rural banks are an important source of financing in rural areas. They are locally based and primarily private institutions, but there are also some government-owned rural banks. Rural banks tend to be closer to the community than traditional commercial banks. In 2014, there were fewer than 1,643 rural banks (Bank Perkreditan Rakyat) and in January 2019, only 1,598 units remained.

Table I: Sharia Rural Banks Operation (Billion Rp)

Indicator	2011	2012	2013	2014	2015	2016	2017	2018	2019	*2020
Financing iB	2,675.93	3,553.52	4,433.49	5,004.91	5,765.17	6,662.56	7,763.95	9,084.47	9,943.00	10,530.96
Wadiah Savings iB	412.03	527.24	668.25	789.85	997.12	60	1,458.00	1,738.70	1,874.00	1,665.86
Mudharabah Savings iB	447.81	590.37	700.86	750.48	860.63	982.70	28	50	.00	5
Deposit Mudharabah iB	1,235.49	1,820.20	2,297.06	2,488.08	2,944.13	3,662.66	4,409.00	5,136.74	5,529.00	5,969.75

Source: Financial Services Authority, 2021

* Data May 2020

Islamic financial institutions allocate financing for the agricultural sector which is less than 10 percent of the total financing (Utama et al., 2019). The lack of role of Islamic banking in agricultural financing is caused by the perception of high risk and the lack of competence of human resources to maintain agricultural financing. The total financing of rural banks has an effect of less than 10% on the total financing of rural banks but has an influence on regional economic growth (Fakhrunnas, 2020). Table I shows the development of public savings and financing disbursed by sharia rural banks nationally. In 2011, only around 2,675 billion rupiah of financing was disbursed, and it continued to increase until May 2020 to 10,530 billion rupiah. In addition to financing, public funds deposited in the sharia rural bank also continued to increase, with *Mudharabah* Deposits being the largest, followed by *Wadiah* Savings and *Mudharabah* Savings.

Generally, respondents take credit under 50 million rupiah. However, some farmers take advantage of loans above 50 million rupiah. Most of the respondents in

Siak Regency took loans between 10 million to 50 million rupiah. In Bengkalis Regency, most respondents borrowed less than 20 million rupiah. Farmer loans of between 10 and 50 million rupiah come from formal and informal institutions. Often, when providing loans, farmers do not get the required amount. Loans above 50 million rupiah are only given to formal financial institutions such as commercial banks and rural banks.

Of the 18 farmers in Siak who became *Muhil* (i.e., people who transferred their debts to others), 55.56% of farmers used their loans for working capital. Buying seeds, fertilizers, tillage, maintenance costs and others are jobs that require working capital. Loans taken by farmers are mainly in the short term. Meanwhile, oil palm rejuvenation takes time. Around 45% of respondents in Bengkalis use borrowed money for working capital. Table 2 describes the estimation results of the probit model. In this model, the dependent variable “PAR” is a binary variable to determine whether farmers participate in SMIs. In participation in SMIs, the variable is assumed to be equal to 1 and zero otherwise. The independent variable is taken in the form of the natural logarithm (ln). In the table, the variables are listed according to their corresponding coefficients in the second column.

The results in Table 2 show the parameters that influence farmers' decisions to seek and participate in SMI. The results showed that farmers' education level had a positive and significant effect ($P \leq 0,05$) on the decision to participate in SMI. This means that educated farmers can read financial market signals such as interest rates and payment terms and dare to seek loans. In addition, education empowers borrowers with confidence because they can have a clear plan on how to invest funds.

Table 2. Factors Affecting Farmers Participation (probit regression model)

Variable	Description	Coeff.		SE	t _{stat}
ln_Age	Age	-0.0009		0.001	-1.025
ln_Gen	Gender	-0.7307		0540	-1.354
ln_Edu	Education	0.0299	*	0.014	2.650
ln_Dra	Dep. Ratio	0.0006	**	0000	2.965
ln_Fas	Farm Size	-0.3256		0186	-1.754
ln_Dis	Distance	-0.0654	*	0.029	-2.251
ln_Las	Liquid assets	0.0001	**	0.000	3.051
ln_Inc	Income	0.0303	*	0.014	2.105
C		0.8952			

Wald χ^2	89.4801
Prob > χ^2	0.0000
Pseudo R ²	0.6520
N	62
**	= sign. at 1%
*	= sign. at 5%

Source: The printout Regression Analysis, 2020

The results of the Wald test are used to simultaneously determine the effect of the independent variable on the dependent variable. The decision making used is if the Wald value > table value, then the independent variable has a significant effect on the dependent variable simultaneously. Meanwhile, if the value of Wald < 2 table value, the independent variable does not significantly affect the dependent variable.

Table 2 above explains that the Wald test value with the significance of each independent variable (right column) is smaller than the probability of 0.05 (marked *) and 0.01 (marked **). The independent variables that have a significance of less than 0.05 are education, dependency level, distance from SMI, ownership of liquid assets and farmer's income. These results indicate that these variables have a significant effect on farmers' decision making to participate in SMI. While the independent variables that have a significance above 0.05 are the age of the farmer, gender and land area. R-squared shows goodness of fit model. The results showed that the variation of the independent variable affected the variation of the PAR variable. The number of observations used in the model is 62 respondents for analysis.

Age is an important variable in decision-making. Farmers' years of experience in farming will affect their access to loans and the size of the loans. Age is important as older farmers with years of farming experience are expected to know about agriculture and various sources of financing. They also have financing management skills and better credibility with lenders. In Table 2 it is explained that the coefficient of the age variable is negative, which means that the higher the age of the farmer, the greater his participation. This result contradicts the hypothesis stated in the previous section.

Djournessi et al (2018) using age as a factor influencing farmer participation in SMI. More than 70% of respondents in Siak and Siak are aged

between 25 - 55 years. This age group is classified as productive, especially in the agricultural sector. Farmers who are skilled and have qualified personnel will be able to cultivate the land well. The results of the research in the research area found that the coefficient was negative but not significant at the 0.05 level. These results prove that older farmers tend to be wary and worried about financing risks. They tend to be less daring to take out loans. Ibrahim and Bauer (2013) see that the older the age, the attitude of farmers tends to be less willing to take risks and choose to rely on their capital. In addition, old farmers experience a decrease in work productivity so that they do not qualify for loans (Kosgey, 2013). It is different with young farmers. They are more willing to take risks in developing their farms (risk takers) and have opportunity to access SMIs because their work productivity is still high (Luan & Bauer, 2016).

From the data obtained, most of the respondents are male, both in Siak and Bengkalis. The results of the probit regression model analysis show that gender reduces farmer participation in providing financing. Respondent's gender can influence SMI participation and loan size. However, in several studies, there is a fact that men usually have social and political power and dominate ownership and access to productive resources in most rural communities (Anang et al., 2015). Anane et al. (2021) stated that gender has a negative influence on creditors' decisions to provide financing to customers. However, from the statistical test at 5% significance, research in Siak and Bengkalis, gender variable has no significant effect on farmer participation in SMIs.

The financing taken by farmers in Siak and Bengkalis is mostly *wakalah wal mudhârabah*, where farmers as *mudârib* use it for more interests and without investment provisions. A few farmers borrow money in the form of *wakalah wal mushâraka*. Most of the formal education level of farmers in both villages is a secondary school (above 50%). A small number of them have completed higher education, but some have not completed primary school. It is also a problem for banking and for entering the small rural agricultural sector. Low levels of education and lack of technical training and access to capital are the main factors in the traditional agricultural sector. Farmers' education up to elementary school is still above 30%. They need assistance from the government, such as access to SMIs and the latest technology. The ability of farmers to produce more efficiently and sell more products in the market is very high and is positively related to their level of education (Muslimah et al., 2017).

At a certain level of education, a farmer can make an informed decision about the amount required to undertake a particular project by creating a business plan or budget. However, there are studies that find that education does not affect farmer participation (Anang et al., 2015). Farmers with low education tend not to take advantage of the facilities offered by SMIs. The results of the study further showed that the level of dependence in the household had a positive and significant effect ($P \leq 0,01$) on the decision to participate in SMI. These results indicate that greater dependence in households encourages farmers to seek agricultural finance due to the high demand they receive. Therefore, farmers tend to be more economically oriented and seek financing.

The dependency ratio aims to determine the dependence of the elderly population and the population of children under five on the productive age population in farming households. The high percentage of the elderly population and children under five illustrates the relatively low ability to farm because they still depend on the productive age population. The higher the elderly population and children under five, the lower the productivity of farmers. Low productivity causes the need for farming capital to increase.

Children under the age of 15 are generally considered unproductive because they are economically dependent on their parents or other people who support them. In addition, people over the age of 65 are considered unproductive after retirement. The population aged 15-64 years is a productive working-age population. Based on this concept, it can be described how much the population is dependent on the working-age population. Although not very accurate, the dependency ratio has a significant effect on farmer participation in SMI. Many dependent family members encourage the possibility of being poor or having fewer members who have a steady income. Therefore, households are most likely to experience financing problems (Hemtanon & Gan, 2020).

Akudugu (2016) provides insight into production scale (farm size as a proxy) and access to financial services in increasing agricultural productivity. Moahid & Maharjan (2020) found that in Afghanistan, the larger the size of agricultural land, the greater the opportunity to obtain financing from legal sources. In research in Riau, land area also has a negative effect. However, from the statistical test at a significance of 5%, the variable land area has no significant effect on participation in SMIs.

Financial institutions strengthen the capital of agricultural business actors by providing financing (Panekenan et al., 2017). However, the location of SMI is

mostly far from the farmer's house, especially in the study area. Anang et al (2015) found that the location of the house affects the participation of farmers in SMI. In Siak District, the distance from the farmer's house has a negative and significant effect on the farmer's decision to participate in SMI. The fact is that the longer the distance, the higher the transaction costs of obtaining a loan (Chisasa, 2016). The study of Djoumessi et al (2018) found under different distances, the farther, and the more opportunities to participate.

Location or distance has a significant effect on farmer participation in SMIs. Anane et al. (2021) also found that geographic location affects farmers' access to SMIs. Chen & Jin (2017) and Jumpah et al (2019) stated that the distance of the farmer's house from the MFI reduces their participation. Many other studies have also looked at the effect of distance between farmhouses and SMIs (Chandio & Jiang, 2017). The negative relationship between distance and farmer participation in SMI is in line with research results consistent with Linh, et al (2020) and Hananu et al (2015).

Then the results of data analysis found that assets influenced the decision for farmers to participate. Meanwhile, Santoso & Gan (2019) did not find a significant relationship between household assets and participation (Diaz-Serrano & Sackey, 2018). SMIs provides agricultural financing by using asset ownership as collateral and measuring the ability to pay in installments and ensure repayment of financing (Henning et al., 2019). Collateral is very important for SMIs as collateral to pay off loans that are in default. Assets are always a concern because they affect participation (Chandio et al., 2017). Guarantees for farmers and financial institutions to strengthen financing markets (Calomiris et al., 2017). For low-income farmers, it is difficult to convert savings into assets (Addai et al., 2017; Asante-Addo et al., 2017); therefore affect their participation in SMIs.

The value of liquid assets (i.e., the total value of all bicycles, motorcycles, cars, refrigerators, televisions, and gas/electric stoves) and livestock, as well as previous year's income from agricultural households, can be used as indicators of liquid asset ownership. Lenders will be more open to farmers who have more liquid assets because their assets can be more easily liquidated to offset the debt. Studies in Siak and Bengkalis Districts show that a large number of liquid assets increases the chances of participating in SMIs. This is because large assets can be more easily liquidated to offset the debt.

In the locus area, the greater the ownership of land and the value of livestock as farm household assets, the greater the likelihood of farmer household

income. The assets and income of these farmers have a multi-linearity relationship. However, both have a significant effect on farmer participation in SMI. The accumulated assets of farmers are obtained from the excess income that they do not spend. Farmers consider it savings because it can be used when urgent. There are times when farmers prefer to borrow from SMIs rather than sell their livestock or land. Most of the respondents are oil palm farmers (partly horticulturalists) whose harvest period is about two weeks. When there is an urgent need, while the harvest is not yet due, SMI is the place to get money. Sometimes to meet the shopping needs of school children, they also borrow money from SMI. This situation makes SMI indispensable for farmers in the sample areas.

An important finding in the study was that income levels would increase farmers' opportunities to participate in SMIs. The purpose of getting financing at SMIs is to expand their farming business. This finding diverges with a result by Asante-Addo et al. (2017) that farmers with lower incomes are more likely to get a portion of the loan. Similarly, research by Awunyo-Vitor et al. (2014) found that farmers' income from the previous year reduces the possibility of participating in working capital credit financing. Farmers in Siak and Bengkalis are not recipients of the financing program, they seek loans that are not part of the SMIs program, so farmers with higher incomes are more likely to participate in SMIs.

E. CONCLUSION

Most of the financing taken by farmers is wakalah wal mudhárabah and very little is borrowed in the form of wakalah wal musháraka. The results showed that the factors that influence farmers' opportunity to participate in sharia micro finance are education, dependency ratio, the value of liquid assets owned, and farmers' income. The farther the farmer's house is from the SMI location, the less opportunity to participate. Other independent variables included in the model have no significant effect on farmers' opportunities to participate in SMI in both regions.

This finding has several implications for farmers to participate in SMI. Adult financial literacy programs need to be implemented by the Financial Services Authority (Otoritas Jasa Keuangan/OJK) and rural development partners. The program will provide education for farmers about financing and business management of agricultural products. The findings also recommend that

SMI should be encouraged to replace physical security with social security through a group responsibility strategy. It will increase income, increase payment capacity, and empower farm households to participate in financing programs. This finding has relevant implications for national policies to expand financial participation for rural farmers.

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