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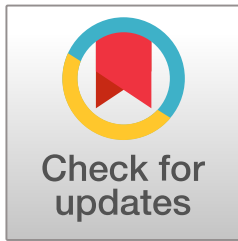
The Role of Access to Agribusiness Microfinance Institutions (LKM-A) on Poverty Reduction

Case Study in Kuningan District

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Abstract: This study aims to determine whether the role of the Agribusiness Microfinance Institution (LKM-A) has an actual or significant effect on the poverty of farmer households. By using various financial instruments, especially Indonesia's aspirations towards an inclusive financial system for everyone, especially in the agricultural sector, it is very important to examine the agribusiness microfinance institutions (LKM-A) to see how much impact they have on farming communities so they can get out of poverty status. This study used a mixed method with a sample using a purposive sampling method with a total sample of 52 divided into three growing seasons (MT I, MT-II, and MT III). The analytical method used the logit or logistic regression method with the variable of interest, namely access to LKM-A debtors and ten other control variables, which are divided into financing characteristics indicators, farming characteristics indicators, and household characteristics indicators as well as qualitative findings from field interviews with respondents. The results showed that 4 out of 11 variables have a negative effect (coefficient below 1), which means that they have a relationship to reduce the risk of being poor, namely the variable access to LKMA debtors, Bank debtor access; land area, and marital status. The results of this study showed that banks have a significant effect on reducing the risk of possible poverty levels, so the government needs to provide convenience for vulnerable people, especially farmers, to be able to access LKM-A and banks and increase financial inclusion.

Keywords: Microfinance Institutions; poverty; financial inclusiveness.

1. Introduction

All business activities will require financing to start them. Interestingly, there are differences in socio-cultural conditions between urban and rural areas. One real difference occurs when starting a business, where people tend to have limited financing, where 90 percent still use personal money to start a business (Syukur, 2009). Microloans are a type of loan that targets underprivileged or poor people to increase income to alleviate poverty and increase development (Dorfleitner et al., 2017). Ideally, development in a country is said to be successful if development has high and stable economic growth, increased human development, and reduced poverty and unemployment rates (Arkum & Amar, 2022). Even though the number of poor people throughout Indonesia has decreased between 2016 and 2017 (Aji, 2022), Indonesia still has to strengthen development, especially in rural areas, from being left behind by strengthening its regulations (Yusuf & Khoirunurrofik, 2022).

The phenomenon of rural areas being left behind compared to urban areas is caused by discrimination in various development fields towards villages (Murliasari, 2021), one of which is finance. This problem of microfinance conditions has occurred worldwide, especially in developing countries. Many previous studies link microfinance and poverty levels, including neighboring countries in Southeast Asia, such as the Philippines (Agbola et al., 2017) and Malaysia (Samer et al., 2015); South Asian countries, such as India (Imai et al., 2010); Europe such as Bosnia as a country that emerged from war (Gava et al., 2021), as well as Central American countries such as Nicaragua as the poorest country on the American continent where 48% of its people live below the poverty line (Dorfleitner et al., 2017); where all research has the result that poverty has been successfully reduced due to the influence of microfinance.

Microfinance institutions are an interesting topic, especially in developing countries, including Indonesia. One financial institution that plays a big role in microloans, especially families who have businesses but are less well off, is Microfinance Institutions (LKM). Non-bank microfinance institutions consist of savings and loan cooperatives, savings and loan units, rural credit institutions, Baitul Mal Wattanwili, non-governmental organizations, and government programs such as people's business loans, urban poverty alleviation projects, and others.

With the various types of microfinance institutions above, the MFI appropriate and suited to the character of village communities as a solution to inclusive finance is the Agribusiness Microfinance Institution (LKM-A). The agribusiness microfinance institutions established by the Ministry of Agriculture are interesting to discuss because several things make agribusiness microfinance institutions superior, including being participative, dynamic, and professional. According to Hermawan and Andrianyta (2012), LKM-A is participatory because farmers, as the main livelihood in the village, have a big role in managing group money, developing their agribusiness to make it productive, and directly networking to manage their business. Dynamic because it is a means of gathering the aspirations of members and professionals because it has the general goal of providing capital assistance to farmers.

One of the provinces with the potential to develop LKM-A units in terms of the largest number of LKM-A is West Java Province. West Java Province has 717 active LKM-A and Agricultural Cooperatives to date, making it the third largest province out of 31 provinces that have LKM-A in Indonesia. This shows great potential for LKM-A in providing financial services to farmers. Meanwhile, Kuningan Regency is the district with the highest percentage of poor people in West Java Province, 13.10%,

far above the national average of 9.71% as of September 2021 (BPS-Statistics of Jawa Barat Province, 2022). As reported by data from West Java in Figures, Kuningan Regency is only better than Tasikmalaya City, the poorest district/city in West Java. However, the number of LKM-A that have incorporated legal cooperatives (also known as Agricultural Cooperatives) in Kuningan Regency is the highest, namely 40 Agricultural Cooperatives and 28 LKM-A which are non-legal entities, when compared with other districts/cities in Java Province West. This is what makes the basic background for sampling in Kuningan Regency stronger. "Independent" and "developed" regions have the potential to reduce the depth of poverty and severity of poverty in their regions and to increase economic growth (Handoyo et al., 2021).

The objective examined by this research is the extent to which Microfinance Institutions, especially agribusiness microfinance institutions (LKM-A), can significantly affect the size of poverty at the farming household level. Using various financial instruments, especially Indonesia's aspiration towards an inclusive financial system for everyone, especially in the agricultural sector, agribusiness microfinance institutions (LKM-A) need to examine the impact on farming communities so they can get out of poverty.

The long history of the development of microfinance institutions cannot be separated from the institutions' success. From a global perspective, the concept of microfinance institutions is certainly inseparable from the establishment of the Grameen Bank in Bangladesh by Professor Mohammad Yunus, which aims to empower women in the region. Globally, microfinance institutions are estimated to have covered more than 200 million clients by the end of 2010 (Bhanot et al., 2012). Prawiranata (2013) also proved that there was an increase in income and employment opportunities for households who were customers of Bank Rakyat Indonesia, District Credit Agency (BKK), and Small People's Business Credit (KURK). BRI and Village Credit Bank customers also experienced increased household welfare as measured by consumption and improved health (Prawiranata, 2013).

The Indonesian government realizes that developing alternative instruments for APBN financing needs to be continued, including regulation and financing allocation (Putera et al., 2022). Based on the General Guidelines of the Ministry of Agriculture for the Growth and Development of Agribusiness Microfinance Institutions and Agricultural Cooperatives (2022), LKM-A was established to overcome the classic problem of farmers, namely lack of agricultural capital because farmers usually seek additional capital from various financial sources. Farmers must think about how to continue producing when the new planting season arrives. Agribusiness microfinance institutions (LKM-A) fostered by the Directorate of Agricultural Financing are present and have a strategic role as intermediaries for financial activities for farmers who previously could not access public or formal banking services. Previously, in the era of President Susilo Bambang Yudhoyono, the starter of this institution was known as a program called PUAP (Development of Rural Agribusiness Enterprises) specifically taken from Gapoktan in 2008-2015, where the grand design of the PUAP program, the formation of LKM-A by Gapoktan was carried out in third since receiving the PUAP Program.

This research's Basic Theory or Grand Theory starts from household income theory and poverty theory. Due to the poverty status obtained by farming households, households can no longer depend 100% on farming on land. Farmers try to earn multiple incomes from various non-agribusiness sources. If possible, even all existing workers, if they still have the opportunity and ability, will be mobilized to earn a living for the sake of the household economy (Suratiyah, 2012). This is

confirmed by Remi and Tjiptoherijanto (2002), where the main cause of household poverty is the low income they receive. At the same time, poor people are also characterized by an average number of dependents and large monthly expenses.

To capture multidimensional aspects of poverty, such as basic needs, wealth, type of housing, job security, sanitation, and food security, this research uses Index Based Ranking (IBR) from research by Imai et al. (2010). This IBR indicator is based on a national-level household survey to examine the role of microfinance in poverty reduction in India (Imai et al., 2010).

2. Methods

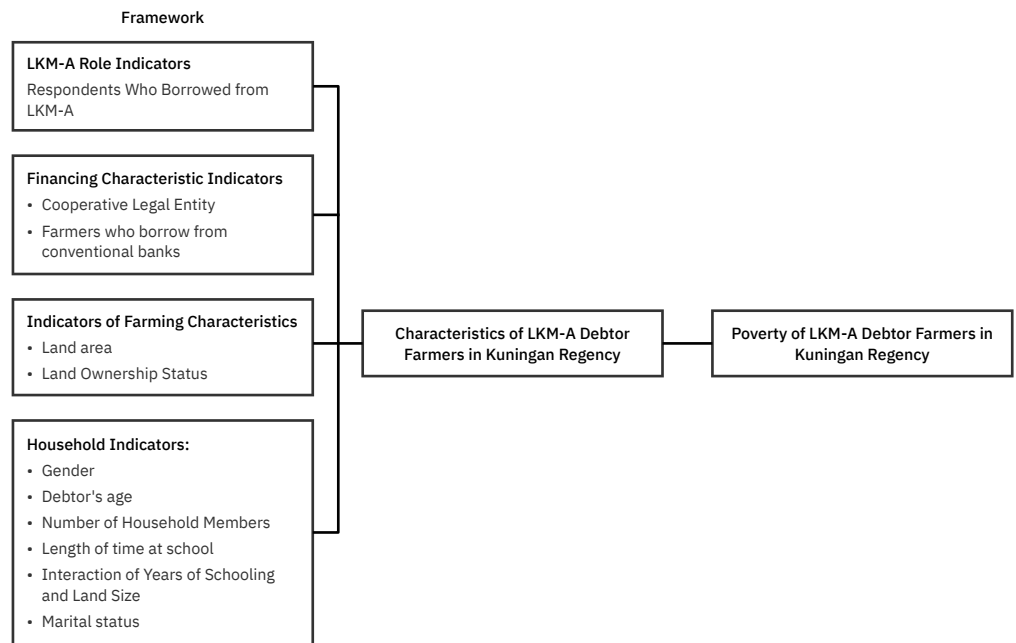


Figure 1. Research Conceptual Framework

Source: Processed

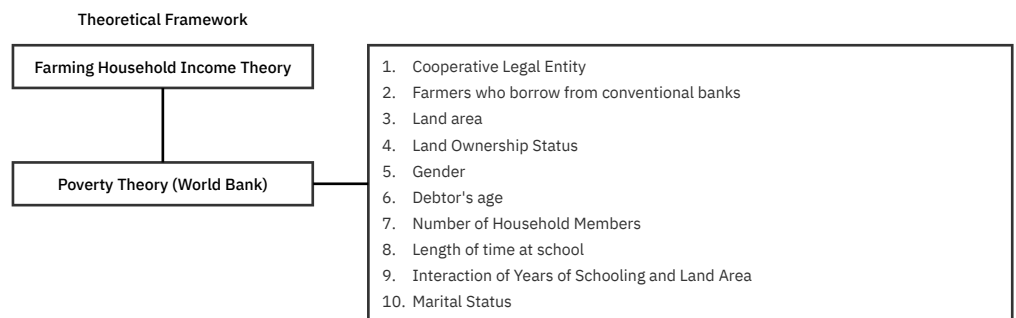


Figure 2. Theoretical Concept Framework

Source: Processed

This research focuses on a one-way relationship, namely the influence of characteristics variables of debtor farmers of agribusiness microfinance institutions in Kuningan Regency on the poverty of debtor farmers. The variables used to form the research framework shown in Figure 1 are based on literature studies and empirical reviews in the previous section. Poverty measured on a household and regional scale is measured by referring to research conducted by Gava et al. (2021), Imai et al. (2010), and Agbola et al. (2017) in measuring the relationship with the characteristics of each debtor. Meanwhile, the indicators used as determining factors

for the characteristics of LKM-A debtor households are type of business, existence of a formal (conventional) bank, type of loan, as well as household indicators consisting of female debtor loans, age of the debtor, and marital status of the debtor.

Poverty reduction strategies must refer to who and why poverty occurs to make sustainable development programs effective for community welfare (Gunawan et al., 2022). One approach used to measure poverty levels is the income approach (Sugiyarto et al., 2016). This approach has the advantages of (1) being consistent with national poverty levels, (2) it is expressed in common units, and (3) it provides greater support for international estimates of poverty lines (Jolliffe & Prydz, 2016).

Poverty is an illustration of determining a household's ability to fulfill basic rights or the need for a decent and dignified life as measured by the poverty line (Sudipa & Nurjani, 2021). According to the World Bank (2022), the poverty level must be readjusted so that by September 2022, there will be a change in the poverty line with an income approach of US\$2.15/capita/day or Rp33,155 in conversion to Rupiah (as of December 2022). In Indonesia, this research was conducted by Sugiyarto et al. (2016) regarding poverty and income inequality.

This research used panel data with purposive random sampling for three planting seasons ($t = 3$) from planting seasons I, II, and III, with 52 household samples ($n = 52$) from registered farmer households. In Gapoktan, which has an LKM-A unit, the total data used in this research is $52 \times 3 = 156$ in Kuningan Regency, West Java Province. This is based on research by Gava et al. (2021) in researching Agricultural Cooperatives in Bosnia because the sampling adapted to the aims and objectives of research for microfinance institutions.

The type of data analyzed in this research was primary data. Primary data is data obtained by taking it directly by conducting interviews with sources at the research site in a certain period. The data sources needed come from farmer debtors of the Agribusiness Microfinance Institution (LKM-A) in Kuningan Regency and secondary data from the internal Directorate of Agricultural Financing, Ministry of Agriculture. The data was then regressed into panel data. According to Gujarati (2013), panel data combines time series and cross-section data. Time series data is data from one object over several specific periods, while cross-section data is data obtained from one or more research objects in the same period. This research is also presented with qualitative and quantitative analysis, which aims to complement and strengthen the analysis of quantitative findings (Ivankova et al., 2006).

A variable can be interpreted as a quantity or factor whose value can change; besides variables, it is an important element in every theory. As for the variable type, this research uses three variables: the dependent, independent, and control variables. The dependent variable is a variable that is influenced by other variables, in this case, the poverty level, according to the World Bank. The independent variable is LKM-A Debtors, farmers who took loans from LKM-A during the last three planting seasons. Meanwhile, the control variable is the region where LKM-A is a legal entity or not, the existence of other financial institutions (formal/banks), per capita income, land area, land ownership status, gender, age, number of family members, years of schooling, and marital status.

Among regression analyses, logistic models involve parameter estimation when the dependent variable is dichotomous, or the dependent variable is a dummy. Mathematically, the binary logistic model has a dependent variable, Y , with two possible values, 0 and 1 (Walker & Duncan, 1967). Gava et al. (2021) also used this model to determine the influence of agricultural cooperatives on poverty. The general formula is as follows:

$$\text{logit (POV)} = \ln \left(\frac{\text{POV}}{1 - \text{POV}} \right) = \alpha + \beta_1 \text{LKMAit} + \beta_2 \text{LEGALit} + \beta_3 \text{BANKit} + \beta_4 \text{LANDAREAIT} \\ + \beta_5 \text{LANDOWDERit} + \beta_6 \text{GENDERit} + \beta_7 \text{AGEit} + \beta_8 \text{HHSIZEit} \\ + \beta_9 \text{SCHOOLit} + \beta_{10} \text{SCHOOLLANDAREAIT} + \beta_{11} \text{MARITALit} \\ + \epsilon_{it}$$

A new dependent variable, Y, is identified, representing poverty exposure. Y can take three values: Y = 0 if the observation has never been below the poverty line for three years (never poor); Y = 1 if the observation is below the poverty line and repeats during one of three growing seasons (Gava et al., 2021). The unit of measurement uses primary data and groupings adjusted to the research objectives.

The hypotheses that can be formulated are: (1) Respondents in Kuningan Regency who borrow from LKM-A have a lower risk of possible poverty levels compared to respondents who are not LKM-A debtors; (2) Respondents in Kuningan Regency who are in areas with financial institutions with cooperative legal entities are at risk of lower levels of poverty compared to respondents who are not in areas with financial institutions with cooperative legal entities; (3) Respondents in Kuningan Regency who borrow from conventional banks have a lower risk of poverty levels compared to respondents who do not borrow from conventional banks; (4) The larger the land owned by farmers in Kuningan Regency, the greater the risk of lower levels of poverty; (5) Respondents in Kuningan Regency who have their own land are at risk of lower levels of poverty compared to respondents who do not own their own land; (6) Respondents in Kuningan Regency who are female have a lower risk of possible levels of poverty compared to respondents who are male. (7) The younger the age of farmers in Kuningan Regency, the higher the risk of possible levels of poverty being lower; (8) The fewer household members in Kuningan Regency will result in the risk of a lower poverty level; (9) The longer a farmer's schooling in Kuningan Regency will result in a lower risk of possible poverty levels; (10) The interaction between the variables of years of schooling and land area will produce a risk of lower levels of poverty; and (11) Respondents in Kuningan Regency who have ever been married have a lower risk of poverty compared to respondents who have never been married.

Apart from that, there were several open questions collected through interviews with local actors, namely the Chair of the Farmer's Group, the Management of the Women's Farmer's Group (KWT), the Manager of LKM-A, and the organization's administrators under the combined farmer groups (Gapoktan) as sources, especially regarding case study and the potential role of agriculture, and especially rice farming, to alleviate poverty in Kuningan Regency.

3. Results and Discussion

Based on primary data taken from 52 respondents and descriptive statistical analysis starting from looking at statistical data on poverty levels and LKM-A debtors. The poverty line used in this research is from the World Bank Criteria (World Bank, 2022), namely with the most recent policy being September 2022, where the poverty line for each country is US\$2.15/capita/day, or if converted into rupiah, it is IDR 33,155/capita/day. The per capita income sought for each planting season is then divided by month to obtain households whose per capita income is below Rp33,155 which is worth 30.76% of the total respondents taken. This figure tends to be quite high compared to the Kuningan Regency BPS poverty line, namely IDR365,069/capita/month or the equivalent of IDR12,169/capita/day.

The reason for using the World Bank criteria is that this institution is recognized as an international institution that deals with micro issues, especially poverty and financial inclusion, so the basis for determining poverty will impact the ease of comparing with other countries' poverty standards. Meanwhile, data on debtors who accessed loans through LKM-A marked with the LKMA code was worth 65.85% of the total respondents.

Apart from access to LKM-A debtors, which is the variable of interest or the main variable, several control variables are needed to test the robustness of the model studied. These control variables are then grouped into financing characteristics, which include the legal entity status of the LKM-A and also the existence of other financial institutions (formal/bank); farming characteristics, which include factors relating to farming, namely income per capita, land area, and land ownership status; and finally, individual characteristics which include gender, age, number of household members, years of schooling, and marital status. Based on financing characteristics, it can be seen that both the legal entity variables and the existence of other formal financial institutions use dummies.

Then, the results of the statistical data on farming characteristics are described. The farming business run by farmers also influences the income or poverty in the data. As in the results of the following statistical description, the income of respondents in Kuningan Regency has an average income of IDR67,249.32 per capita per day. This cumulative figure is higher than the poverty line from the World Bank, namely US\$2.15 per capita per day, with the lowest income being IDR4,875 per capita per day and the highest reaching IDR1,001,000 per capita per day. However, because income is already the basis for determining poverty levels, it is not included in the logit regression.

Apart from that, land area and land ownership status are among the variables considered in this research to see the robustness of the control variables to the main variable regarding access to LKM-A debtors. Based on the processed data, the average land of respondents in Kuningan Regency, both from rice fields and moorland, is worth 0.283 hectares, with spread land ownership of 2.14 hectares. Meanwhile, land ownership calculated dummy explains that 61.53% of respondent farmers' land in Kuningan Regency is their own.

Apart from financing and farming business characteristics, individual characteristic variables will also be examined in this research to see how far they are related to the poverty level in Kuningan Regency. Based on the data that has been processed, in terms of gender factors intending to see the impact of women's participation in borrowing from LKMA, the data obtained are quite balanced. Namely, 48.08% of women participated in this research, and the rest were men. Then, from the average age, the results showed that respondents in Kuningan Regency had an average age of 50,077 years, with the youngest being 16 years and the oldest being 78 years. Based on the previous explanation, a statistical description of data on the characteristics of financing, farming, and individual respondents in Kuningan Regency in 2022 can be seen in [Table 1](#).

In Indonesia, poverty is also still a fundamental problem that requires awareness and practical action to reduce its possible impacts ([Nanivazo et al., 2021](#); [Nugroho et al., 2021](#); [Purwono et al., 2021](#); [Saragi, 2021](#)). The research "The Role of LKM-A Access in Poverty Alleviation: Case Study in Kuningan Regency" is the first to use the logit model or another name, logistic regression. The logit model method is a form of statistical model used to predict the probability of an event occurring. The logit model is based on the logistic function (also called the sigmoid function), which is

Table 1. Descriptive Statistics Results

Variable	Observation	Mean	Std. Dev.	Min.	Max.
Poverty level (POV)	156	0,30769	0,46302	0	1
LKM-A Debtor (LKMA)	156	0,65385	0,47728	0	1
Legal Entity (LEGAL)	156	0,36538	0,48309	0	1
Existence of Other Financial Institutions (Formal/Bank) (BANK)	156	0,25	0,43441	0	1
Land Area	156	0,28320	0,32066	0	2,14
Land Ownership (LAND OWNER)	156	0,61538	0,48807	0	1
Gender	156	0,48077	0,50124	0	1
Age	156	50,07692	14,47246	16	78
Number of Household Members (HHSIZE)	156	3,01923	1,17320	1	6
Length of Schooling (SCHOOL)	156	8,61539	2,85897	6	13
Marital Status (MARITAL)	156	0,96154	0,19293	0	1

Source: Primary Data Analysis, 2022.

used to model situations with two possible outcomes. This Logit method begins by testing the results of the F-test and T-test. Based on the results of the F-test, it shows that Prob > F is 0.00. This indicates that statistically, at a significant level of 1%, all the variables used in this research jointly influence the poverty level of respondents in Kuningan Regency.

The Determination Coefficient Test can be seen from the R-squared value increasing as variables from existing characteristics are added. In model (1), the resulting R2 is 4.38%, then increases to 11.66% in the model (2) and increases again to 14.53% in model (3) and peaks at 18.76% in model (4). This shows that the poverty level was influenced by 18.76% of the independent variables in this research, the rest of which is influenced by other variables outside the independent variables.

In model (1), the results of the logit model aim to see the impact of the independent variable on the dependent variable, namely the impact of farmers who became LKM-A debtors, which is measured by adding up the number of all farmers who became borrowers in LKM-A during the last year, on the poverty level with the World Bank poverty line, which is a dummy variable. Then, in model (2), control variables are added, financing characteristics, namely LKM-A with cooperative legal entities and conventional bank debtors, as part of the control for the types of existing financing institutions. In model (3), another control variable for farming characteristics is added to observe the impact of farming factors, which include per capita income, area size, and land ownership status. The ultimate in the model (4) is to measure all factors by adding individual characteristics, namely gender, age, number of family members, years of schooling, marital status, and the interaction between years of schooling and land area.

Based on the results of the logit method, model (1) shows that access to LKM-A debtors marked with the code "LKMA" has a coefficient below one and is not significant, which means that farmers who borrow from LKM-A have a risk of being poor 0.82435 times higher or 82.435% for the poor, lower than farmers who do not borrow from LKM-A with a confidence level below 90%. However, this model needs to consider the impact of control variables, so the results will tend to be biased (underestimated). This probability or opportunity risk figure continues to decrease if we add financing characteristics to model (2) to 0.58362 and peaks when adding farming characteristics to model (3) and individual characteristics to model (4) with

farmers borrowing from MFIs. A has a risk of being poor 0.35314 times higher or 35.314% lower than farmers who do not borrow from LKM-A with a confidence level of 90% (significant). This is in line with previous studies, namely that microfinance has a real effect in reducing poverty rates (Agbola et al., 2017), which was researched in Mindanao, Philippines; Imai et al. (2010) with research on microfinance and poverty in India; Samer et al. (2015) with the same research in Malaysia; and Gava et al. (2021) in Bosnia. In other words, hypothesis number 1, that borrowing from LKM-A can reduce the risk of becoming poor, is accepted.

The results of model (2), which has added financing characteristics factors other than the main variable (LKM-A debtor access), showed that microfinance institutions that are cooperative legal entities marked with the code "LEGAL" have a coefficient below one but it not significant that farmers who are in the LKM-A area with a cooperative legal entity have a risk of being poor 0.62604 times higher or 62.604% lower than farmers who are not in the LKM-A area with a cooperative legal entity with a trust level below 90% (no significant). This is in accordance with previous research, namely that agricultural cooperatives that are legal entities influence poverty levels in Bosnia & Herzegovina (Gava et al., 2021), in China (Zhong et al., 2023), and in Iran (Alimohammad et al., 2022), but changes little during model (4). Thus, it can be concluded that hypothesis number 2, that legal entity financial institutions can reduce the risk of poverty, is rejected.

Meanwhile, the factor of respondents who borrow from formal financial institutions with the code "BANK" has a negative relationship (coefficient below 1) and is significant in model (2), meaning that farmers who borrow from banks have a risk of being poor 0.15933 times higher or 15.933% lower for the poor than farmers who do not borrow from banks with a confidence level of 99%. This is also in accordance with previous research, which states that the role of banks has a significant influence in reducing poverty (Delis et al., 2023; Nanivazo et al., 2021). This shows that borrowing from banks is a good alternative financial institution for business development and can usually be accessed by bankable farmers because the conditions for borrowing from banks are more complicated than borrowing from LKM-A, one of which is due to collateral obligations. Thus, it can be concluded that hypothesis number 3, that farmers who borrow from other financial institutions, namely formal (banks), can reduce the risk of becoming poor, is accepted.

In model (3) results, the logistic regression or logit model has added the main variables and financing characteristics, then farming characteristics. The area of land with the code "LANDAREA" has a positive and insignificant relationship (below 90% confidence level) in the model (3), meaning that every increase in farmer's land area by 1 hectare will increase the poverty level by 0.33836 times higher or 33.836 % lower risk of poverty. This figure changes rapidly when individual characteristic variables are added to the model (4) where the land area has a positive effect (above number 1) although not significant, namely 4.19834 times higher for the poor with a confidence level below 90%. According to the author's observations, this occurs because the respondent's land area in Kuningan Regency is very small, namely 0.28 Ha, and also seen from the results of the previous income distribution, most respondents depend more on income from outside farming, which requires land, and in accordance with Qi et al.'s research (2023) and Kebede et al. (2023). Thus, it can be concluded that hypothesis number 4, that a larger land area can reduce the risk of being poor, is rejected.

For the results of the land ownership factor with the code "LANDOWNER," the results of the regression coefficient for model (3) are positive (above 1) and not

significant (confidence level below 90%), namely 2.65065. This means that farmers who have land with their status have a risk of being poorer, 2.65065 times higher than farmers who do not have their land. This figure decreased to 2.57834 with a confidence level of 90%. This is different from several research results, for example, from [Irawan et al. \(2015\)](#) and [Kebede et al. \(2023\)](#), where the increasing number of tenants or tenants can increase the level of poverty, not the status of owning property. According to the author's qualitative observations, when taking data into the field, farmers who own their land and work on it themselves ultimately still incur costs for labor outside the family and pay annual taxes, thus making costs more inflated and not much different from farmers who are farmers. Farmers who own their land tend to have the risk of losing themselves, thereby reducing their total income. Thus, it can be concluded that hypothesis number 5, that private land ownership status can reduce the risk of poverty, is rejected.

In model (4) results, all variables in the characteristics are added and regressed, including individual characteristics, which are described in five variables. In the gender variable, to see gender, which has the code "GENDER," it has a coefficient above 1, namely 2.22838 at a confidence level below 90%, meaning that female farmers have a risk of being 2.22838 times higher or 122.838% poorer than male farmers. This result is different from the claims of [Beck et al. \(2013\)](#), [Godquin \(2004\)](#), and [D'Espallier et al. \(2011\)](#) that women show better repayment when borrowing from microfinance institutions. Women farmers tend to borrow for non-farming purposes, so the risk factor for repayment is greater because it is not used for productive businesses (children's snacks, kitchen needs, etc.).

This is reinforced by qualitative findings from interviews in the field with respondents, namely Mrs. II, Chair of the Wanita Tani Wargi Sajati Group, Kertayuga Village, Nusaherang District:

“Usually, when adult women borrow, it is not for farming in the fields (rice fields). At most, it is usually for stalls (waserda) or processing businesses (fried food), processing sweet potatoes, and so on. Because you only get a small amount (affirmation from Mr. Soman's info), the maximum is only IDR3,000,000.”

The same information was also confirmed by Mrs. W, secretary of KWT Wargi Sajati, Kertayuga Village, Nusaherang District:

“If it's an adult woman who borrows, the use can vary. Sometimes rice, school snacks, or other kitchen necessities. So, the money is mixed with other income.”

According to qualitative observations made by the author, most borrowers in LKM-A cannot increase their household income because they are the only workers in the family. So, it cannot increase income and escape the poverty trap, whereas, for men, the costs incurred will still be used for farming, such as fertilizer. This is in accordance with research by [Ksoll et al. \(2016\)](#), where fertilizer and other inputs are purchased when farmers borrow money to start a farming business. In addition, if more loans are given in kind, the credit institutions that provide these loans will be directed to pay at the right time ([Okorie, 1986](#)).

Apart from that, on average, LKM-A is only able to lend its members a maximum of IDR3,000,000 a year or IDR1,000,000 per planting season, which is not yet able to improve farming for the better. This is in accordance with research by [Butolo](#)

(2022) and Zugravu-Soilita et al. (2021) that one of the problems of small businesses is capital resources. Thus, it can be concluded that hypothesis number 6, that private land ownership status can reduce the risk of poverty, is rejected.

In the next variable, namely age or "AGE," the result was that the coefficient was 1.05301, meaning that for every one-year increase in farmer age, the risk of being poor could increase by 1.05301 times higher at the 95% confidence level. This is in accordance with research by Vogelgesang (2003) that age has a risk-reducing effect; Dinh and Kleimeier (2007) who measured that the probability of default increases continuously with age in the context of retail banking in Vietnam; and Reinke (1998) where younger borrowers are more likely to look for and find other and better job opportunities than older people so that they get better income and how to manage their business than older people. Thus, it can be concluded that hypothesis number 7, that younger age can reduce the risk of being poor, is accepted.

The third variable is the number of farming family members or "HHSIZE," with the coefficient showing a result of 1.33270, which means that for every increase in the number of household members by one person, the risk of being poor will increase by 1.33270 times. This happens because family members who are still in school and have no income can also have greater household expenses than households with many productive working age members. Thus, it can be concluded that hypothesis number 8, that the lower the number of family members can reduce the risk of being poor, is accepted.

In the next variable, namely length of schooling or "SCHOOL," the results showed that the coefficient was 1.26918, meaning that every increase in the farmer's length of schooling by one year can increase the risk of being poor by 1.26918 higher or 26.918% higher for poverty at the 95% confidence. This is different from the research of Ustama (2009) and Tran et al. (2023) in Thailand and Vietnam, where education is a significant influencing factor when linked to poverty levels.

Based on qualitative observations in the field, this is reinforced by the results of interviews with Mr U, Chairman of the Marga Jaya Farmers Group, Kertayuga Village, Nusaherang District and Mr Y:

"...When it comes to graduates, there doesn't seem to be any difference here in terms of production or income harvest. There is also no difference between high school, middle school, and elementary school graduates in terms of area of work, for example. Borrowing from LKM-A, high school, or elementary school graduates are also welcome. There are no special privileges..." – Mr. U.

"... In terms of borrowing agricultural facilities or infrastructure such as fertilizer seeds, we sometimes borrow in kind from LKM-A but never look at educational background. What is considered is the child's education compared to his father..."
– Mr. Y

From the description of Mr. U and Mr. Y's sentences, the author believes that when starting a farming business, LKM-A or banks do not provide privileges in providing financing to farmers regardless of their background, including education. Education should play an important role in knowledge, but in farming and farming management, experience in farming is much more influential than knowledge or elementary

school. Thus, it can be concluded that hypothesis number 9, that the greater the number of years of schooling can reduce the risk of being poor, is rejected.

However, because there are several differences with previous research, such as the results of the relationship between the poverty level and land area as well as poverty level and years of schooling, the author carried out an analysis by creating an interaction variable between years of schooling and land area as the 11th variable and carried out a logistic regression along with ten other variables. From the results of logistic regression (logit method), an odds ratio value of 0.74223 was obtained, which means that the risk of being poor is 0.74223 higher or the risk of being poor is 74.223% lower with a significance level below 90%, which means there is an interaction effect. Between years of schooling and land area in reducing the risk of possible poverty levels. There are indications that respondents who have had more years of schooling but do not have a large area of land or that a large area of land influences the risk of poverty levels when interacting with years of schooling. Thus, it can be concluded that hypothesis number 10, that the greater the number of years of schooling can reduce the risk of being poor, is accepted.

Table 2. Research Results on the Relationship Between Poverty Level and Access to LKM-A Debtors Using 4 Models Using the Logit Method

	(1) Poverty level (POV)	(2) Poverty level (POV)	(3) Poverty level (POV)	(4) Poverty level (POV)
LKMA Debtor (LKMA)	0,82435 (0,30464)	0,58362 (0,25498)	0,49049 (0,22232)	0,35314* (0,21806)
Cooperative Legal Entity (LEGAL)		0,62604 (0,26066)	0,91252 (0,49669)	1,14089 (0,76286)
Bank Debtors (BANK)		0,15933*** (0,09715)	0,15308*** (0,09594)	0,14358*** (0,09893)
Land Area (LANDAREA)			0,33836 (0,24428)	4,19834 (9,93634)
Land Ownership (LANDOWNER)			2,65065* (1,36770)	2,57834 (1,58167)
Gender (GENDER)				2,22838 (1,49316)
Age (AGE)				1,05301** (0,02744)
Number of Household Members (HHSIZE)				1,33270 (0,30366)
Length of Education (SCHOOL)				1,26918** (0,14104)
Interaction Length of Education * Land Area (SCHOOL*LANDAREA)				0,74223 (0,27046)
Marital Status (MARITAL)				0,08614* (0,12598)
MT II	0,34931**	0,31590**	0,39999*	0,35242**
MT III	0,34931**	0,31590**	0,39826*	0,35199**
Observation	156	156	156	156
Pseudo R2	4,52%	11,66%	14,53%	18,76%

Source: Primary Data Analysis, 2022

Information:

The numbers in brackets are standard errors. Model (1) contains regression of the main variables, model (2) adds financing characteristic factor variables, model (3) adds farming characteristic factor variables, model (4) adds all variables including individual characteristic factors.

* p<0,1

** p<0,05

***p<0,01

Next the last variable is marital status. The variable with the code "MARITAL" shows that the coefficient is 0.08614, meaning that married farmers have a 0.08614 times higher risk of being poor or 8.614% lower risk of being poor than unmarried farmers at 90% confidence. Thus, it can be concluded that hypothesis number 11, that farmers who have previously been married can reduce the risk of being poor, is accepted. Based on the previous explanation, the results of research on the relationship between the poverty level and access to LKM-A debtors and all control variables (financing characteristics, farming characteristics, and individual characteristics) in Kuningan Regency in 2022 can be seen in [Table 2](#).

4. Conclusion

Based on the regression results in 4 models, for 11 independent variables that are related to 11 different hypotheses, four variables have a negative relationship or a coefficient number below 1, namely access to LKM-A debtors (significant), borrowing at the bank (significant), interaction between years of schooling and area (not significant), and marital status (significant), so that these four independent variables make four hypotheses accepted. Meanwhile, six variables have coefficients above 1, namely cooperative legal entity (not significant), land area, land ownership status, gender, number of household members, and years of schooling, with the results of 2 of them being acceptable, namely age and number of household members.

It is hoped that this research can be the beginning of making the existence of the Agribusiness Microfinance Institution (LKM-A) better, including through collaboration and the role of policy stakeholders. First, the government needs to take a policy to strengthen LKM-A as a financial institution used by vulnerable communities, especially farmers, by increasing farmer loan assets for each farmer to increase farmer confidence and income to reduce poverty levels. Second, from the results obtained, it is known that banks have a significant effect on reducing the risk of possible levels of poverty. Hence, the government needs to make it easier for vulnerable communities, especially farmers, to be able to access banks.

The author hopes that the limitations of this research can be the start of interesting and constructive socio-economic research and findings for microfinance institutions that will increasingly have an impact on farmers not only in Kuningan Regency but also throughout Indonesia in order to achieve Indonesia's ideals towards national financial inclusiveness.

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References

- Agbola, F. W., Acupan, A., & Mahmood, A. (2017). Does Microfinance Reduce Poverty? New Evidence From Northeastern Mindanao, the Philippines. *Journal of Rural Studies*, 50, 159–171. <https://doi.org/10.1016/j.jrurstud.2016.11.005>
- Aji, Y. I. T. (2022). The Effect of Village Income and Gross Regional Domestic Product on Poverty in Indonesia. *Jurnal Bina Praja*, 14(2), 315–328. <https://doi.org/10.21787/jbp.14.2022.315-328>
- Alimohammad, M., Farajallah Hosseini, S. J., Mirdamadi, S. M., & Dehyouri, S. (2022). Collaborative Networking Among Agricultural Production Cooperatives in Iran. *Heliyon*, 8(11), e11846. <https://doi.org/10.1016/j.heliyon.2022.e11846>

- Arkum, D., & Amar, H. (2022). The Influence of Economic Growth, Human Development, Poverty and Unemployment on Income Distribution Inequality: Study in the Province of the Bangka Belitung Islands in 2005-2019. *Jurnal Bina Praja*, 14(3), 413–422. <https://doi.org/10.21787/jbp.14.2022.413-422>
- Beck, T., Behr, P., & Guettler, A. (2013). Gender and Banking: Are Women Better Loan Officers?*. *Review of Finance*, 17(4), 1279–1321. <https://doi.org/10.1093/rof/rfs028>
- Bhanot, D., Bapat, V., & Bera, S. (2012). Studying Financial Inclusion in North-East India. *International Journal of Bank Marketing*, 30(6), 465–484. <https://doi.org/10.1108/02652321211262221>
- BPS-Statistics of Jawa Barat Province. (2022). *Provinsi Jawa Barat dalam Angka 2022*. BPS-Statistics of Jawa Barat Province. <https://jabar.bps.go.id/publication/2022/02/25/0d261f828b581d8082bbc6c1/provinsi-jawa-barat-dalam-angka-2022.html>
- Butolo, I. (2022). Development of Micro, Small, and Medium Enterprises Through Geoproductions for Geopark Gorontalo. *Jurnal Bina Praja*, 14(2), 251–262. <https://doi.org/10.21787/jbp.14.2022.251-262>
- Delis, M., Galariotis, E., Iosifidi, M., & Monne, J. (2023). Poverty and Seeking Bank Advice: Evidence From a Survey Experiment. *Journal of Financial Stability*, 67, 101156. <https://doi.org/10.1016/j.jfs.2023.101156>
- D'Espallier, B., Guérin, I., & Merland, R. (2011). Women and Repayment in Microfinance: A Global Analysis. *World Development*, 39(5), 758–772. <https://doi.org/10.1016/j.worlddev.2010.10.008>
- Dinh, T. H. T., & Kleimeier, S. (2007). A Credit Scoring Model for Vietnam's Retail Banking Market. *International Review of Financial Analysis*, 16(5), 471–495. <https://doi.org/10.1016/j.irfa.2007.06.001>
- Dorfleitner, G., Just-Marx, S., & Priberny, C. (2017). What Drives the Repayment of Agricultural Micro Loans? Evidence From Nicaragua. *The Quarterly Review of Economics and Finance*, 63, 89–100. <https://doi.org/10.1016/j.qref.2016.02.009>
- Gava, O., Ardakani, Z., Delalić, A., Azzi, N., & Bartolini, F. (2021). Agricultural Cooperatives Contributing to the Alleviation of Rural Poverty. The Case of Konjic (Bosnia and Herzegovina). *Journal of Rural Studies*, 82, 328–339. <https://doi.org/10.1016/j.jrurstud.2021.01.034>
- Godquin, M. (2004). Microfinance Repayment Performance in Bangladesh: How to Improve the Allocation of Loans by MFIs. *World Development*, 32(11), 1909–1926. <https://doi.org/10.1016/j.worlddev.2004.05.011>
- Gunawan, F. X. C., Mesa, A. N. L. M., Syah, R. F., Simandjorang, B. M. T. V., & Fitri, S. E. (2022). Farmers and Poverty: Farmer Complaints and Problems in Mutunggeding Village. *Jurnal Bina Praja*, 14(3), 529–541. <https://doi.org/10.21787/jbp.14.2022.529-541>
- Handoyo, F., Hidayatuna, A., & Purwanto, P. (2021). The Effect of Rural Development on Poverty Gap, Poverty Severity and Local Economic Growth in Indonesia. *Jurnal Bina Praja*, 13(3), 369–381. <https://doi.org/10.21787/jbp.13.2021.369-381>
- Hermawan, H., & Andrianyta, H. (2012). Lembaga Keuangan Mikro Agribisnis: Terobosan Penguatan Kelembagaan dan Pembiayaan Pertanian di Perdesaan. *Analisis Kebijakan Pertanian*, 10(2), 143–158. <https://epublikasi.pertanian.go.id/berkala/akp/article/view/1015>
- Imai, K. S., Arun, T., & Anni, S. K. (2010). Microfinance and Household Poverty Reduction: New Evidence from India. *World Development*, 38(12), 1760–1774. <https://doi.org/10.1016/j.worlddev.2010.04.006>
- Irawan, B., Ariningsih, E., & Pasandaran, E. (Eds.). (2015). *Panel Petani Nasional: Rekonstruksi Agenda Peningkatan Kesejahteraan Petani*. Indonesian Agency for Agricultural Research and Development (IAARD) Press.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Jolliffe, D., & Prydz, E. B. (2016). Estimating International Poverty Lines From Comparable National Thresholds. *The Journal of Economic Inequality*, 14(2), 185–198. <https://doi.org/10.1007/s10888-016-9327-5>
- Kebede, D., Emanu, B., & Tesfay, G. (2023). Impact of Land Acquisition for Large-Scale Agricultural Investments on Food Security Status of Displaced Households: The Case of Ethiopia. *Land Use Policy*, 126, 106507. <https://doi.org/10.1016/j.landusepol.2022.106507>
- Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2016). Impact of Village Savings and Loan Associations: Evidence from a cluster randomized trial. *Journal of Development Economics*, 120, 70–85. <https://doi.org/10.1016/j.jdeveco.2015.12.003>

- Murliasari, R. (2021). Implementation of Village Fund Management Policy Affirmation in Village Development. *Jurnal Bina Praja*, 13(3), 555–567. <https://doi.org/10.21787/jbp.13.2021.555-567>
- Nanivazo, J. M., Egbendewe, A. Y. G., Marcelin, I., & Sun, W. (2021). Foreign Bank Entry and Poverty in Africa: Misaligned Incentives? *Finance Research Letters*, 43, 101963. <https://doi.org/10.1016/j.frl.2021.101963>
- Nugroho, A., Amir, H., Maududy, I., & Marlina, I. (2021). Poverty Eradication Programs in Indonesia: Progress, Challenges and Reforms. *Journal of Policy Modeling*, 43(6), 1204–1224. <https://doi.org/10.1016/j.jpolmod.2021.05.002>
- Okorie, A. (1986). Major Determinants of Agricultural Smallholder Loan Repayment in a Developing Economy: Empirical Evidence From Ondo State, Nigeria. *Agricultural Administration*, 21(4), 223–234. [https://doi.org/10.1016/0309-586X\(86\)90040-3](https://doi.org/10.1016/0309-586X(86)90040-3)
- Prawiranata, I. R. (2013). *Sustainable Microfinance in Indonesia: A Sociocultural Approach* [PhD thesis, Victoria University]. <https://vuir.vu.edu.au/22309/>
- Purwono, R., Wardana, W. W., Haryanto, T., & Khoerul Mubin, M. (2021). Poverty Dynamics in Indonesia: Empirical Evidence From Three Main Approaches. *World Development Perspectives*, 23, 100346. <https://doi.org/10.1016/j.wdp.2021.100346>
- Putera, P. B., Widianingsih, I., Rianto, Y., Ningrum, S., & Suryanto. (2022). Implementing Sukuk Financing in Indonesia: Policy Actions to Improve and Support Development Research and Development Infrastructure (RDI). *Jurnal Bina Praja*, 14(3), 555–570. <https://doi.org/10.21787/jbp.14.2022.555-570>
- Qi, Y., Zhang, J., Chen, X., Li, Y., Chang, Y., & Zhu, D. (2023). Effect of Farmland Cost on the Scale Efficiency of Agricultural Production Based on Farmland Price Deviation. *Habitat International*, 132, 102745. <https://doi.org/10.1016/j.habitatint.2023.102745>
- Reinke, J. (1998). How to Lend Like Mad and Make a Profit: A Micro-Credit Paradigm Versus the Start-Up Fund in South Africa. *Journal of Development Studies*, 34(3), 44–61. <https://doi.org/10.1080/00220389808422520>
- Samer, S., Majid, I., Rizal, S., Muhamad, M. R., Sarah-Halim, & Rashid, N. (2015). The Impact of Microfinance on Poverty Reduction: Empirical Evidence from Malaysian Perspective. *Procedia - Social and Behavioral Sciences*, 195, 721–728. <https://doi.org/10.1016/j.sbspro.2015.06.343>
- Saragi, N. B. (2021). Indonesia's Village Fund Program: Does It Contribute to Poverty Reduction? *Jurnal Bina Praja*, 13(1), 65–80. <https://doi.org/10.21787/jbp.13.2021.65-80>
- Sudipa, N., & Nurjani, P. S. (2021). Strategy for Accelerating Poverty Reduction in Klungkung Regency, Bali. *Jurnal Bina Praja*, 13(1), 41–51. <https://doi.org/10.21787/jbp.13.2021.41-51>
- Sugiyarto, S., Mulyo, J. H., & Seleky, R. N. (2016). Kemiskinan dan Ketimpangan Pendapatan Rumah Tangga di Kabupaten Bojonegoro. *Agro Ekonomi*, 26(2), 115–120. <https://doi.org/10.22146/agroekonomi.17264>
- Suratiah, K. (2012). *Kecamatan Ngawen Kabupaten Gunungkidul Ditinjau dari Ekonomi Rumah Tangga Petani Tahun 2010-2011*. Jurusan Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Gadjah Mada.
- Syukur, M. (2009). *Bank Pertanian Pembiayaan Alternatif untuk Petani: Mencari Alternatif Pembiayaan Pertanian*. Round Table Discussion, Hotel Borobudur Jakarta.
- Tran, D. B., Tran, H. T. M., Pham, T. D. N., & Nguyen, T. T. (2023). Education and Agricultural Household Income: Comparative Evidence From Vietnam and Thailand. *World Development Perspectives*, 29, 100489. <https://doi.org/10.1016/j.wdp.2023.100489>
- Ustama, D. D. (2009). Peranan Pendidikan dalam Pengentasan Kemiskinan. *Dialogue: Jurnal Ilmu Administrasi dan Kebijakan Publik*, 6(1), 1–12. <https://ejournal.undip.ac.id/index.php/dialogue/article/view/417>
- Vogelgesang, U. (2003). Microfinance in Times of Crisis: The Effects of Competition, Rising Indebtedness, and Economic Crisis on Repayment Behavior. *World Development*, 31(12), 2085–2114. <https://doi.org/10.1016/j.worlddev.2003.09.004>
- World Bank. (2022, September 14). *Fact Sheet: An Adjustment to Global Poverty Lines*. World Bank. <https://www.worldbank.org/en/news/factsheet/2022/05/02/fact-sheet-an-adjustment-to-global-poverty-lines>
- Yusuf, M., & Khoirunurrofik, K. (2022). The Relationship of Village Funds With Village Economic Development: A Village Level Study in Indonesia. *Jurnal Bina Praja: Journal of Home Affairs Governance*, 14(3), 493–504. <https://doi.org/10.21787/jbp.14.2022.493-504>
-

Zhong, Z., Jiang, W., & Li, Y. (2023). Bridging the Gap Between Smallholders and Modern Agriculture: Full Insight Into China's Agricultural Cooperatives. *Journal of Rural Studies*, *101*, 103037. <https://doi.org/10.1016/j.jrurstud.2023.103037>

Zugravu-Soilita, N., Kafrouni, R., Bouard, S., & Apithy, L. (2021). Do Cultural Capital and Social Capital Matter for Economic Performance? An Empirical Investigation of Tribal Agriculture in New Caledonia. *Ecological Economics*, *182*, 106933. <https://doi.org/10.1016/j.ecolecon.2020.106933>