Contract Farming & Cost of Funding: Evidence from Madurase Solar Salt Small Businesses

Campina Illa Prihantini[1,2], Nuhfil Hanani[3], Syafrial[3], Rosihan Asmara[3]

[1]Doctoral Program Agriculture, University of Brawijaya, 65145, Indonesia
[2]Agribusiness Study Program, Faculty of Agriculture, Fisheries, and Animal Husbandry, Universitas Sembilanbelas November Kolaka, Southeast Sulawesi, 93561, Indonesia
[3]Department of Socio Economic, Faculty of Agriculture, Brawijaya University, 65145, Indonesia
Email: campinailla26@gmail.com

Abstract

This study aimed to estimate the indirect expenses borne by tenant farmers due to credits they receive in community salt farming operations managed through contract farming systems in Pamekasan Regency. Credits constitute a crucial aspect of tenant farmers' rights within the community salt farming contract farming framework. This study employed a comparative analysis of the cost of funds based on the adopted contract farming models, specifically the two-way and three-way contract farming structures. Moreover, it investigated the correlation between the cultivated salt field's size and the magnitude of the cost of funds endured by tenant farmers. The results of the analysis reveal that the average costs of funds borne by tenant farmers are notably high, ranging from 5.24% to 6.71% per month. Surprisingly, these figures exceed the loan interest rates offered by two formal financial institutions: BRI and Bank JATIM. Another significant finding is the positive correlation between the size of cultivated salt fields and the magnitude of the cost of funds borne by tenant farmers. Lastly, there is a clear positive relationship between the credit amount received and the corresponding cost of funds endured by tenant farmers. The substantial costs of funds shouldered by tenant farmers involved in the community salt farming, operated through contract farming systems in Pamekasan Regency, signify inefficiencies within the contract farming structure. It is expected that the government can aid these tenant farmers by disbursing subsidized credits through collaborations with relevant ministries and local formal financial institutions.

Keywords: Cost of Funds, Contract Farming, Madurese Solar Salt, Small Business.

Pamekasan Regency stands as one of Indonesia's largest salt-producing regions (KKP, 2010). Salt farming activities in this area predominantly operate through a contract farming system. According to Prihantini (2015, 2024c), 74 percent of surveyed salt farmers are engaged in contract farming arrangements. Data from the Pamekasan Regency Secretary (2015) reveals that around 1,031 salt farmers, approximately 70.47 percent of the total in the area, participate in contract farming systems. The prevalent use of these systems suggests that the

local community's salt farming practices may not yet be operating efficiently. One notable indicator of inefficiency within these systems is the high cost of funds (Anggraini, 2015). Basu (1997) outlines three methods in his book to estimate the value of the cost of funds that can be applied in this context.

Research on contract farming systems in community salt farming remains relatively limited, especially concerning the financing aspects of community salt farming. This study is deemed essential due to addressing two primary issues faced by salt farmers: marketing and financing (Sukesi 2011). Based on the aforementioned background, this research poses the following problem statements:

What is the relationship between the cost of funds, the extent of cultivated salt fields, and the amount of credits received by tenant farmers in Pamekasan Regency?

What is the cost of funds value in community salt farming operated through contract farming systems in Pamekasan Regency?

How does the cost of funds compare with the interest rates of formal financial institutions in Pamekasan Regency?

THEORETICAL REVIEW

The Cost of Funds Theory

This analysis is employed to estimate the cost of funds for loans paid by tenant farmers to landowners. Anggraini (2015) explains that generally, the cost of funds for loans paid by tenant farmers can be estimated using equation 1 below.

$$COF = \frac{Interest\ Paid}{Total\ Fund} \times 100\ \% \qquad (1)$$

Where:

Interest Paid = Total interest paid by tenant farmers (in IDR)

Total Fund = Total fund (credit) received by tenant farmers (in IDR)

The interest paid represents the amount of the cost of funds borne by tenant farmers to the landowners. Total fund signifies the overall funds (credit) amount received by tenant farmers for their salt farming activities from the landowners. The amount of interest paid can be estimated through direct agreements with landowners or based on contract farming schemes. However, Basu (1997) explains that in agricultural contract farming, landowners commonly determine the interest paid using the following methods:

Interest paid based on output: It involves tenant farmers providing a certain portion of their output free of charge. This helps calculate the interest paid received by the landowner. This calculation method is relatively straightforward. Tenant farmers are required to deliver a specific quantity of their output, aiming to sustain profitability for the landowner. Mathematically, this calculation is defined by the following equations:

$$COF = \frac{L_1 - L_0}{L_0} \qquad (1.a)$$

$$COF = \left(\frac{(P_i * Y_i) - L_0}{L_0}\right) \times 100\% \qquad (1.b)$$

Where:

COF = The cost of funds paid by tenant farmers (in percentage)

L1 = The total value received from the sale of the output provided by tenant farmers (in IDR)

L0 = The total credit amount (total fund) provided by the landowner (in IDR)

Pi = Price of salt for Production Quality i-th (in IDR per ton)

Yi = The output provided by tenant farmers (in tons)

Interest paid based on pricing: This second method involves applying a lower price

than the market rate. Essentially, tenant farmers sell to the landowner at a reduced price compared to the market rate. The determination of this selling price is sometimes unilaterally made by the landowner. Employing this second method allows for an estimation of the interest paid received by the landowner. This method is quite commonly used by landowners. Mathematically, the calculation of the applied interest rate follows the equation below:

$$COF = \left(\frac{\{\sum(P' - P_0)\} \times Y_i - L_0}{L_0}\right) \times 100\% \quad (1.c)$$

Where:

COF = The cost of funds paid by tenant farmers (in percentage)

P' = Purchase price of salt set by the landowner (in IDR per ton)

P0 = Market price of salt (in IDR per ton)

L0 = Total credit amount (total fund) provided by the landowner (in IDR)

Yi = Output provided by tenant farmers (in tons)

The mixed method: This final one combines aspects of the first and second methods. This implies that the landowner does not solely rely on one method but integrates both approaches. The landowner benefits not only from receiving output free of charge but also by imposing lower prices. This method significantly burdens the farmers. The profit gained through this method surpasses that of the other methods.

MATERIAIS AND METHODS

This study was conducted in three districts within Pamekasan Regency: Tlanakan, Galis, and Pademawu. These districts are known as the largest salt-producing areas in Pamekasan Regency. Pamekasan Regency itself is one of the largest salt producers in Indonesia (KKP, 2010). The research aimed to assess the cost of funds incurred by tenant farmers involved in the contract farming system of community salt farming in Pamekasan Regency. The data collection took place over four months, spanning from Januari to April 2024.

The respondents were chosen through purposive and snowball sampling methods. In total, there were 115 respondents, consisting of 22 landowners and 93 tenant farmers. Among the tenant farmers, 13 operated under a two-sharing system while 80 operated under a three-sharing system. It is anticipated that the data and information provided by these respondents follow a normal distribution and accurately represent field conditions.

This research employed the analysis of the cost of funds to estimate the expenses borne by tenant farmers involved in contract farming agreements. Subsequently, the estimated results from this analysis were thoroughly examined. For example, they were compared against the interest rates on loans from formal financial institutions. Additionally, there was an assessment of their correlation with salt lands and the amounts of credits received by tenant farmers. In the analyzing process, this study utilized Microsoft Excel 2013 and Minitab 11 programs.

The Cost of Funds Analysis

This analysis is utilized to estimate the expenses incurred by tenant farmers in loan repayments (the cost of funds). For investors or landowners, the cost of funds represents the interest rates applied by landowners to their tenant farmers. In the actual contract farming system, it is established that investors do not impose interest rates on the capital they lend. Basu (1997) explains that determining the interest paid by tenant farmers, which has been prevalent in informal credit systems, can be approached using three methods. However, based on field observations, the method commonly employed by landowners relies on pricing.

The cost of funds and interest paid based on pricing is executed by purchasing the output generated by tenant farmers but at a lower price

than the market rate. This method is commonly employed by landowners. Mathematically, the calculation of the interest rate applied by investors adheres to the following equation:

$$COF = \left(\frac{\{\sum(P' - P_0)\} \times Y_i}{L_0}\right) \times 100\% \quad (2)$$

Where:

COF = The cost of funds paid by tenant farmers (in percentage)

P' = Purchase price of salt for non-borrowing-salt farmers (in IDR per ton)

P0 = Purchase price of salt for borrowing-salt farmers (in IDR per ton)

L0 = Amount of credit (total fund) provided by investors (in IDR)

Yi = Output contributed by tenant farmers (in tons)

Furthermore, the cost of funds paid by tenant farmers will be compared to the interest rate imposed by banking institutions (r). If the cost of funds exceeds the formal loan interest rate (r), it indeed confirms that landowners benefit from this method despite not directly applying interest charges. The costs of funds incurred by tenant farmers represent the third indicator of inequity in the contract farming system of community salt farming in Pamekasan Regency.

RESULTS AND DISCUSSION

The analysis of the cost of funds in community salt farming operated through contract farming systems is also correlated with the extent of salt lands cultivated by tenant farmers and the amount of credits they receive. This section also delves into comparing the cost of funds for each funding category, encompassing both the two-sharing and three-sharing patterns.

The Relationship between Salt Land Area, Credits, and the Cost of Funds in Different Contract farming Patterns

This analysis aims to examine the correlation between the magnitude of credits and the corresponding cost of funds incurred by tenant farmers based on the area of cultivated salt lands. This discussion aims to determine whether there is a positive relationship between the land area and the credits received by tenant farmers. Following that, it delves into the relationship between the cost of funds borne by tenant farmers and the area of cultivated salt lands, examining whether it demonstrates a positive correlation or, conversely, a negative one. The analysis results regarding the relationship among credits, the cost of funds, and the extent of cultivated salt land are detailed in Table 1.

Table 1. The Comparison of Credits, the Costs of Funds, and the Extent of Cultivated Salt Land among Contract farming Patterns per Season

Salt Land Area (Ha)	Average Credits (IDR) and Cost of Funds (IDR)* (in %)** per Season			
	Two-Sharing Pattern		Three-Sharing Pattern	
1.00	2,300,000	990,000 (33.54)	3,109,259	752,361 (24.70)
1.01 – 2.00	-	-	5,625,000	1,625,300 (29.25)
> 2.00	-	-	10,000,000	3,237,500 (32.38)

Source: Processed Survey Data (2024)

Notes: * = {∑(P'-P0)}*Yi (in IDR)

** = [({∑(P'-P0)}*Yi)/L0] x 100 % (in %)

The cost of fund value (in IDR) is derived by multiplying the price difference between salt sold to non-borrowing farmers and borrowing farmers by the quantity of salt sold to the landowners. Landowners also function as middlemen or aggregate traders. The average

price difference for salt with Production Quality #1 (PQ1) is 10,000 IDR per ton or equivalent to 2.00 percent of the selling price of PQ1 salt to borrowing farmers. For salt with Production Quality #2 (PQ2), the average price difference is 10,000 IDR per ton or 2.22 percent of the selling price of PQ2 salt to borrowing farmers. Meanwhile, for salt with Production Quality #3 (PQ3), the average price difference stands at 5,000 IDR per ton or 1.25 percent of the selling price of PQ3 salt to borrowing farmers. The percentage value of the cost of funds represents the nominal cost of funds divided by the amount of credits received by borrowing-tenant farmers, then multiplied by 100 percent. The average selling price of PQ1 salt to borrowing farmers is 510,000 IDR per ton, whereas to non-borrowing farmers, it is 500,000 IDR per ton. For PQ2 salt, the average selling price to borrowing farmers is 460,000 IDR per ton, and to non-borrowing farmers, it is 450,000 IDR per ton. As for PQ3 salt, the average selling price to borrowing farmers stands at 400,000 IDR per ton, while to non-borrowing farmers, it is 405,000 IDR per ton. This difference in salt selling prices serves as the method to determine the cost of funds incurred by borrowing-tenant farmers—a method explained in a study by Basu (1997).

Tenant farmers involved in the two-sharing pattern only have one category, which is a land area of one hectare. This is because the available salt lands for tenant farmers in the two-sharing pattern are limited in size. The newly acquired salt lands confine tenant farmers to holding just one hectare of salt land. On average, the credits received by tenant farmers in the two-sharing pattern amount to 2,300,000 IDR per season. This credit nominal results in the cost of funds of 990,000 IDR or 33.54 percent per season for the tenant farmers. If one season spans five months, the incurred costs of funds amount to 6.71 percent per month. There are a total of 13 tenant farmers participating in the two-sharing pattern. Therefore, all tenant farmers engaged in this pattern bear the cost of funds of 990,000 IDR, having received a credit of 2,300,000 IDR per season for a cultivated salt land area of one hectare.

Tenant farmers in the three-sharing pattern, as it turns out, have a more diverse range of land sizes. Typically, these farmers also cultivate a one-hectare salt land area, accounting for 54 individuals or approximately 67.50 percent of all participating farmers in this pattern. Those with a one-hectare salt land area receive an average credit of 3,109,259 IDR per season, bearing an average cost of funds of 752,361 IDR or around 24.70 percent per season. When compared to tenant farmers in the two-sharing pattern with the same land area for salt cultivation, those in the three-sharing pattern receive higher credits. This occurs because tenant farmers in the three-sharing pattern request larger funding, prompting landowners to offer larger credit amounts. The costs of funds borne by three-share pattern farmers are typically lower compared to those of two-share pattern farmers. A conclusion drawn for farmers owning a one-hectare salt cultivation area is that the costs of funds they bear have a positive correlation with the amount of credit they receive. Moreover, the credit amount received by farmers is influenced by the size of the credit they apply for. Landowners tend to approve these credit requests as long as they still qualify for repayment.

Three-share pattern farmers with salt cultivation areas between 1.00 and 2.00 hectares have an average credit of 5,625,000 IDR per season, with an average cost of funds of 1,625,300 IDR or 29.25 percent per season. Meanwhile, for three-share pattern farmers with salt cultivation areas larger than 2.00 hectares, the average credit they receive is 10,000,000 IDR per season, with an average cost of funds of 3,237,500 IDR or 32.38 percent per season. About 31.25 percent or 25 farmers who have salt cultivation areas between 1.00 and 2.00 hectares bear an average cost of funds of 29.25 percent per season or approximately 5.85 percent per month. Meanwhile, farmers with salt cultivation areas larger than 2.00 hectares only constitute one person or roughly 1.25 percent of the total

three-share pattern farmers. This individual bears a cost of funds of 32.38 percent per season, or about 6.48 percent per month. For three-share pattern farmers, the conclusion drawn is that there is a positive relationship between the size of the salt cultivation area and the amount of credit received by farmers. This happens because as the cultivated salt area expands, the incurred costs also rise, prompting farmers to seek higher funding. These funding applications impact the landowner's decision to grant credit to the tenant farmers. Landowners tend to approve the credit requested by their tenant farmers, creating a positive link between the size of the cultivated salt area and the amount of credit received by the farmers. The same applies to farmers operating under a three-share pattern. According to Table 1, there is a positive correlation between the land size and the cost of funds borne by tenant farmers. The larger the cultivated salt area is, the higher the cost of funds will be incurred. This occurs because as the cultivated salt area expands and higher fundings are requested, the associated costs of funds also increase for the farmers.

That conclusion appears to contradict the findings of a study conducted by Anggraini (2015), which indicates that as the received credit amount increases, the costs of funds borne by farmers typically decrease. This discrepancy could be due to differences in repayment methods. Farmers with lower credits usually repay weekly installments to the middleman, resulting in higher cost of funds. Conversely, those with larger loans often repay through deductions from their livestock sales, leading to lower costs of funds. Overall, the conclusion drawn is that there is a positive relationship between the cultivated salt land area, the credits received by tenant farmers, and their cost of funds, whether in the two-sharing or three-sharing patterns. Now, how do these costs of funds borne by tenant farmers compare to the formal loan interest rates? This explanation will be discussed in the subsequent subsection.

Comparison of the Cost of Funds with Formal Loan Interest Rates

The cost of funds indicates the interest rate borne by tenant farmers to the landowners acting as funders for the provided credits. Based on field research, landowners never apply an interest rate to these funds. Basu (1997) explains that the difference in prices received by landowners and tenant farmers is one of the methods used to determine the interest paid by the tenant farmers. The cost of funds borne by tenant farmers in the two-sharing pattern typically ranges from 24.05 percent to 48.00 percent, averaging 33.54 percent per season. The average salt season in Pamekasan Regency lasts for five months, resulting in an average cost of funds of 6.71 percent per month. The average costs of funds borne by tenant farmers in both the two-sharing and three-sharing patterns turn out to be higher than the formal loan interest rates. The average costs of funds incurred by tenant farmers in the three-sharing pattern amount to 26.22 percent per season. Given that one season lasts for five months, the average monthly cost of funds stands at 5.24 percent per month, reaching 62.88 percent annually. Concerning the inter-pattern cost of funds, the average cost of funds borne by tenant farmers amounts to 27.24 percent per season. If one salt season spans five months, the average monthly cost of funds is 5.45 percent per month, reaching 65.40 percent annually. Detailed information is presented in Table 2.

The costs of funds borne by tenant farmers surpass the interest rates imposed by formal banking institutions (cost of fund > interest rate). Bank Rakyat Indonesia (BRI) applies an interest rate of merely 0.75 percent per month (which equals an annual rate of 9 percent) or a flat rate of 0.41 percent per month for rural agricultural credits. On the other hand, Bank Pembangunan Daerah Jawa Timur (BPD JATIM) (lit. the East Java Regional Development Bank) imposes an interest rate of only 1.00 percent per month (equivalent to an annual rate of 12.02 percent) for microcredit loans.

Table 2. Comparison of Average Cost of Funds Per Sharing Pattern and Formal Loan Interest Rates

Average	Value of Interest Rates or Costs of Funds Per Period (%)*		
	Per Month	Per Season	Per Year
Two-Sharing Pattern	6.71	33.54	80.52
Three-Sharing Pattern	5.24	26.22	62.88
Inter-Pattern	5.45	27.24	65.40
Bank JATIM	1.00	5.01	12.02
BRI	0.75	3.75	9.00

Source: Processed Survey Data (2024)

Note: * = [({∑(P'-P0)}*Yi)/L0] x 100% (in %)

Based on the data presented in Table 2, tenant farmers in the two-sharing pattern bear higher costs of funds than those in the three-sharing pattern. The average fund for tenant farmers in the two-sharing pattern is 2,300,000 IDR per person per season, whereas, for tenant farmers in the three-sharing pattern, it is 3,990,000 IDR per person per season. With such fund amounts, the costs of funds borne by tenant farmers might be considered unreasonable, especially when compared to the formal financial institution's loan interest rates. The findings of this study are consistent with research conducted by Anggraini (2015), which states that the average cost of funds borne by farmers amounts to 7.06 percent per month or 84.77 percent per year for credits below 2,000,000 IDR. However, for credits exceeding 6,000,000 IDR, the average costs of funds are 3.17 percent per month or 38.03 percent per year. The study concludes that the lower the received credit amount is, the higher the cost of funds will be borne (Saha et al., 2011). This trend is driven by the pursuit of Pareto improvement conditions by landowners, aiming to enhance one group's welfare without reducing another group's welfare. In this scenario, landowners apply varying costs of funds to tenant farmers based on the magnitude of the credits they acquire. The higher the credit received by the tenant farmer, the lower the associated costs of funds; conversely, lower credit amounts result in higher costs of funds. Anggarini (2015) suggests that the repayment system is one of the methods to achieve this Pareto improvement condition. Farmers with lower credits are expected to make weekly repayments, whereas those with larger credits can repay through deductions from their livestock sales. These differing repayment methods significantly impact the extent of the incurred costs of funds. Hence, it is reasonable to conclude that there is a negative correlation between the received credit amount and the borne costs of funds.

The high costs of funds shouldered by tenant farmers are influenced by several factors. Tenant farmers incur these high costs of funds because landowners also bear marketing costs, such as transportation, labor, road taxes, and other marketing expenses. Consequently, landowners impose these costs of funds to share the marketing costs they incur. Furthermore, the costs of funds borne by tenant farmers also account for the marketing profit (marketing margin) received by landowners. As per field interviews, the income structure for landowners from marketing margins is relatively low due to the associated marketing costs. In the profit structure, costs of funds become an expenditure for tenant farmers, while for landowners, these expenses are included in their income structure.

Comparison of the Cost of Funds per Credit Size between Sharecropping Patterns

This analysis illustrates the costs of funds in both nominal and percentage terms for various credit categories received by tenant farmers, categorized by the sharecropping patterns they follow. The values depicted in Table 3 represent the average credit amounts and the corresponding costs of funds. Additionally, it outlines the loan duration for each category of credits received by tenant farmers.

According to Table 3, the average credit amount received for loans ≤ 3,000,000 IDR stands at 2,720,000 IDR, with associated costs of funds of 699,210 IDR. This expense represents 26.32 percent of the average credit received by tenant farmers. The average loan duration is 4.56 months, resulting in an annualized average cost of funds of 57.22 percent. For loans in the range of 3,000,000 IDR and 6,000,000 IDR, the average received credit stands at 4,854,347 IDR, with an average incurred cost of funds of 1,069,777 IDR. This amounts to 25.87 percent of the average credit received by tenant farmers. The average loan duration is 4.91 months, resulting in an annual cost of funds of 63.12 percent. In the larger loan category of ≥ 6,000,000 IDR, the average received credit is 7,337,500 IDR, with an average cost of funds of 1,936,875 IDR, equivalent to 26.39 percent of the average credit received. Farmers in this category have an average loan duration of 6.25 months, longer compared to the previous two categories. This longer duration might be due to the impact of higher credit amounts on the repayment period. The average cost of funds for this latter category amounts to 42.23 percent per year.

For the two-sharing pattern, the first loan category, i.e., ≤ 3,000,000 IDR, displays an average credit of 2,250,000 IDR received by tenant farmers. They bear an average cost of funds of 723,416 IDR, approximately 33.76 percent of the average credit they received. The loan duration or repayment period in this category is 4.08 months, resulting in an average annual cost of funds of 82.75 percent. In the second category, i.e., 3,000,000 IDR - 6,000,000 IDR loans, the average credit received is 3,200,000 IDR, with an average incurred cost of funds of 990,000 IDR, approximately 30.94 percent per season. The average loan repayment duration is 7 months, leading to an average incurred cost of funds of 53.04 percent per year. The final loan category was not found in the two-sharing pattern as farmers in this category generally do not seek credits exceeding 6,000,000 IDR.

Table 3. Comparison of Credits and Costs of Funds per Loan Size Category

Credit Category (in IDR)	Average Credit (in IDR)	Average Cost of Funds* (in IDR)	Average Cost of Funds** (in %)	Average Loan Duration (in Months)	Average Annual Cost of Funds (in %)
Three-Sharing Pattern					
≤ 3 million	2,720,000	699,210	26.32	4.56	1,678,104 (57.22)
3 – 6 million	4,854,347	1,069,777	25.87	4.91	2,567,465 (63.12)
≥ 6 million	7,337,500	1,936,875	26.39	6.25	4,648,500 (42.23)
Average	**3,990,000**	**1,056,219**	**26.22**	**4.95**	**2,534,925 (62.88)**
Two-Sharing Pattern					
≤ 3 million	2,250,000	723,416	33.76	4.08	1,736,198 (82.75)
3 – 6 million	3,200,000	990,000	30.94	7.00	2,376,000 (53.04)
≥ 6 million	-	-	-	-	-
Average	**2,300,000**	**743,923**	**33.54**	**4.31**	**1,785,415 (80.52)**

Source: Processed Survey Data (2024)

Notes: * = {∑(P'-P0)}*Yi (in IDR)

** = [({∑(P'-P0)}*Yi)/L0] x 100 % (in %)

Based on Table 3, the average credit received by farmers in the three-sharing pattern is 3,990,000 IDR, with an average cost of funds of 1,056,219 IDR. This average cost of funds represents 26.22 percent of the average credit received. On average, farmers in this pattern take about 4.95 months to repay the credit, resulting in an annual average cost of funds of 62.88

percent. Conversely, farmers in the two-sharing pattern receive a lower average credit, specifically 2,300,000 IDR. These farmers bear an average cost of funds of 743,923 IDR, approximately 33.54 percent per season. Their average repayment period is 4.31 months, leading to an annual cost of funds of 80.52%.

The average costs of funds carried by farmers are a determining factor in the overall profit earned by each party involved. Landowners consider the costs incurred to obtain funds as revenue, thereby contributing to their overall profit. Conversely, for farmers, these costs are seen as expenditures that reduce their profit margins. As previously explained, the cost of funds is calculated by multiplying the difference in salt purchase prices between borrowing and non-borrowing salt farmers by the quantity of salt products delivered or sold to the landowners. In the salt industry, landowners serving as financiers do not implement an interest rate on the credits they provide. Instead, they utilize this method to gain returns on the credits they offer to tenant farmers. The average costs of funds borne by the farmers are relatively high, especially when compared to the interest rates of formal financial institutions (as shown in Table 3). However, the farmers might not be aware of this situation. Market manipulation by certain entities creates an oligopsonistic salt market. An oligopsonistic market structure involves numerous sellers but is controlled by a few buyers. Here, sellers refer to tenant farmers, while buyers are the landowners. Landowners tend to wield power as they control two crucial inputs in salt production: the salt fields and production capital. Consequently, this often leaves tenant farmers resigned to facing the high burden of costs of funds they incur.

DISCUSSION

Based on the research using the costs of funds analysis, it is found that tenant farmers bear a considerably high cost of funds, significantly above the interest rates set by banks as formal financial institutions. This fact has been extensively studied, leading to recommendations for the government to subsidize credit for farmers. Various programs have been implemented by the government to support and facilitate the improvement of farmer welfare. Ashari (2009) mentioned several programs aimed at enhancing farmers' access to financing, including (a) the Bimas program, (b) the KUT program, (c) the Food Security Credit (Indonesian: Kredit Ketahanan Pangan [KKP]) program, (d) BLM/BPLM/PMUK program, (e) the Micro Agribusiness Financial Institutions (Indonesian: Lembaga Keuangan Mikro Agribisnis [LKMA]) program, (f) the Small Farmers/Fishermen Income Improvement Project (Indonesian: Proyek Peningkatan Pendapatan Petani/Nelayan Kecil [P4K]) program, (g) the Strengthening Rural Economic Enterprise Capital Fund (Indonesian: Dana Penguatan Modal Lembaga Usaha Ekonomi Perdesaan [DPM-LUEP]), (h) the Agricultural Financing Service Scheme (Indonesian: Skim Pelayanan Pembiayaan Pertanian [SP3]), and (i) the Rural Agribusiness Development (Indonesian: Pengembangan Usaha Agribisnis Perdesaan [PUAP]). However, each of these programs has its strengths and weaknesses, leading to new challenges in their implementation.

Aziz and Wicaksono (2016) mentioned that one of the recommendations proposed in the alternative credit program scheme for micro, small, and medium-sized enterprises is to unify the credit program formats and ultimately propose Microfinance Institutions (Indonesian: Lembaga Keuangan Mikro [LKM]) as one of the implementers of the credit programs to broaden credit access for SMEs in Indonesia, including farmers.

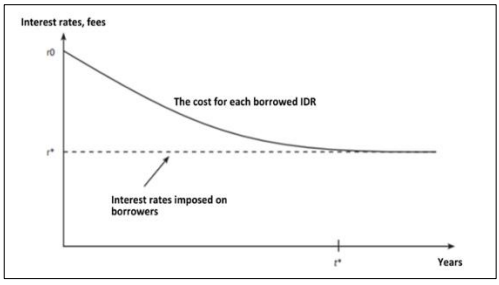

Figure 1. Start-Up Cost Subsidy
Source: Armendariz de Aghion & Morduch, 2005

Figure 1 illustrates how subsidies of this nature influence the interest burden carried by borrowers as time progresses. Initially, the interest rate imposed on borrowers (r0) is higher than the long-term interest rate (r*). The government provides subsidies to support microfinance institutions during their early operations, aiming to reduce start-up costs and subsequently lower the interest rates charged to borrowers, aligning them with future interest rates (r*).

As previously mentioned, each financing program scheme has its respective strengths and weaknesses, particularly in its distribution. Below is a summary of the advantages and disadvantages of the distribution of credit in Indonesia.

Table 4. Comparison of Credit Program Distributors

No.	Institutions	Advantages	Disadvantages
1	Bank	1. Large funding sources 2. Established systems 3. Extensive network	1. Profit-oriented 2. Interest rates are determined by the market. 3. Very high prudentiality
2	Microfinance Institutions	1. Closer proximity to targets (including rural areas) 2. Approximately 631,867 units across Indonesia 3. Subject to OJK regulations 4. Offers two loan schemes: conventional and Shariah	1. Limited funding sources and undetected capital accumulation 2. Rigidity in loan regulations 3. Requires highly intensive human resource development if this institution is the executor
3	Revolving Fund Management Institutions or similar public service agencies	1. Not profit-oriented 2. Interest rates are regulated by the government (Ministry of Finance). 3. Revolving Fund Management Institutions already exist. 4. Meanwhile, similar public service agencies are spread across regions, although in relatively small numbers.	1. Limited funding sources (from State Revenue and Expenditure Budget of State Ministries/Institutions) 2. The majority of similar public service agencies focus on health and education rather than finance 3. Takes a long time to adjust the duties, functions, and work systems of human resources, requiring highly intensive human resource development if this institution is the executor

Source: Aziz and Wicaksono (2016)

Aziz and Wicaksono (2016) conducted an analysis and proposed various schemes as optional choices for the government to enhance financing accessibility for farmers and SMEs. The following are optional scheme recommendations along with their respective advantages and disadvantages.

Table 5. Comparison of Several Subsidized Credit Program Schemes

	Guarantee Scheme	Interest Subsidy Scheme	Subsidy Scheme for Intermediaries
Advantages	1. Provides access to businesses without collateral 2. Eliminates fiscal risks due to interest rate fluctuations 3. Banks decrease their prudentiality, often leading to higher credit absorption.	1. Lower interest rates for borrowers 2. Potential minimization of moral hazard 3. Banks increase their prudentiality, leading to higher credit absorption.	1. Borrowers benefit from lower interest rates due to government-subsidized interest for intermediary institutions (cooperatives). 2. Simplifies the work of designated public service agencies because cooperatives source borrowers and collect loan repayments
Disadvantages	1. Higher interest rates for borrowers 2. Potential moral hazard where borrowers may not repay loans due to government guarantees	1. Potential fiscal risks due to fluctuations in market interest rates 2. Subsidy programs may become permanent, making it difficult to upgrade debtor status.	1. Potential moral hazard within intermediary institutions, necessitating oversight from supervisory bodies (i.e., Revolving Fund Management Institutions) 2. Possibility of targeting wrong debtors to increase numbers and thus receive larger government subsidies through cooperatives

Source: Aziz and Wicaksono (2016)

Based on the study conducted, evaluating and changing the credit program distribution schemes and institutions emerges as a solution to enhance financial access for economically constrained communities. Microfinance Institutions (MFIs) are regarded as capable of minimizing risks arising from these core issues. Particularly, cooperatively structured MFIs possess substantial information access concerning potential borrowers who are members, thereby reducing concerns related to adverse selection and moral hazard. This scheme also involves oversight from regulatory bodies like Revolving Fund Management Institutions, hence minimizing potential moral hazards from these distribution institutions. The expansion of MFIs will foster the development of an efficient financial market for economically disadvantaged communities, especially those engaged in entrepreneurial pursuits. Consequently, improving financial access for low-income communities can help prevent them from falling below the poverty line.

However, has this scheme truly been effectively implemented in practice? It appears that in 2019, the government introduced the People's Business Credit (Indonesian: Kredit Usaha Rakyat [KUR]) Scheme, specifically tailored for salt farmers. This initiative aimed to enhance financing accessibility for salt farmers who have historically faced challenges in expanding their businesses due to financial constraints (kur.ekon.go.id). The KUR scheme was extended to all salt farmers in Pamekasan Regency, with support from both the Regent of Pamekasan and the Governor of East Java.

Indonesia's 16th Coordinating Minister for Economic Affairs, Darmin Nasution, highlighted that the KUR scheme for salt farmers applies a mere 7% annual interest rate for credit. Additionally, salt farmers are permitted to borrow without any time restrictions. They can opt for loans covering just one season (6 months), known as "yarnen" (a portmanteau word for the Indonesian term "bayar setelah panen"; lit. payment after harvest).

It is intriguing to explore further the progression of this scheme. Has it genuinely been executed in practice? Can small-scale tenant farmers or salt farmers with land areas of less than 1 hectare access it? Research conducted by Kurniawan and Gitayuda (2022) indicates that

salt farmers in Pamekasan Regency still rely on family funding practices for their salt businesses.

Family funding is an informal financing method originating from family members' or relatives' resources (Lee & Persson, 2016). It offers easy access in terms of time, adjustable loan amounts based on needs, and rapid disbursement, making it effective during urgent capital needs. Generally, the process for obtaining family funding is less procedural, seemingly simple, without collateral, and interest-free. Approval for family funding relies more on the trust between the lender and borrower, often not mandating collateral, unlike the usual requirement in formal financial institutions (Salimah & Muflikhati, 2016).

The concept of family funding is indeed intriguing to explore in terms of economic, cultural, and social values. However, is it true that family funding does not involve interest? Additionally, is there no agreement or relationship between the borrower (farmers who borrow) and the lender (those who provide the credit)? Based on research by Prihantini et al. (2016) & Prihantini et al. (2024a,b) there is typically a connection or contractual bond between the lender and borrower in contract farming systems. This is what encourages lenders to offer credit to borrowers (often tenant farmers working on the lender's land).

Based on the various facts mentioned, the government does need to actively engage in financing distribution practices and policy formulation to improve financing access for salt farmers. Several optional schemes have been proposed in various conducted studies. Another critical aspect to consider is government guidance, both for borrowers and Microfinance Institutions (MFIs), in implementing these programs. This guidance is crucial to ensure that both parties operate with efficiency principles, enabling the funds used to provide optimal benefits for all involved.

CONCLUSION

The costs of funds incurred by tenant farmers are exceptionally high. These costs far exceed the interest rates of formal banking loans, such as those offered by BRI and Bank JATIM. The substantial costs of funds borne by tenant farmers are expected to serve as a basis for the People's Salt Business Empowerment program, not only being provided in physical forms but also as financial aid or through subsidized credit programs for salt farmers. Therefore, it is expected that the government can collaborate with regional banks to distribute subsidized government credit.

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