

## PERCEPTION AND ACCESSIBILITY OF CHILI FARMERS TOWARDS FORMAL AND NONFORMAL FINANCIAL INSTITUTION IN MAGELANG REGENCY

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### ABSTRACT

The existence of financial institutions is very important to support the availability of capital. This research aims to know (1) accessibility of chili farmers on formal and nonformal financial institution, (2) perception of chili farmers on formal and nonformal financial institution, and (3) factors influencing perception of chili farmers on financial institution. The basic method of this research is descriptive and regression analysis. Data obtained by survey and samples were selected by simple random sampling amounted 60 chili farmers consists of 30 farmers at Dadapan Hamlet and 30 farmers at Semimpen Hamlet. The analysis method used in this research are proportion test, one-sample Z test, paired sample t test, and multiple linear regression analysis. The research results show that farmer's accessibility on formal financial institution and nonformal financial institution is categorized as high. Chili farmers has positive perception on formal and nonformal financial institutions. Perception of chili farmers on nonformal financial institution is higher than that of formal financial institution. Factors that affect the chili farmers perception on financial institution are age and credit experience on nonformal institution. Farmer's age negatively influencing their perception on financial institution, meanwhile credit experience on nonformal institution has a positive influence.

**Keywords:** accessibility, formal financial institution, nonformal financial institution, perception, chili farmer

### INTRODUCTION

Horticulture as a sub-sector of agriculture is getting more and more evident in its urgency. Horticultural production will continue to increase in the coming years, which in itself requires even greater handling and production. Not only are horticultural agricultural products needed as foodstuffs by the community, but in the aspect of production it involves a lot of life for farmers and their families (Sastratmadja, 1991). It is the same with chili farmers who depend on the chili production they get. It is hoped that the income from the chili harvest will be able to meet the necessities of life and keep away from poverty.

Chili is one of the horticultural commodities needed by humans in everyday life. National chili production in 2017 for large chili types and cayenne reached 1.21 million tons and 1.15 million tons respectively (Ministry of Agriculture, 2019). Supervision of chili production is necessary in order to meet consumer demand and maintain price stability. The efforts to increase chili productivity require farmers to be able to produce in the quantity and quality desired by the market.

The agribusiness activities that is engaged in chili commodities has great prospects both now and in the future. Good, correct, and sustainable

management of agribusiness systems will attract farmers to continue planting chili commodities. The capital capacity of farmers will have an impact on how much success the farmers have in meeting production costs. Expertise and perseverance in maintaining chili plants are also needed in order to avoid the risk of crop failure. Strengthening their own capital as well as external capital assistance can certainly support farmers to continue working on the chili commodity.

The limited capital owned by farmer households is still a problem in farming. Bank Indonesia (2010) states that the main obstacle faced by small and household industries is the low access to formal banking credit institutions, so that their business financing tend to depends on their own capital or other sources such as family, relatives, traders, intermediaries and even moneylenders. According to a survey conducted by the World Bank (2008) around 48 percent of all households in Indonesia do not have access to formal financial institutions. Although nonformal financial service providers are able to serve around 31 percent, there are still 17 percent who live without financial services from any sector (both formal and nonformal).

Farmers' preferences in making loans to financial institutions will vary. The aspects of reach, cost, facilities, and ease of transaction are also considered by farmers in accessing capital loans. The existence of each financial institution at the farm level is also influenced by how the promotion and management are carried out by each institution. The information received by farmers will form different perceptions of financial institutions.

The amount of chili production in Magelang making Magelang appointed as the center of national chili production (Khamdi, 2016). Seeing how important capital is for farmers and the condition of access to capital to financial services, the perception of farmers towards financial institutions are important to know in order to improve capital services accordingly the wants and needs of farmers. Based on this background, the authors are interested in conducting research to determine (1) the accessibility of chili farmers to formal and nonformal financial institutions, (2) the perception of chili farmers towards formal and nonformal financial institutions, and (3) factors affecting the perception of chili farmers towards financial institutions in Magelang Regency. The results of this study are expected to be useful for improving capital services according to the wishes and needs of farmers.

**METHOD**

This research used descriptive and regression analysis method and was conducted in Semimpen Hamlet, Ketundan Village, Pakis District and Dadapan Hamlet, Krinjing Village, Dukun District, Magelang Regency. The selection of the research location was carried out purposively with the consideration that the area has the highest amount of chili production in Magelang Regency.

Sampling in this study was conducted in Magelang Regency. From 21 sub-districts, 2 sub-districts were taken purposively, namely Dukun District and Pakis District with the consideration that these two sub-districts have high chili production in Magelang Regency. From each sub-district, 1 village was taken purposively with the consideration that this village has the largest chili production in each of the selected sub-districts. From each village, 1 hamlet was selected purposively. The selection of 60 respondents was carried out using the simple random sampling method with a sample size of 30 respondents in each district.

The analytical methods used in this research are:

**Proportion test**

Analysis of the accessibility of chili farmers to formal or nonformal financial institutions, can

be seen by the proportion test with the following equation:

a. Hypothesis test

Ho:  $P \leq 50\%$

Ha:  $P > 50\%$

Where,

Ho: It is assumed that 50% of chilli farmers have low accessibility to formal / nonformal financial institutions

Ha: It is assumed that more than 50% of chili farmers have high accessibility to formal / nonformal financial institutions.

b. Significance level

$A = 0.05$  (5%),  $n = 60$

c. Testing Criteria

Zvalue > Ztable: Ho is rejected, Ha is accepted

Zvalue  $\leq$  Z table: Ho is accepted, Ha is rejected

d. Testing Statistics

$$Z_{value} = \frac{\left(\frac{x}{n}\right) - P_o}{\sqrt{\frac{P_o(1 - P_o)}{n}}}$$

Where:

x: the number of samples of chili farmers who have high accessibility to formal/nonformal financial institutions

n: the total number of samples

Po: 50 %

**Test of Mean and Difference of Mean**

The perception of chili farmers towards financial institutions can be determined by means of the average test with the following equation:

a. Hypothesis test

Ho :  $\mu \leq 3$

Ha :  $\mu > 3$

Where,

Ho: It is assumed that chili farmers have negative perceptions of formal/nonformal financial institutions.

Ha: It is assumed that chili farmers have positive perceptions of formal/nonformal financial institutions.

d. Significance level

$A = 0.05$  (5%),  $n = 60$

e. Testing Criteria

Zvalue > Ztable: Ho is rejected, Ha is accepted

Zvalue  $\leq$  Z table: Ho is accepted, Ha is rejected

d. Testing Statistics

$$Z_{value} = \frac{X - \mu}{\frac{\sigma}{\sqrt{n}}}$$

Where:

X : Sampling distribution with normal distribution

$\mu$  : Average count

$\sigma$  : Standard deviation

n: Total sample of respondent farmers

The difference in perceptions of chili farmers towards formal financial institutions and nonformal financial institutions can be seen by using the paired sample t test mean difference with the following equation:

b. Hypothesis test

Ho:  $\mu_1 \leq \mu_2$

Ha:  $\mu_1 > \mu_2$

Where,

Ho: It is assumed that the perception of formal financial institutions is smaller than the perception of nonformal financial institutions.

Ha: It is assumed that perceptions of formal financial institutions are greater than perceptions of nonformal financial institutions.

**Multiple Linear Regression Test**

The factors that influence the perception of chili farmers towards financial institutions can be identified by multiple regression analysis. Multiple regression analysis is used to measure the influence of the independent variable on the dependent variable. The form of the multiple linear regression analysis equation in this study is as follows:

$$\text{Ln}Y = \text{Ln}\alpha + \beta_1\text{Ln}X_1 + \beta_2 \text{Ln}X_2 + D_1X_3 + \beta_4 \text{Ln}X_4 + \beta_5 \text{Ln}X_5 + D_2X_6 + D_3X_7 + e$$

Where:

Y = Perception of farmers

$\alpha$  = Intercept

$X_1$  = Age

$X_2$  = Education

$X_3$  = gender (1 = male) (0 = female)

$X_4$  = land area

$X_5$  = Collateral value

$X_6$  = Experience of credit to formal financial institutions (1 = ever) (0 = never)

$X_7$  = Experience of credit to nonformal financial institutions (1 = ever) (0 = never)

e = Error term

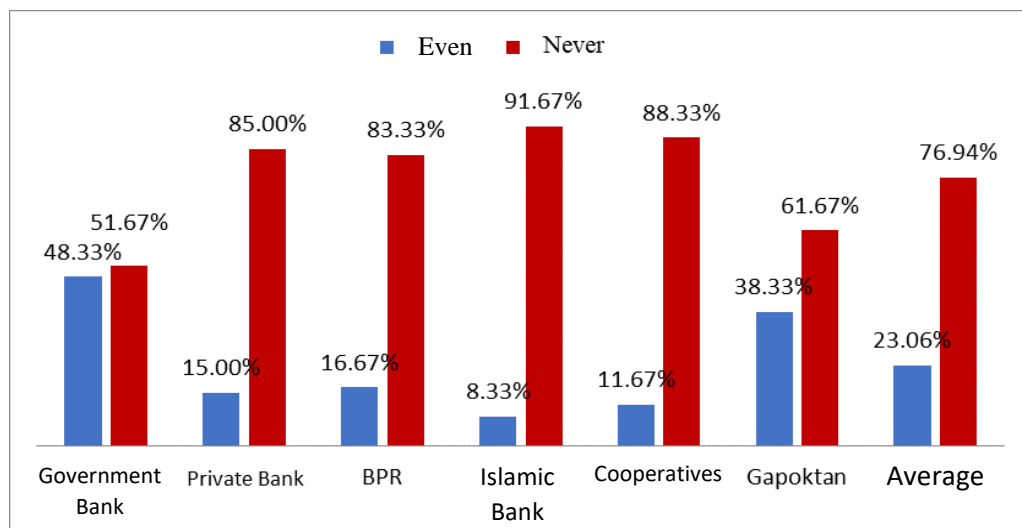
**RESULTS AND DISCUSSION**

**Accessibility to Financial Institutions**

Ease of access to financial services for farmers in the long term is expected to help eradicate poverty, reducing inequality of income level, and accelerate economic development. Various financial institutions that can be a source of financing for farmers have grown and developed in Indonesia. Based on the form of financial institutions in the research area, they can be grouped into two parts. First, formal financial institutions consisting of government banks, private banks, Gapoktan, cooperatives, Islamic banks and rural banks. Second, nonformal financial institutions consisting of agricultural kiosks, middlemen, moneylenders, neighbors, family, and friends.

**Accessibility to Formal Financial Institutions**

Experience of farmers who utilize credit services. The experience of farmers in this case is distinguished from the percentage of farmers who have and have never submitted a proposal, which can be seen in Figure 1. below.



**Figure 1. Percentage of Farmers according to Experience in Applying for Financing to Formal Financial Institutions**

Figure 1 shows that on average 23.06% of farmers have applied for financing at formal financial institutions, while the percentage who

have never applied for financing is higher at 76.94%. The highest percentage of farmers who have applied for financing at government banks is

48.33%. The number of farmers who apply for financing at government banks, especially BRI Bank because farmers choose to take advantage of Kredit Usaha Rakyat (KUR) program with the interest offered is quite low, namely 7%. However, the distance between the farmer's house and BRI Bank is around 6- 26%. Percentage of farmers applying for financing other than government banks in the highest is Gapoktan (38.33%) and the lowest is Islamic banks (8.33%).

The large percentage of Gapoktan is due to the capital assistance of PUAP (Pengembangan Usaha Agribisnis Pedesaan) provided by the government and managed by Gapoktan. The revolving fund manager is also known as LKM-A (Lembaga Keuangan Mikro Agribisnis). This result is supported by Mulyaqin & Dewi (2013) that shows the largest source of capital accessed by farmers in Banten, namely to Gapoktan by 31%. This is due to the PUAP program, which provides assistance to strengthen capital in the amount of 100 million rupiah to be managed by Gapoktan and rolled out to farmers in the form credit loan. Meanwhile, low access to Islamic

banks is caused by farmers' lack of understanding of credit products Islamic banks apply a contract system (*akad*). If low access is associated with negative perceptions, it can be caused by limited office network, complicated credit procedures, and a complex operational system convolutions and small credit opportunities (Sholihah *et. al.*, 2014).

Farmers who have never borrowed credit may not necessarily have no access. A farm has access to certain sources of financing if the farmer is borrowing, has borrowed, and chooses not to borrow for various reasons. Farmers are said to have access if they have never applied for credit on the grounds that they still have credit at other institutions, are afraid of not being able to pay, don't need, don't know, and culture / religious reasons. Farmers who have reasons such as not having collateral, credit product features, and discrimination are classified as farmers who do not have access to formal financial institutions. The percentage of farmers who have taken credit and the reasons for having never taken credit in formal finance can be seen in Table 1.

Table 1. Distribution of Farmers Who Have Taken Credit and Reasons for Never Taking Credit at Formal Financial Institutions in 2019

Description	Government Bank	Private Bank	Gapoktan	Cooperatives	Islamic Bank	BPR
<b>1. Taking credit</b>						
Percentage (%)	41.67	6.67	31.67	11.67	1.67	10.00
<b>2. Not taking credit</b>						
Percentage (%)	6.67	8.33	6.66	-	6.67	6.67
<b>3. Never had credit and had access</b>						
Still have credit at other institutions	1.67	10.00	-	1.67	10.00	8.33
Fear of not being able to pay	31.66	36.66	6.66	10.00	15.00	20.00
Does not need credit	10.00	16.67	21.67	8.33	20.00	18.33
Does not know	3.33	16.67	1.67	68.33	43.33	35.00
Cultural/religious reasons	-	-	-	-	-	-
Percentage (%)	46.66	80.00	30.00	88.33	88.34	81.66
<b>4. Never had credit and had no access</b>						
Have no collateral	3.33	3.33	-	-	-	-
Credit product features	1.67	1.67	-	-	3.33	1.67
iscrimination	-	-	31.67	-	-	-
Percentage (%)	5.00	5.00	31.67	-	3.33	1.67
Total (No. 1,2,3,4)	100.00	100.00	100.00	100.00	100.00	100.00

Source: Primary Data Analyzed in 2019

According to Azriani et. al., (2014), access to credit is more on the supply side of credit, while participation in credit is more on the demand side of credit. Based on Table 1. The percentage of farmers who are currently taking credit at Government Banks is 41.67%. Meanwhile, 6.67% were not taking credit. More farmers are currently taking credit than those who are not taking credit. If reviewed from the distance from farmer's house to the bank is quite far, about 6-26 km.

The same is the case with farmers who are taking credit from private banks, Gapoktan, Islamic banks, and rural banks (BPR). There are several farmers who initially took credit but in the last one year did not take credit, so there was a change in credit demand. One of the causes can be seen from the background of the farmers who made loans to formal institutions. Sometimes it is influenced by urgent needs with large nominal loans such as meeting capital needs after crop failure. So, when the capital needs of chili farmers have been fulfilled by their own capital or capital from nonformal institutions, the farmers do not continue their loans for a certain planting period. In general, the two groupings indicate that farmers have participated in utilizing credit services and already have access to credit to formal financial institutions.

According to Diagne & Zeller (2001) states that a business is said to have access to a certain source of credit if the business can or borrow from that source, even though for various reasons it chooses not to borrow, while a business is said to be participating in credit if the business is borrowed or have borrowed from the source of credit. In Table 1, it can be seen that as many as 1.67% of farmers who have never applied for credit at a government bank expressed their reasons because they still have credit at other institutions. Meanwhile, for this reason, private banks were 10.00%, cooperatives 1.67%, Islamic banks 10.00%, and BPR 8.33%. For this reason, farmers already know that most banks require customers who want to borrow capital to be free from credit coverage at other banks and not currently receiving credit at other banks. It is different from Gapoktan which does not require these requirements. The highest percentage of farmers who gave reasons for fear of not being able to pay was at private banks of 36.66%.

The existence of risks and uncertainties from receiving chili production makes farmers considerations to borrow capital. In addition, the percentage of farmers who feel they do not need to borrow capital from government banks is 10.00%, private banks 16.67%, Gapoktan 21.67%, cooperatives 8.33%, Islamic banks

20.00%, and BPR 18, 33%. Several farmers expressed that reason because they were able to meet their farming capital needs with their own capital without the need for additional capital. However, there are farmers who do not need to make loans at formal institutions but instead choose to borrow from nonformal financial institutions. Furthermore, the percentage of farmers who gave reasons because they did not know the procedures, terms, and conditions in making credit was the highest first to cooperatives at 68.33% and second to Islamic banks at 43.33%.

For farmers who do not have access, there are formal financial institutions on the grounds that they do not have collateral, only at government banks and private banks. It is different with those who argued because the most product features in Islamic banks were 3.33%. Some farmers consider the credit system using the profit sharing method to be more detrimental than the interest system. Then, the percentage of farmers who argued because of discrimination was 31.67% due to restrictions on the number of Gapoktan members. When they do not join Gapoktan, farmers cannot receive PUAP capital loans from Gapoktan, so farmers are unable to take advantage of the capital loan.

The analysis of the distribution of farmers' accessibility to financial institutions in Magelang Regency is divided into two categories, namely low and high. Accessibility is low with a range of farmers who have access to 1-3 types of formal financial institutions and high accessibility with a range of farmers who have access to 4-6 types of formal financial institutions. The distribution of farmers' accessibility to formal financial institutions can be seen in Table 2.

Table 2. Distribution of Farmers' Accessibility to Formal Financial Institutions

Accessibility categories in various financial institutions	Total (People)	Percentage (%)
Low (1-3 types of formal financial institutions)	2	3.33
High (4-6 types of formal financial institutions)	58	96.67
<b>Total</b>	<b>60</b>	<b>100.00</b>

Source: Primary Data Analyzed in 2019

Based on Table 2, it is known that the level of accessibility of farmers to formal financial institutions is in the high category with a percentage of 96.67%. The remaining 3.33% indicates the low level of accessibility of farmers to formal financial institutions. Based on the

results of the analysis using the proportion test, the Zvalue was 7.235 and the Ztable value was 1.645. This means that  $Zvalue > Ztable$ , so that  $H_0$  is rejected and  $H_a$  is accepted. It can be concluded that  $> 50\%$  of chili farmers have high accessibility to formal financial institutions in Magelang Regency. Farmers consider a formal financial institution to be sources of financing that can alleviate problems in terms of capital, interest given the bank is low, the process is not as difficult than expected, and the bank will trust the farmers if they have a history good credit (Supanggih & Widodo, 2013).

**Accessibility to Nonformal Financial Institutions**

The experience of farmers who apply for credit financing at nonformal financial institutions can be a measure of farmer participation in making credit loans to nonformal financial institutions. The experience of farmers in this case is distinguished from the percentage of farmers who have and have never applied for loans to nonformal financial institutions nonformal finance can be seen in Figure 2. below.

Figure 2. shows that on average 40.28% of farmers have applied for financing to

nonformal financial institutions, while 59.72% stated that they have never. The highest percentage of farmers who have applied for financing is middlemen at 83.33%. The large number of farmers who apply for financing to middlemen is due to the lending system carried out by the middlemen in the form of cooperation. In meeting the production cost needs, farmers are given production capital loans in the form of seeds, fertilizers, pesticides, and cash. However, during the harvest season, chili farmers are obliged to deposit the chili harvest to middlemen as a form of return on their capital. There is no credit interest rate applied by middlemen, but it takes an attitude of trust from the farmers to deposit their harvest to the middlemen. During the chilli maintenance period, middlemen also help provide directions to farmers if there are obstacles both from pests and diseases and soil fertility conditions. Therefore, the credit system implemented by middlemen involves financial, processing and marketing activities. The rest are in agricultural shops (18.33%), moneylenders (5.00%), neighbors (48.33%), family (50.00%), and friends (36.67%).

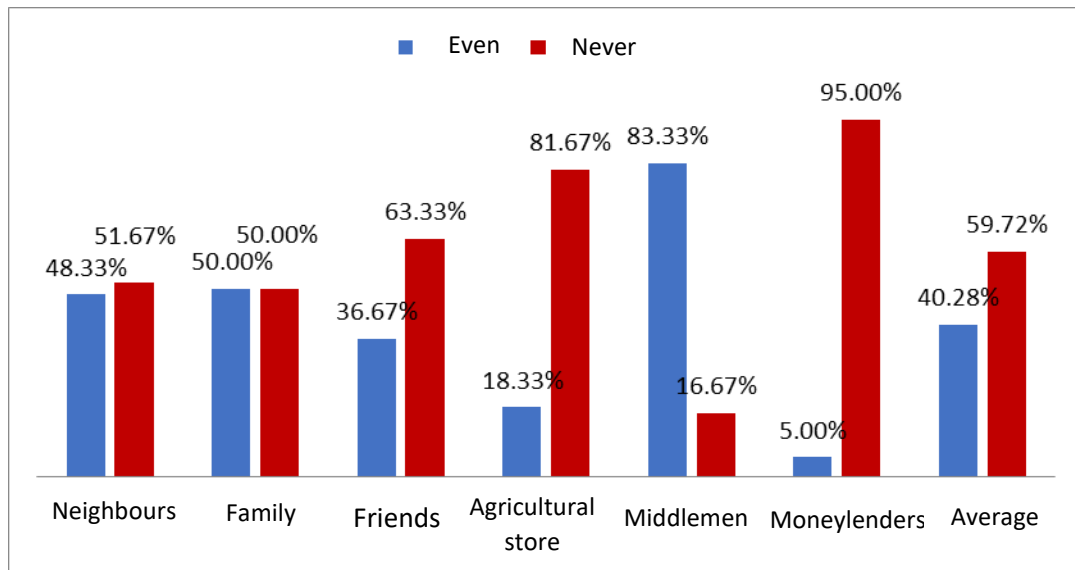


Figure 2. Percentage of Farmers according to Experience in Applying for Financing to Nonformal Financial Institutions

The experiences of farmers who have applied for credit can be grouped into farmers who are ever access credit and currently obtaining credit in the last one year and farmers who are not taking credit. The difference is the credit period made by the farmer. Farmers are said to have access to certain sources of financing if they are borrowing, have borrowed, and choose not to borrow for various reasons. Farmers are said to have access if they have never applied for credit

on the grounds that they still have credit at other institutions, are afraid of not being able to pay, don't need, don't know, and culture / religious reasons. Farmers who have reasons such as not having collateral, credit product features, and discrimination are classified as farmers who do not have access to nonformal financial institutions. The percentage of farmers who have taken credit and the reasons for having never

taken credit from nonformal financial institutions can be seen in Table 3.

Based on Table 3. the percentage of farmers who are taking credit from agricultural input production stores is 16.67%. while those who are not taking credit are 1.67% of farmers. On average, more farmers are currently taking credit than those who are not taking credit. The same is the case with farmers who take credit from middlemen, loan sharks, neighbors, family and friends. Previously, there were only 1-5 farmers who did not take credit from nonformal institutions before. Of the many farmers who are taking credit from nonformal institutions, the majority of about 81.67% of chili farmers obtain credit from middlemen. Cooperation with middlemen has been around for about 10 years on average. In fact, when the harvest period is over but still have loan bills, sometimes middlemen are not reluctant to give back loans, with the hope that the harvest in the next planting period can cover the previous loan shortage. In addition, during the harvest period, middlemen sometimes come directly to the farmer's house to transport

the chilies. With this flow, farmers prefer to borrow from middlemen. This system of middlemen has provided certainty for financial assistance and marketing of chili peppers for the farmers. Apart from middlemen, in conditions of urgent need, needing additional capital quickly, and being easily accessible, farmers will prefer to borrow from other nonformal institutions such as neighbors, family, and friends.

In Table 3. it can be seen that on average farmers do not give reasons because they still have credit at other institutions because most nonformal institutions are more flexible and do not question a farmer's loan history. Furthermore, the highest percentage of farmers who gave reasons for fear of not being able to pay their loans was loan sharks at 61.67%. The loan pattern that applies very high interest rates, returns every week, and there is additional interest if late in repaying the loan makes farmers reluctant to choose credit from loan sharks. The harvest period for chilies, which must wait up to three to four months, of course with this borrowing pattern is very burdensome for farmers.

Table 3. Distribution of Farmers Who Have Taken Credit and Reasons for Never Taking Credit from Nonformal Financial Institutions in 2019

Description	Agricultural Store	Middlemen	Moneylenders	Neighbors	Family	Friends
<b>1. Taking credit</b>						
Percentage (%)	16.66	81.66	3.33	40.00	43.33	30.00
<b>2. Not taking credit</b>						
Percentage (%)	1.67	1.67	1.67	8.33	6.67	6.67
<b>3. Never had credit and had access</b>						
Still have credit at other institutions	1.67	0.00	0.00	1.67	0.00	0.00
Fear of not being able to pay	15.00	6.67	63.33	8.33	8.33	8.33
Does not need credit	41.67	10.00	11.67	26.67	25.00	41.67
Does not know	18.33	0.00	20.00	0.00	0.00	1.67
Cultural/religious reasons	0.00	0.00	0.00	13.33	16.67	11.66
Percentage (%)	76.67	16.67	95.00	50.00	50.00	63.33
<b>4. Never had credit and had no access</b>						
Have no collateral	0.00	0.00	0.00	1.67	0.00	0.00
Credit product features	0.00	0.00	0.00	0.00	0.00	0.00
Discrimination	5.00	0.00	0.00	0.00	0.00	0.00
Percentage (%)	5.00	0.00	0.00	1.67	0.00	0.00
Total (No. 1,2,3,4)	100.00	100.00	100.00	100.00	100.00	100.00

Source: Primary Data Analyzed in 2019

Farmers who feel they don't need to borrow capital in the highest is agricultural store that have a percentage of 41.67% and the lowest is middlemen (10.00%), The reason is chili farmers can fulfill their capital production by themselves. Furthermore, there were some farmers who expressed reasons because they felt uncomfortable or could be categorized as regional culture if they wanted to borrow capital from neighbors, family, and friends. The percentage distribution for this reason to neighbors is 13.33%, family is 16.67%, and friends are 11.67% farmers.

For farmers who do not have access, there are nonformal financial institutions on the grounds that they do not have collateral, only the neighbors are 1.67%. This may be because the neighbor wants a guarantee as a form of responsibility from the borrower. Then, there were 5.00% of farmers who argued that they were discriminated against because they felt they were not allowed to borrow from a saprotan shop, while other farmers were allowed.

Table 4. Distribution of Farmers' Accessibility to Nonformal Financial Institutions

Accessibility categories in various financial institutions	Total (People)	Percentage (%)
Low (1-3 types of nonformal financial institutions)	0	0.00
High (4-6 types of nonformal financial institutions)	60	96.67
Sum	60	100.00

Source: Primary Data Analyzed in 2019

The analysis of the distribution of farmers' accessibility to formal financial institutions in Magelang Regency is divided into two categories, namely low and high. The perception is low with the range of farmers who have access to 1-3 types of nonformal financial institutions and high accessibility to the range of

farmers who have access to 4-6 types of nonformal financial institutions. The distribution of farmers' accessibility to nonformal financial institutions can be seen in Table 4.

Based on the results of the analysis using the proportion test, the Zvalue was 7,752 and the Ztable was 1,645. This means that Zvalue > Ztable, so that Ho is rejected and Ha is accepted. It can be concluded that > 50% of chili farmers have high accessibility to nonformal financial institutions in Magelang Regency. Borrowing procedures and requirements on nonformal institutions are generally relatively very fast and simple, according to farmer's ability (Hastuti & Supadi, 2002).

**Perceptions of Financial Institutions**

The level of participation and accessibility of farmers to financial institutions can be related to perceptions. Then, from the perception, it will provide several responses regarding the requirements for crediting and the attributes of the institution. The good growth of financial institutions can support the economy of the country and the surrounding areas. If you focus on chili commodities, all people will need chili in everyday life.

The sustainability of chili farming needs to be supported by a lot of capital because it requires an intensive maintenance process. Without adequate capital support, farmers can be hampered in meeting production costs, adopting technology, and adapting to climate change. The existence of financial institutions that provide farm financing facilities is expected to be able to provide services according to the needs of farmers. The perception in this study is how the views of chili farmers when observing formal financial institutions in Magelang Regency. Perception indicators are grouped into two, namely judging from the terms of access to credit and the attributes of financial institutions. Table 5. shows the perception of chili farmers towards formal financial institutions.

Table 5. Chili Farmers' Perceptions of Formal Financial Institutions

Indicators	Interval Score	Average Score of Achievement	Perception's Rate (%)
<b>Credit Access Terms</b>			
<i>Collateral</i>	1-5	3.75	75.00
<i>Character</i>	1-5	3.55	71.00
<i>Capacity</i>	1-5	3.76	75.33
<i>Capital</i>	1-5	3.62	72.33



<i>Condition of Economy</i>	1-5	3.43	68.67
<i>Constraints</i>	1-5	3.45	69.00
Average Credit Access Terms (A)		3.59	71.89
Financial Institution Attributes			
Credit Lending Procedures	1-5	3.55	71.00
Hospitality	1-5	3.95	79.00
Provision of Consultation Services	1-5	3.87	77.33
Credit Nominal Limit	1-5	3.63	72.67
Credit Disbursement Time	1-5	3.48	69.67
Credit Refund Deadline	1-5	3.60	72.00
Average Attributes of Financial Institutions (B)		3.68	73.61
Average (A+B)		3.64	72.75

Source: Primary Daya Analyzed in 2019

In Table 5, it is known that the average perception score of chili farmers towards formal financial institutions is 3.64 and the perception level is 72.75%. This shows that most farmers have good perceptions of formal financial institutions. The level of perception on the indicators of the terms of access to credit is lower than that of financial institutions. Judging from the terms of access to credit applied by banks, namely the 6C element, the highest level of perception is the Capacity element at 75.33%. This requirement is considered good by farmers because farmers realize that a lender will assess the farmer's ability to repay the loan to reduce the risk of bad credit. The lowest indicator regarding perceptions on the terms of credit is the condition of the economy in the neighborhood (Condition of economy). The level of perception of 68.67% indicates that the perception of the economic situation in the neighborhood as a credit condition is considered good, but for farmers, this requirement is not so important compared to other requirements. Therefore, it is necessary to re-examine the terms of access to credit, namely the economic situation in the farmer's environment.

The achievement of the highest percentage level of farmers' perceptions for the attributes of financial institutions is the service friendliness indicator with the achievement of a perception score of 3.95 percentage 79.00%

which means that the service friendliness of formal financial institutions is good. The large percentage indicates that friendly service from institutional officers is needed by farmers to access formal financial institutions. The lowest percentage for the attributes of financial institutions is at the time of credit disbursement. Farmers consider that the time for credit disbursement is quite long, the waiting time ranges from 4-7 days after applying for credit at formal institutions. Based on the results of the analysis using the Z mean test, the Zhitung value was 3.2 and the Ztable value was 1.645. This means that  $Z_{hitung} > Z_{table}$ , so that  $H_0$  is rejected and  $H_a$  is accepted. It can be concluded that chili farmers have positive perceptions of formal financial institutions in Magelang Regency.

In addition to the existence of formal financial institutions, there is also a perception of nonformal financial institutions. High accessibility to nonformal financial institutions proves that the existence of nonformal financial institutions is quite high. The credit system run by it has less standard rules than formal financial institutions. The sustainability of chili farming will also depend on the ability of financial institutions to understand farmers' needs. The perception in this case is how the views of chili farmers when observing nonformal financial institutions in Magelang Regency.

Table 5. Chili Farmers' Perceptions of Nonformal Financial Institutions

Indicators	Interval Score	Average Score of Achievement	Perception's Rate (%)
Credit Access Terms			
<i>Collateral</i>	1-5	3.80	76.00
<i>Character</i>	1-5	3.86	77.33
<i>Capacity</i>	1-5	3.98	79.67

<i>Capital</i>	1-5	3.86	77.33
<i>Condition of Economy</i>	1-5	3.70	74.00
<i>Constraints</i>	1-5	3.77	75.33
Average Credit Access Terms (A)		3.83	76.61
<b>Financial Institution Attributes</b>			
Credit Lending Procedures	1-5	4.15	83.00
Credit Interest	1-5	3.85	77.00
Credit Service Rate	1-5	4.13	82.67
Hospitality	1-5	4.22	84.33
Provision of Consultation Services	1-5	4.05	81.00
Credit Nominal Limit	1-5	4.00	80.00
Credit Disbursement Time	1-5	3.97	79.33
Credit Refund Deadline	1-5	4.17	83.33
Dissemination of Credit Information	1-5	3.80	76.00
Credit Supervision	1-5	3.85	77.00
Average Attributes of Financial Institutions (B)		4.03	80.37
Average (A+B)		3.95	79.06

Source: Primary Daya Analyzed in 2019

Based on Table 6, it shows that the average perception score of chili farmers towards nonformal financial institutions is 3.95 and the perception level is 79.06%. This shows that most farmers have good perceptions of nonformal financial institutions. In general, the level of perception on the indicator for the attributes of financial institutions is higher than for the indicators for terms of access to credit. Perceptions in nonformal financial institutions are related to the condition of the economy in the neighborhood (Condition of economy) which is one of the requirements for access to credit, namely 74.00%. This shows that the perception of the economic condition in the neighborhood as a condition for credit is considered good but not better than other conditions. The assessment of these requirements is deemed irrelevant because it seems to equate the condition of the group, not each individual farmer. Similar to the perception of formal financial institutions, the Capacity indicator has a high score and level of perception. This is because assessing the ability of farmers to repay loans is very important for business sustainability.

The achievement of the highest percentage level of farmers' perceptions in terms of attributes is the service friendliness indicator with a score of 4.22 and a perception level of 84.33%, which means that the service friendliness of nonformal financial institutions is very good. Friendliness of service from institutional officers is very important and needed by farmers to access nonformal financial institutions. The lowest score and perception level on the attributes of financial institutions is the dissemination of information. The lack of information dissemination is because nonformal financial institutions do not have standard rules for crediting and prioritize aspects of trust. Based on the results of the analysis using the Z mean test, the Zhitung value was 5 and the Ztable value was 1.645. This means that  $Z_{hitung} > Z_{table}$ , so that  $H_0$  is rejected and  $H_a$  is accepted. It can be concluded that chili farmers have positive perceptions of nonformal financial institutions in Magelang Regency.

Testing the difference in perceptions between formal institutions and nonformal institutions can be analyzed using the t test paired sample test. The results of the t test can be seen in Table 7.

Table 7. T Test Paired Sample Test Differences in Perceptions of Financial Institutions

	Mean	t-value	t-table	Sig. t
Perception towards Formal Financial Institutions	3.64	-2.540	2.031	0.000
Perception towards Nonformal Financial Institutions	3.95			

Source: Primary Data Analyzed in 2019

From Table 7. It can be seen that the t-value is less than the t-table, so  $H_0$  is accepted / failed to be rejected. Thus, the perception of chili farmers towards formal financial institutions is

smaller than the perception of nonformal financial institutions. Farmers tend to have a higher positive perception of nonformal financial institutions because of the high social capital that

has been in the community for a long time. This social capital is reflected in the trust, reciprocity, and social interactions that exist between chili farmers and nonformal financial institutions.

**Factors Affecting Perceptions of Financial Institutions**

The regression model has met all the classical assumption tests, so multiple linear regression analysis can be performed. The independent variables in this study include age, gender, education level, land area, value of collateral ownership, experience of credit to formal financial institutions, and experience of credit to nonformal financial institutions owned by farmers while the dependent variable is the perception of chili farmers. formal and nonformal financial institutions.

The results of multiple linear regression analysis regarding the factors that affect perception can be seen in Table 8. The independent variable that has a significant effect on the perception of chili farmers can be shown from the probability value t by comparing it with  $\alpha$  (0.05 and 0.10). If the probability of t is smaller than  $\alpha$  (0.05 and 0.10), then this variable has a significant effect on perception. Independent variables that have a significant effect are farmer age and access to nonformal financial institutions.

The regression coefficient shows a unidirectional or reversible relationship between the independent variable and the dependent variable. From the regression results, regression

coefficient of independent variables is -0,081 (Age); -0,024 (Education); -0,014 (Gender); 0,006 (Land area); 0,002 (Collateral value); 0,007 (credit experience on formal institution); and 0,121(credit experience on nonformal institution). If the coefficient value is positive, so the relationship between the independent variable and the dependent variable is a unidirectional relationship. This means that if there is an increase in the value of X, there will be an increase in Y or the dependent variable. If the regression coefficient is negative, then the independent variable has a reverse effect on the dependent variable, it can have a negative or positive impact in accordance with the context.

Table 8 is the result of multiple linear regression analysis regarding perceptual factors. The adjusted R square value is 0.142 which means that 14.2% of the variable perceptions of chili farmers towards financial institutions can be explained by independent variables (age, gender, education level, land area, value of collateral ownership, access to formal financial institutions, and access to financial institutions). nonformal financial institutions) included in the model, while 85.8% of the variations are explained by other variables not linked in the model. Based on the results of the analysis, it can be seen that the F-statistic probability value is 0.034. This value is smaller than  $\alpha$  (0.05) so that Ho is rejected, so the independent variables in the model jointly affect the dependent variable (the perception of chili farmers) in Magelang Regency.

Table 8. Factors Affecting Perception towards Financial Institution, 2019

Variables	Expected Sign	Coefficient	t value	Sig. t
C	+	4.831**	22.238	0.000
lnAge (X <sub>1</sub> )	+/-	-0.081**	-2.017	0.049
lnEducation (X <sub>2</sub> )	+	-0.024 <sup>ns</sup>	-0.626	0.534
DummyGender (X <sub>3</sub> )	+/-	-0.014 <sup>ns</sup>	-0.151	0.881
lnLand_Area (X <sub>4</sub> )	+	0.006 <sup>ns</sup>	0.390	0.698
lnCollateral_value (X <sub>5</sub> )	+	0.002 <sup>ns</sup>	0.661	0.512
DummyCredit experience_formal institution (X <sub>6</sub> )	+	0.007 <sup>ns</sup>	0.241	0.811
DummyCredit experience_nonformal institution (X <sub>7</sub> )	+	0.121*	1.929	0.059
R square		0.244		
Adjusted R Square		0.142		
Prob (F-Statistik)		0.034		
Description:				
** : significant at $\alpha$ : 0.05				
* : significant at $\alpha$ : 0.10				
ns : non significant				

Source: Primary Data Analyzed in 2019

The explanation for each variable is as follows:

### 1. Age

Table 8 shows that the regression coefficient value of the farmer age variable is -0.081. The coefficient is negative, so it means that the older the farmer is, the lower the perception of financial institutions will be. Every one percent increase in the farmer's age will decrease the perception level by 0.081 percent. From the results of the regression analysis, it was found that the significance value of the farmer age variable was 0.049, which means it was smaller than  $\alpha$  (0.05), so it could be concluded that the age of the farmer had a significant influence on the perception of 5% alpha. This happens because the younger the farmer can indicate that the education received is higher, so that he is more able to receive information well and has an open mind to compete in business matters. Younger farmers will be more productive and have higher motivation to farm, so that the perception of financial institutions will also be better.

### 2. Education Level

The level of education of a farmer is the length of time the farmer has taken formal education. Based on the results of the regression analysis in the Table 8., obtained a significance value of the education level variable of 0.534. It can be seen that the significance value of the education level variable is greater than the  $\alpha$  value of 5% and 10%, so it can be concluded that the education level variable has no significant effect on the magnitude of farmers' perceptions of financial institutions in Magelang Regency.

### 3. Gender

Gender is the difference in biological characteristics of respondents consisting of women and men. Gender is measured by a dummy variable where male farmers score 1 and female farmers score 0. If you look at the results of the regression analysis in Table 8. the regression coefficient value is -0.014 and the significance value is 0.881. The significance value of the gender variable is greater than the  $\alpha$  value of 5% and 10%, so it can be concluded that the gender variable has no significant effect on the magnitude of farmers' perceptions of financial institutions in Magelang Regency.

### 4. Land area

The results of multiple linear regression analysis in Table 8 show that the variable area of land has a regression coefficient of 0.006 and the significance value obtained is 0.698. The

significance value of the variable land area is greater than  $\alpha$  (0.05 and 0.10), so that the variable of farmer's land area has no significant effect on perceptions of financial institutions.

### 5. Collateral Value

Based on the regression analysis in Table 8, it shows that the variable regression coefficient value of the collateral value of farmers is 0.002 and the variable significance value of the collateral value is 0.512. The significance value of the collateral value variable is greater than  $\alpha$  (0.05 and 0.10), so it can be concluded that the collateral value variable does not significantly affect farmers' perceptions of financial institutions.

### 6. Experience Credit to Formal Financial Institutions

The dummy variable of credit experience to formal financial institutions is determined that farmers who have accessed both formal financial institutions are worth 1 and farmers who have never accessed formal financial institutions are worth 0. The results of multiple linear regression analysis are Table 6.14. indicates that the access variable to formal financial institutions has a regression coefficient of 0.007 and a significance value of 0.811. The significance value of the credit experience variable at formal institutions is greater than  $\alpha$  (0.05 and 0.10), so that the variable experience of credit to formal financial institutions has no significant effect on perceptions of financial institutions.

### 7. Credit Experience to Nonformal Financial Institutions

The dummy variable of credit experience to nonformal financial institutions is determined that farmers who have accessed both nonformal financial institutions have a value of 1 and farmers who have never accessed nonformal financial institutions have a value of 0. The results of multiple linear regression analysis are Table 8. nonformal has a regression coefficient of 0.121 and a significance value of 0.059. The significance value of the access variable in nonformal financial institutions is smaller than the  $\alpha$  value of 10% (0.10). The variable of credit experience to nonformal financial institutions has a significant effect on perceptions of financial institutions. Therefore, the variable experience of credit to nonformal financial institutions significantly influences perceptions of financial institutions. The regression coefficient value is 0.121, which means that farmers who have had

experience in accessing credit at nonformal financial institutions have a better effect on perceptions of financial institutions than those who have never had experience. This is sustainable with the accessibility of farmers, in terms of farmer credit participation to nonformal financial institutions is higher than formal institutions. The higher the intensity of access to credit to nonformal financial institutions, the more dominant it increases the perception.

## CONCLUSIONS

Based on the results of the analysis and discussion in the previous chapter, it can be concluded that:

1. More than 50% of chili farmers in Magelang District have high accessibility to formal financial institutions and nonformal financial institutions. In terms of farmer credit participation in formal financial institutions, the highest was government banks at 48.33%, while for middlemen it was 83.33%. The high level of credit participation in middlemen is caused by the credit system that involves financial, processing and marketing activities.
2. Chili farmers have a positive perception of formal financial institutions and nonformal financial institutions. The perception of chili farmers towards formal financial institutions is smaller than the perception of nonformal financial institutions.
3. Factors that significantly influence the perceptions of chili farmers towards financial institutions are the age of the farmers and experience of credit to nonformal financial institutions.

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