

# The Relationship Between Small Farmers Education Level with Food Crops Financing in Jambi Province

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## Abstract

The objective of the study is to measure the participation rate of small farmers in following the two scheme of food crops financing that have been operating in rural areas. The method used in this study is the Kai Squares financing model. The result of the research found that the community economic empowerment is the best scheme for food crop financing in the category of non-formal financing. The financing scheme derived from the rice mill is the most cost-effective scheme. There is a significant difference between the high-educated crop farmers and the low- to middle-educated crop farmers in accessing and utilizing non-formal scheme of financing. On the other hand, there is no significant difference in accessing and utilizing non-formal scheme of financing among well-educated farmers and low-educated crop farmers.

## Keywords

Education, Small Farmers, Food Crop Financing

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## 1. Introduction

Education level is very closely related to the quality of human resources. Educated small farmers, usually are more open to innovations. Thus they are more aware in finding alternative sources or schemes for financing. Many schemes of crops financing have been disbursed to small farmers. The success rate of small farmers businesses will depend on the structure of the financing. Schemes offered by formal financing institutions are different from non-formal institutions. Small farmers will certainly look for the most lucrative schemes for them.

In this analysis, the level of education of rural farmers is divided into two categories. First, crop farmers that have high school education or below. Second, crop farmers with college education. From both categories, we measured their participation in following two patterns of agricultural crops

financing that have been running in the countryside. First, the scheme of formal financing (program), which consists of the small family business credit scheme and the Business Credit to Strengthen the Community Economy scheme. Second, the scheme of non-formal/informal financing, which consists of financing scheme from rice mills, middlemen, loan sharks, landowners, julo-julo system and peer-to-peer borrowing. The study was conducted in two villages. First, Gedung Karya village, Kumpeh sub-district, Muaro Jambi regency. Second, in the village of Simbur Naik, Kecamatan Sabak, Tanjung Jabung Timur Regency.

Based on two financing schemes in the two research sites, we obtained four (4) results. First, the participation of crop farmers in the village of Gedung Karya through the formal financing scheme (program). Second, the participation of high-educated crop farmers with low-and middle-educated food crop farmers. We obtained 98% of middle- or lower-educated farmers took advantage of the informal financing

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schemes, and the rest of 2% did not participate in such schemes. As for college-educated farmers who took advantage of informal financing schemes were amounted to 94% and the remaining 6% did not participate in the utilization of such schemes.

The homogeneous results of crops farmers in terms of education in utilizing informal financing schemes are caused by a variety of factors, including: (1) This financing scheme is accessible to all rural groups; (2) The pattern of informal financing does not require a lot of provisions, thus attracting farmers to use it; (3) This pattern of informal financing does not involve collateral material and loan use proposals, making it easier for all layers of farmers to utilize it; (4) Available at any time required by farmers.

## 2. Research Method

This study uses the Kai Squares model to see the relationship between the level of education of small farmers and the financing scheme used. This model can test the difference from the average of small farmers who use formal credit with small farmers who use non-formal credit. The formula:

$$Z = \frac{\bar{Y}_1 - \bar{Y}_2}{\sqrt{\delta \bar{Y}_1 - \bar{Y}_2}}$$

Which =

Z= Total score of correlation between two average score of data.

$\bar{Y}_1$ = Average score for formal financing.

$\bar{Y}_2$ = Average score for informal financing.

$\delta \bar{Y}_1 - \bar{Y}_2$  = Difference between two data.

Research location was taken in 2 districts in Jambi Province. East Tanjung Jabung Regency which represents the food producing region meanwhile Muaro Jambi regency represents the less productive regency. For Kabupaten Tanjung Jabung Timur, the study was conducted in Desa Simbur Naik, while for Muaro Jambi District, it was conducted in the village of Gedung Karya. Simbur Naik village represents the food producing village, whereas the village of Gedung Karya for less-food-producing location.

The level of education of small farmers is divided into two parts. First, crop farmers with high school education or below. Second, crop farmers with college education. The financing scheme is simplified into two parts. First, Financing provided by established and licensed financing institutions, grouped into Formal financing institutions. Second Financing Institution granted by individual or unlicensed institution.

## 3. Results

### 1. Analyzing the Influence of Education Level towards Crop Farmers' Awareness for Accessibility and Utilization of Financing Scheme for Food Crops

From the results of kai square calculations in the two research villages, it can be seen that for the financing scheme there is a significant difference in the accessibility and utilization of the crop financing scheme when viewed from the level of education of small farmers. For non-formal financing scheme, there is no significant difference in the accessibility and utilization of crop agriculture financing if viewed from the level of education.

**Table 1.** The Influence of Education Level towards Crop Farmers' Awareness for Accessibility and Utilization of Financing Scheme for Food Crops in Rural Areas.

No	Financing Scheme	X <sub>2</sub>	X <sub>2 table</sub> DF. 5%	X <sub>2 table</sub> DF. 1%	X <sub>2 table</sub> DF. 0.5%	Explanation
1	Program, At Gedung Karya	16.22	3.8415	6.6349	7.8794	Significant
2	Program, At Simbur Naik	15.76	3.8415	6.6349	7.8794	Significant
3	Non-formal, At Gedung Karya	3.18	3.8415	6.6349	7.8794	Not Significant
4	Non-formal, At Simbur Naik	0.80	3.8415	6.6349	7.8794	Not Significant

Source: Primary data calculations, 2017

The result of Mubyarto's study, titled "Accelerating the Realization of Social Justice through Development of Rural Credit System", indicates that providing rural financing to accelerate welfare regardless of the rural community education stratum is relatively difficult to achieve. The results of this study indicate that financing program will not be able to realize social justice for rural communities because it is only enjoyed by a handful of community leaders in the countryside. Meanwhile, the scheme of non-formal financing is in line with Mubyarto's research because non-formal financing is apparently can be enjoyed equally by the rural

population, regardless of the strata of education.

The study of Hamp and Hanning (2016) states that the existing financing scheme in rural areas is only enjoyed by a small number of rural elites. This fits perfectly with the results of the review of the program financing scheme. It is shown that the program financing scheme is only enjoyed by a small number of highly educated farmers. While low-educated farmers are unable to access and utilize the financing scheme of this program.

Ashari and Supana (2016), argue that low-educated farmers

find it difficult to access existing rural financing schemes. The results of Ashari and Supana's studies are well suited to the program financing scheme, but on the other hand do not fit into non-formal financing schemes. As for the program financing scheme can only be accessed by small amount of farmers only.

Roger (2013) states that depending on the educational level of rural farmers, they are capable of accepting changes that come into their environment. From the review of the study, it is clear that for the financing scheme that demands many requirements can only be accessed and utilized by highly educated farmers. While low-educated farmers can only utilize financing schemes that do not require many requirements.

The results of this study is able to further clarify the results of research conducted by previous researchers. From Mubyarto's, Stefan Jansen, Michael Hamp and Alfred Hanning, Ashari and Supana as well as Everet M. Roger

stated that the government-subsidized financing scheme will only be enjoyed among the educated village elite. While non-formal financing schemes that come from the community were utilized by the majority of small farmers.

Therefore, if the government launches a subsidized financing scheme, the distribution of such financing schemes should be channeled through non-formal financing institutions. So the financing scheme that contains the subsidy can be accessible by small farmers more evenly. If the financing scheme is channeled through a formal financing institution, those who will only enjoy the financing scheme are only a handful of highly educated farmers.

## 2. Pros and Cons of Financing Schemes for Small Farmers

This study is able to contribute to the development of science in the field of financing for small farmers in rural areas, especially from the theoretical perspective that has been advanced by previous agricultural development experts.

**Table 2.** Differences in studies between experts in financing for small farmers.

<b>Contribution of Recent Studies</b>	<b>Arguments that developed recently</b>
1. Mubyarto stated that an effective financing scheme to accelerate social justice is a non-formal financing scheme because this financing scheme is capable of being accessed and utilized by all levels of farmers regardless their education level.	1. Mubyarto, stated that various financing schemes for rural farmers are very effective to accelerate economic empowerment in society.
2. Jansen, Hamp and Hanning argued that the existing financing schemes in the countryside can only be enjoyed by a few elite farmers in the countryside. The financing scheme meant by the researcher is the program financing scheme.	2. Stefan Jansen, Michael Hamp and Alfred Hanning, argue that the existing financing schemes in the countryside can only be enjoyed by a small share of farmers.
3. Ashari and Supana argued that low-educated farmers are very difficult to access the existing financing schemes in the countryside. The scheme is called program financing scheme.	3. Ashari and Supana, argue that low-educated farmers are very difficult to access the existing financing schemes in rural areas.
4. Roger argues that depending on the level of education, farmers are able to differentiate information in the agricultural sector. This suggests that a financing scheme that requires many requirements will only be adopted by highly educated farmers. While the financing scheme that does not require many requirements can be utilized by low educated farmers.	4. Everet M. Roger argues that depending on the level of education, farmers are able to differentiate their acceptance of various information in the agricultural sector.

## 4. Conclusion

Agricultural financing schemes for rural farmers will be effective if there is a mutually beneficial relationship between farmers and financing institutions. The credit scheme for community economic empowerment is the best financing scheme for food crop farmers. According to the results of the effectiveness analysis, the Kupem scheme is the most cost-effective program financing scheme. Thus, Kupem's scheme is a suitable for financing scheme among food crop farmers in rural areas.

For non-formal financing schemes, the financing scheme derived from the rice mill is the most cost-effective method of financing. Therefore, the financing offered by the rice mill is the cost-effective scheme for food crop farmers.

The financing scheme of rice mill is selected to be the most effective financing scheme for food crop farmers. This can be examined from three perspectives. First, from a socio-cultural perspective, secondly, from a religious and third perspective from an economic perspective.

From farmer participation rate in the formal financing scheme, there is a significant difference between highly educated farmers and middle to low educated farmers in accessing and utilizing financing scheme.

For non-formal financing schemes, there is no significant difference in terms of access and utilization of non-formal financing schemes among highly educated farmers and middle or lower educated farmers.

## Appendix

**Table A1.** Farmers participation rate in formal financing scheme at Gedung Karya Village according to their Education Level.

Participation in Financing Schemes Program	Farmers Education Level				All Education Level	
	Middle to Low		High		N	%
Participating	20 people	5%	15 people	88%	35	9
Not Participating	374 people	95%	2 people	12%	376	91
Total	394	100%	17	100%	411 people	100%

Source: Primary data calculation, 2017.

**Table A2.** Farmers participation rate in non-formal financing scheme at Gedung Karya Village according to their Education Level.

Participation in Financing Schemes Program	Farmers Education Level				All Education Level	
	Middle to Low		High		N	%
Participating	386 people	98%	16 people	94%	402 people	98%
Not Participating	8 people	2%	1 people	6%	9 people	2%
Total	394	100%	17	100%	411 people	100%

Source: Primary data calculation, 2017

**Table A3.** Farmers participation rate in formal financing scheme at Simbur Naik Village according to their Education Level.

Participation in Financing Schemes Program	Farmers Education Level				All Education Level	
	Middle to Low		High		N	%
Participating	35 people	5%	26 people	81%	61 people	8%
Not Participating	687 people	95%	6 people	9%	693 people	92%
Total	394	100%	32	100%	754 people	100%

Source: Primary data calculation, 2017.

**Table A4.** Farmers participation rate in non-formal financing scheme at Simbur Naik Village according to their Education Level.

Participation in Financing Schemes Program	Farmers Education Level				All Education Level	
	Middle to Low		High		N	%
Participating	705 people	98%	30 people	94%	735 people	97%
Not Participating	17 people	2%	2 people	6%	19 people	3%
Total	722	100%	32	100%	754 people	100%

Source: Primary data calculation, 2017.

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