

## **THE EFFECT OF INSTITUTIONAL STRENGTHENING ON FARMERS PARTICIPATION AND SELF-RELIANCE IN BOGOR INDONESIA**

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### **Abstract**

The alleviation of poverty in rural areas has been implemented through the strengthening of farmer groups and Farmers Group Association that prioritizes the participation of farmers to realize the farmer's self-reliance. The study aimed to assess the effect of the strengthening of farmer groups and Farmers Group Association simultaneously and directly on farmers' participation and influence of farmer groups, Farmers Group Association and participation of farmers simultaneously and directly on the farmer self-reliance. This research has been conducted in Bogor, Indonesia, from September to December 2016. The type of research is a survey research. The study population was a member of farmers group incorporated in the Farmers Group Association. The research sample is determined by 80 respondents using the stratified random technique. The research variables include strengthening of farmer groups ( $X_1$ ), strengthening of Farmers Group Association ( $X_2$ ), the participation of farmers ( $Y_1$ ) and the autonomy of farmers ( $Y_2$ ). This study uses a type of instrument rating scale. The results showed a significant direct effect of the strengthening of farmer groups to the participation of farmers. Strengthening farmer groups and farmers' participation affected simultaneously and significantly direct to the independence of farmers.

**Keywords** institutional strengthening of farmers, participation, self-reliance

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## 1. Introduction

Poverty in Indonesia was more pronounced in rural areas. The Central Bureau of Statistics (2015) reported that the poverty rate in the village is still relatively high at 28% in March 2015. The village is the functional area with the characteristics of the main activity is agriculture. In line with the times, a lot of local knowledge is lost as the loss of local institutions.

In some countries, counseling empowerment has been proven to reduce poverty in rural areas (Fonchingong and Fonjong 2003, Ofuoku and Chukwuji 2012). Empowerment can be started from the establishment and strengthening of local institutions (Schmidt et al 2015). Learning from this experience, the rural development paradigm needs to give attention to the strengthening of local economic development approach based on agriculture. Changes need to be done especially paradigm shift approach to economic development based on agriculture because confronted with the national strategic environmental changes especially regarding demand for food and raw materials as well as the major challenges that the liberalization of international trade as well as the ASEAN Economic Community (AEC).

Institutions in the agriculture sector covering farmer groups and Farmers Group Association-based social economy in rural areas. Implementation of community empowerment preceded by their socio-economic groups. Strengthening socio-economic group enabled the group into a learning place for the public to critically analyze the situation at hand, strengthen and grow awareness and solidarity of the group, thereby increasing public participation (Hellin et al, 2009, Ofuoku and Chukwuji 2012, Chesoli 2013). Community participation is more capable of making an independent community. Independence is a factor that can bring farmers out of the poverty problem (Ife, 2002, Fonchingong and Fonjong 2003, Oktarina et al, 2012), improving the quality of life and raise social security (Ife 2002).

The study aims to (1) analyze the effect of the strengthening of farmer groups and Farmers Group Association on the participation of farmers simultaneously and directly, (2) to analyze the effect of the strengthening of farmer groups, Farmers Group Association and participation of farmers on farmer's financial independence simultaneously and directly.

## 2. Research Methods

Research has been conducted at Tamansari District, Bogor Regency. Time series of studies in October to December 2016. This study is a survey research, based on the research purpose classified as explanatory research and based on its traits is classified as a quantitative research. The study population was farmers who become members of farmers Group and Farmers Group Association (Gapoktan). The sample in this study were 80 people who were taken using stratified random techniques (stratified random sampling).

Instruments in this study is a questionnaire that contains a list of the statement. Variable of strengthening farmer groups ( $X_1$ ), has 9 (nine) indicators which expanded into twelve (12) statement. Variable of strengthening Farmers Group Association ( $X_2$ ), there are 7 (seven) indicators which expanded into twelve (12) statement. Variable of participation of farmers ( $Y_1$ ), there are six (6) indicators which expanded into 16 (sixteen) statements and an independent variable farmer ( $Y_2$ ), has 9 (nine) indicators which expanded into 24 (twenty-four) statements with some variation of statement moving from 1 (one) to 4 (four). The research instrument has passed the test of validity and reliability. Data were analyzed using path analysis technique.

## 3. Results and Discussion

### The Effect of Strengthening Farmers Group and Farmers Group Association on the Participation of Farmers

To see the effect of the strengthening of farmer groups and Strengthening Farmers Group Association on the participation of farmers, carried out a statistical analysis of the primary data using SPSS to get the value of  $R^2$  (R squared) and  $\rho$  (Standardized Coefficients/path coefficient). The results of the statistical analysis are listed in Table 1.

Table 1. Results of statistical analysis of the effect of the strengthening of farmer groups and the strengthening of Farmers Group Association on the participation of farmers

Description	Value	. p-value	Remarks
R square	0,534	0,000	

The coefficient between $X_1$ and $Y_1$	0,731	0,000	Significant
The coefficient between $X_2$ and $Y_1$	0,257	0,073	Not significant
The correlation between $X_1$ and $X_2$	0,781	0,000	Correlates very noticeable

Information:

$X_1$ : The strengthening of farmer groups

$X_2$ : The strengthening of Farmers Group Association

$Y_1$ : Participation of farmers

P: The path coefficients

Table 1 shows that the hypotheses regarding the strengthening of farmer groups and Farmers Group Association have a significant effect simultaneously and directly to farmers' participation has not been proven. The study found that the strengthening of Farmers Group Association does not directly influence the participation of farmers. The direct effect is only found in the variable of strengthening farmer groups on the participation of farmers in Table 1.

The strengthening of Farmers Group Association that does not directly influence the participation of farmers showed that during this counselor's efforts to strengthen Farmers Group Association is not capable of inflicting the participation of farmers. The efforts made by the counselors in strengthening Farmers Group Association include the facilitation of planning and implementation of activities, facilitation of cooperation and capacity building in the field of infrastructure of agriculture, facilitating cooperation and capacity building in the field of agriculture, facilitating cooperation and increase capacity in the processing of agricultural products, facilitating cooperation and capacity building in the field of marketing, facilitating alliances related to capital, and assistance in order to improve the ability to manage microfinance. The absence of a direct effect of strengthening Farmers Group Association to farmer participation in this study is contrary to Douthwaite et al (2006), Hellin et al (2009), Ofuoku and Chukwuji (2012), Chesoli (2013).

The strengthening of Farmers Group Association that does not directly influence the participation of farmers allegedly caused by all the members of farmer groups interact with Farmers Group Association. Based on the information of respondents and the fact encountered in the field, only a relatively small number of farmer groups that actively interact with Farmers Group Association. The Joint farmer groups have limited interaction with all members. Thus it is understandable why strengthening Farmers Group Association does not directly influence the participation of farmers. Among the active members of farmer groups in Farmers Group Association, is a member of the group who is also administrators of farmer groups. Administrators of farmer groups which get the strengthening together with Farmers Group Association should be able to continue all the information to all members of farmer groups. Thus it can be argued that the farmer's groups could be the mediator between Farmers Group Association with all members. The statement reflects the close relationship between Farmers Group Association with farmers' groups can be proved with height figures correlation between strengthening Farmers Group Association with the strengthening of farmer groups which is very noticeable ( $\alpha < 0,01$ ).

Table 1 shows that there is a significant effect of the strengthening of farmer groups directly against the participation of farmers ( $\alpha < 0,05$ ). The amount of the direct effect of the strengthening of farmer groups on the participation of farmers indicated by the path coefficient value (P31). P31 value of 0.731, which means that there is a direct effect of the strengthening of farmer groups on the participation of farmers amounted to 53.4% ( $0.7312 \times 100\%$ ).

Table 1 shows that the strengthening of farmer groups directly and significantly affect the participation of farmers. Efforts to the strengthening of farmer groups have been made by extension workers, community leaders and the group management. Efforts to strengthening the farmer groups through facilitating the implementation of the teaching-learning process and facilitate the sharing of tasks among members. There is also the facilitation of business alliances with other farmer groups, counseling and training the application of technology (materials, tools, and ways) farming and extension increases the ability to analyze the market and business opportunities. Counseling which was carried out is also related to strengthening farmer groups,

such as the counseling to improve the ability to analyze the potential of the region, the counseling increases the ability to manage commercial farming, the activities of making work plans/activities, and is an encouragement, so that farmers willing and able to perform activities of savings / lending for working capital. The presence of the effect of strengthening the farmer groups on the participation corresponds with the results of Douthwaite et al (2006), Hellin et al (2009), Ofuoku and Chukwuji (2012), Chesoli (2013) and Schmidt et al (2015).

The results of the research can prove that strengthening farmer groups as local community organizations were able to improve the fabric of the relationship, horizontally with farmers, thus having a significant influence on the participation of farmers. Based on the information of respondents, almost all active members join the activities of farmer groups despite the current farmer groups activities decreased frequency. Among members of farmer groups established a harmonious relationship in the farmer groups organization. This condition is reinforced by the statement of Wrihatnolo and Dwidjowijoto (2007) that within the development, the role of local community organizations has to be organized hierarchically so that information about the current situation can be multidirectional braided, both vertically and horizontally.

Associated with educational programs that empower, based on the information of respondents, strengthening farmer groups activities carried out in cooperation extension workers, community leaders and farmer groups that emphasize awareness and creation of management and members of farmer groups. This situation is in line with Ife (2002) who noted the importance of institutional power. Kind of the strength of the community that can be used to empower one of which is the institutional power. In this research, institutional strengthening is reflected in the strengthening of farmer groups. Farmer groups is a public institution that has been prevalent in rural communities based on agriculture so that the emphasis on the institutional strengthening of the agricultural community will be at the farmer groups. The results also confirmed by Hikmat (2006) who argued that the concept of empowerment in society strengthening discourse is always attributed to the concept of participation. Participation is what according to Kuper and Jessica (2000) is useful in tackling the various issues surrounding poverty and unemployment. This is because of the efforts is the emphasis on generating awareness and creativity of local people so that they are willing and able to look for ways to solve their own problems.

Effect of the strengthening of farmer groups on the participation of farmers allegedly due to the role of farmers' groups has been able to become the initiator, catalyst, and motivator. Some respondents suggested that farmer groups often have the initiative as a driver for the farmers to organize and develop the participation of the farmers themselves. Farmer groups often encourage and stimulate the formation of synergy and cooperation among the members, previously had stood alone with each character, towards a greater collective common goal. The next group of farmers has been able to facilitate or assist farmers in serving the needs of its members. Given the importance of farmers' participation in the strengthening of farmer groups described by Kuper and Jessica (2000) that the strengthening of community organizations is seen as a vehicle for the mobilization of the rural population to engage in various development programs as engagement can raise public awareness about their ability to build their own environment. Likewise Soetomo (2006) points out the general principles of community development is a priority to community participation and Triyanto et al (2006) which states that in the development of society, it is important for active participation in the form of collective action (group action) in solving problems and meeting their needs has been done base on the potential own by the community. Participation is important in strengthening the community so that it is necessary to increase efforts to improve it. The results of this study to inform you that one of the efforts that can be done to increase the participation of farmers is through the strengthening of farmer groups.

Place of execution of this research is a rural community incorporated as a participant group of farmers who are part of the target extension that always takes part and attends the empowerment of agricultural extension. The main challenge faced in empowering rural communities is limited knowledge, the area which is remote and the understanding of the traditional beliefs or strong customs. Efforts to make changes in the condition of such people is to understand the thoughts and actions of people and make them believe in empowering actors. Furthermore, they need to participate in the alteration process offered by providing opportunities to determine individual choice rationally. This process provides more effective results than giving a predetermined selection. Steps to perform all of these processes aligned with Zubaedi (2007) that first have to form Self Help Groups (SHGs). In the agriculture-based village communities, self-help groups

are identical with farmer groups. The farmer group is a vehicle for teaching and learning activities, a place to discuss identifying and solving problems, preparation of work plans/activities and capacity building in agriculture. Therefore strengthening conducted on farmer groups can open up access to information, providing an explanation regarding government programs which has been encouraged, societal norms that need to be known, the rights of communities to protect, and the benefits of the changes. Thus strengthening farmer groups can increase the participation of farmers.

### **Effect of Strengthening Farmers Group, Strengthening Farmers Group Association, and Participation of Farmers on Farmers Independency/self-reliance**

Effect of Strengthening Farmers Group, Strengthening Farmers Group Association, and Participation of Farmers on Farmer's Independency/self-reliance, was based on data analyzed using SPSS to get the value of  $R^2$  (R square) and  $\rho$  (*Standardized Coefficients*/the path coefficient). The results of the statistical analysis are listed in Table 2.

Table 2. Results of statistical analysis of the influence of institutional strengthening of farmers and farmers' participation on farmer independence/self-reliance

Description	Nilai	. p-value	Remarks
R square	0,586	0,000	There is a linear relationship
The coefficient between $X_1$ on $Y_2$	0,493	0,002	Significant
The coefficient between $Y_1$ on $Y_2$	0,328	0,011	Significant
The coefficient between $X_2$ and $Y_2$	0,161	0,257	Not Significant
Correlation $X_2$ with $Y_1$	0,671	0,000	Correlates very noticeable
Correlation $X_2$ with $Y_2$	0,664	0,000	Correlates very noticeable

Information:

$X_1$ : Strengthening farmer groups

$X_2$ : The strengthening of farmer group

$Y_1$ : Participation of farmers

$Y_2$ : Farmers Independency

P :The path coefficients



Based on the analysis of research data through path analysis technique that has been presented in Table 2, it appears that the strengthening of farmer groups and farmers' participation jointly affects the independence of farmers but not with variable reinforcement Farmers Group Association. The existence of influence jointly on strengthening farmer groups and the participation of farmers on farmers independence evidenced by the coefficient of determination ( $R^2$ ) were significant at  $\alpha = 0,05$ . The results of the analysis of determination coefficient get  $R^2$  value of 0.586. Implies that the value of the variable strengthening farmer groups and farmers' participation jointly affects the independence of farmers amounted to 58.6% while the remaining 41.4% is explained by other factors beyond the study

Table 3. Total direct and indirect effects of each variable

Description	Direct effect	Indirect effect	Effect Total
The influence of $X_1$ to $Y_1$	0,534	-	0,534
The influence of $X_1$ to $Y_2$	0,243	through $Y_1$ 0,118	0,361
The influence of $X_2$ to $Y_1$	-	through $X_1$ 0,383	0,383
The influence of $X_2$ to $Y_2$	-	through $X_1$ 0,256 through $Y_1$ 0,146	0,402
The influence of $Y_1$ to $Y_2$	0,107	through $X_1$ 0,118	0,225

Information:

$X_1$ : Strengthening farmer groups

$X_2$ : The strengthening of Farmers Group Association

$Y_1$ : Participation of farmers

$Y_2$ : Farmers Independency

Table 2 and Table 3 shows that the strengthening of farmer groups and farmers' participation influence simultaneously and directly of the farmer independence which in detail consists of direct influence and indirect strengthening farmer groups on farmer independence, and the direct and indirect influence of participation of farmers on farmer independence. The indirect effect of strengthening farmer groups on the independence of farmers through farmer participation. Likewise, the indirect effect of participation of farmers on self-reliance of farmers by strengthening farmers' groups. The results of this study correspond with research conducted by Fonchingong and Fonjong (2003), Ofuoku and Isife (2009), Tambunan (2009) and Oktarina et al (2012).

Based on the information from respondents and some facts on the ground, the agent has been trying to strengthen farmer groups and raise the participation of farmers. Strengthening farmer groups has been done by facilitating the organization of the learning process, facilitating the distribution of tasks among members, facilitation via cooperation efforts with other farmers groups, extension and training technology application (materials, tools, and methods) of farming, extension increases the ability to analyze the market and business opportunities, counseling improve the ability to analyze the potential of the region, the extension increases the ability to manage commercial farming, the activities of preparing the work plans / activities plans and as encouragement, to farmers willing and able to perform activities of savings and lending for working capital. Extension Workers have also attempted to raise the participation of farmers through volunteerism, involvement in decision-making / planning, involvement in the implementation of activities, involvement in evaluation activities, involvement in the utilization, and involvement in the community to invite others to engage. Extension efforts in collaboration with community leaders and administrators of farmer groups in strengthening farmer groups and farmers' participation have succeeded in giving effect to the farmer independence.

Based on the field findings, in the strengthening of farmer groups there are initiatives from the government through extension workers and farmers develop a spirit of entrepreneurship by facilitating some soft loan program that is integrated into the activities of the strengthening of farmer groups. Strengthening of farmer groups also appears through activities such as an increase in the ability to analyze the market and business opportunities, improving the ability to analyze

the potential of the region, increasing the ability to manage to farm commercially and implement micro-credit activities for venture capital. Field findings are in line with strengthening farmer groups indicators and suspected to trigger the growth of spirit in entrepreneurship so as to contribute to the influence of the strengthening of farmer groups on farmer independence, as Okpukpara (2009) explains that the economic growth and development can not be achieved without placing program on the appropriate focus through which emphasizes the empowerment of the entrepreneurial spirit. Explanation of entrepreneurship was stated also by Tambunan (2009) that build the entrepreneurial spirit is the first process to a sustainable business.

Based on interviews with the respondents obtained information that the farmers as members of farmer groups, the presence of relationships with other members and members of farmer groups can help solve problems faced by farmers and enhance its role both economically and socially. With the establishment of better relations in the farmer groups organization are causing farmers to be able to determine their own path and to reduce dependence on middlemen. This condition is aligned with Otieno et al (2009) who argued that farmer groups as a forum for cooperation can make the farmers are getting stronger in order to increase profits and avoid losses. Thus agricultural businesses become more profitable and competitive so as to reduce dependence on middlemen and make farmers independent. This condition is also supported by Hellin et al (2009) that the farmer institutions and collective action are often seen as a key factor in improving farmers' access to markets. Likewise, Schmidt et al (2015) which states that the structural condition of farmers is the impact of the characteristics of a group of farmers. The study also supports by Oktarina et al (2012) that the concept of farmers institutional strengthening strategies can increase the level of independence of farmers.

Independence becomes an important keyword in counseling that empowers. Interviews with respondents and field survey results showed that most farmers already have the capacity to optimally utilize the potential of the resources they have without having to wait for help from others or depend on outsiders. Some farmers already have the capacity to criticize and express opinions without overshadowed by fear or pressure from other parties. Some farmers also have the capacity to develop themselves through the learning process without depending on outsiders. These conditions are in line with the explanation of Fonchingong and Fonjong (2003) that

independence is one of the bases of effective community development. In fact, the concept of independence is connected with the concept of self-help, mutual aid, community participation and rural development. Farmer independence believed to be the estuary of an agricultural development effort (Christenson 1989). Likewise argued that communities are empowered until its independence. Empowerment is done through their own efforts. Accumulated knowledge, skills and other resources in order to achieve objectives without relying on the help of external relations.

The results of this study were able to present some of the variables that can affect the independence of farmers. These variables are strengthening farmer groups and the participation of farmers who significantly influenced the independence of farmers. The research result is in line with Ofuoku and chukwuji (2012), that in order to achieve independence, participation is required. Through participation in farmer groups according to Ofuoku and Isife (2009) appears greater mutual understanding between the group members which oriented to focus on economic interests and maintain the values, culture and the strength of the group. Thus the farmer participation in farmers' group was able to bring the farmers on their independence/self-reliance. The influence of participation of farmers to farmer independence can not be separated from the participation itself which, according to Pali et al (2005) is a means of empowerment of farmers to improve their welfare. Empowerment puts people as a target that can be capacitated with innovation and technology. Furthermore, also explained that the participation is the internal activities of farmers as an empowering tool appreciation of initiative, control, corrective action, cost effectiveness, and activities that are more accurate and relevant.

The independence of farmers in this research is the ability of farmers on taking the best decisions for themselves on the basis of capabilities such as competitiveness, coupled and filter power. The implication of this study is an effort to improve the ability of farmers to have the competitiveness, coupled and filter power and ability can be done through strengthening institutions, especially farmers' group and involving farmers in the institutional activities.

#### 4. Conclusion

Research on the influence of institutional strengthening on participation and independence of farmers have been implemented in Bogor. The results showed that the strengthening of farmers' group directly affects the participation of farmers. Strengthening farmers' group and farmers' participation influence simultaneously and directly on farmer independence. Furthermore, the strengthening of Farmers Group Association does not directly influence the participation and independence of farmers but should still be a concern because it has indirect influence through farmers' group that are part of the Farmers Group Association.

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