



The Role of Communication in Farmer Learning: The Case of Farmer Institution-Based Cocoa Replanting in East Kolaka District, Indonesia

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Abstract

The purpose of this study was to analyze the role of communication in the learning process of farmers in replanting cocoa and the factors that influence it. This research is a survey research with research locations in East Kolaka District, Southeast Sulawesi Province in 12 villages. The location was chosen because it is a village where the majority of the population cultivates cocoa as the main source of income and a cocoa farmer institution has been formed. The research was conducted for three months, from October to December 2020. The total sample was 192 cocoa farmers from 542 populations that were randomly selected (proportional random sampling) from each farmer institution. Methods of data collection by interview using a questionnaire that has been prepared. Data analysis used descriptive analysis and SEM-GSCA (Structural Equation Modeling-Generalized Structure Component Analysis) analysis. The results showed that communication played a significant role in the learning process of farmers in the farmer institutional-based cocoa replanting program. Farmer characteristics, institutional characteristics, and the support of the three supporting factors influence the role of communication in the farmer's learning process in cocoa replanting.

1. Introduction

The Indonesian government's policy on cocoa development is carried out using a group approach. The cocoa development program launched by the government is cocoa replanting which aims to increase farmers' cocoa production. Currently, cocoa productivity in East Kolaka Regency is 0.3 tons/ha (East Kolaka Regency Plantation Office, 2020) far from its ideal potential, which has the potential to reach 1-2 tons per hectare. The low productivity of cocoa is caused by farmers' cocoa trees being old (> 20 years old) so they need to be replanted. However, the cocoa replanting program cannot be easily accepted by farmers, because it is related to economic, technical and social factors. Farmers need income, if replanting is done, the farmers' cocoa plants will be cut down and the farmers will no longer receive income. Likewise from a technical point of view, the existence of a cocoa replanting program for farmers requires new skills so socially it will affect the level of acceptance. Various problems faced by farmers in the cocoa replanting program are related to the institutional role of farmers which is still low and does not meet farmers' expectations (Listyati, Wahyudi, & Hasibuan, 2014; Prawiranegara, 2016). The low role of farmer institutions is because farmer institutions are only used as program administration activities and not as a forum for social learning processes (Syahyuti, 2003). Farmer institutions play more of a role as a technology transfer than as a social learning process.

The weak institutional role of farmers is believed to be related to the pattern of communication that occurs within farmer institutions. The pattern of communication in cocoa development is still one-way so that it is less capable as a medium for channeling the aspirations of farmers. Sadono,(2009) argues that there has been a shift in the pattern of communication in agricultural development from a linear nature (from the government to farmers) towards a participatory and dialogic communication pattern so that it can fulfill the aspirations of farmers. In the case of the black rice development program, it was found that communication patterns tended to use personal network communication patterns (Zulfiningrum, Sumardjo, Saleh, & Agusta, 2019). The communication factor becomes an important factor in institutional management in information processing. Information processing can occur well if communication is lateral in nature which allows all parties, including farmers, farmer institutions, extension workers and the government, to exchange information in a shared learning forum. The results of the deliberations become the government's basis for policy making in cocoa development. The occurrence of interactive communication between farmers, farmer institutions and the government is more effective in increasing farmer participation in an activity/program (Koesoemowardani, 2008). Therefore, this study focuses on the communication factor as a factor that supports the learning process among farmers in replanting cocoa plants.

The role of communication in the learning process of farmers can be realized if all parties are willing to share information and knowledge. Communication plays a role in facilitating network building, social learning and negotiation of innovation (Leeuwis, 2013; Amanah, 2010). The communication process can occur in a farmer's institution as a farmer's organization in communicating various technological innovations among stakeholders in cocoa development. The existence of farmer institutions can be used as an entry point for efforts to disseminate technological innovations for farmers(Suradisastra, 2008). Farmers who are grouped in farmer institutions are social beings who cannot be separated from their social environment. Farmers are not passive people but can actively design and change their environment according to their knowledge. Farmers will actively seek information according to their needs by using various information communication media, and if it is not possible they will do so according to the experience they already have. The learning process in farmer institutions can be realized if the communication process allows all parties to participate in discussions and dialogues among farmers, government extension workers and other related parties in a farmer institution (Mughtar, Purnaningsih, & Susanto, 2014). The cocoa replanting program launched by the government in 2019 around 1,000 ha has only achieved less than half. The obstacle faced is the existence of doubts from farmers about its success (Interview with Mr. Suwardi, Dangia District extension worker, 2020).

The cocoa replanting program is not being followed by cocoa farmers, because the communication by the government and farmer institutions is believed to be inappropriate. The government should be able to open communication with all actors to share information on the cocoa replanting program so that they can find out what the cocoa farmers want. The role of communication in good farmer institutions allows for a joint learning process between farmers and related stakeholders. The occurrence of a joint learning process between farmers through a lateral communication process allows information and knowledge sharing to occur so as to enable increased knowledge, attitudes and skills of farmers in supporting the cocoa replanting program. The role of communication in the learning process of farmers can be realized allegedly influenced by several factors such as characteristics of farmers, characteristics of institutions and support from related parties. The purpose of this research is to examine the role of communication in the learning process of farmers and the factors that influence it.

2. Materials and Methods

This research is a survey research. The research location is in East Kolaka Regency, Southeast Sulawesi Province in 12 villages. The 12 villages were chosen because they are villages where the majority of the

population cultivates cocoa as the main source of income and a cocoa farmer institution has been formed under the name of the Prosperous Community Economic Institution (PCEI). The research was conducted for three months, from October to December 2020. The total sample was 192 cocoa farmers from 542 populations that were proportional random sampling from every PCEI. The object of research is cocoa farmers who are members of PCEI. The variable role of farmer communication is measured by four indicators, namely; access to information, mediation of information, methods of information communication and the effectiveness of information communication. The data collection method is by interviewing selected PCEI members using a prepared questionnaire. Data collection was also carried out by means of in-depth interviews and focused discussions. The categorization of each research indicator uses a score based on a Likert scale with five categories namely; score 1 category is very low, score 2 category is low, score is 3 categories is medium, score is 4 categories is high and score is 5 categories is very high. Data analysis used descriptive analysis and SEM-GSCA analysis. Descriptive analysis is used to explain social phenomena that are measured based on percentages and average values. SEM-GSCA analysis was used to determine the effect of each of the latent variables studied. Questionnaire as a data collection tool, has previously been tested for validity and reliability. Based on the test results, it showed that there were several variables that were still not reliable and valid, then improvements were made so that all research variables were declared reliable and valid.

3. Results and Discussions

Characteristics of Farmers

Characteristics of cocoa farmers which include aspects of cultivated land area, cosmopolitanness, motivation in cocoa farming and the level of activeness of farmers in farmer groups/institutions. The research results are seen in Table 1.

Table 1
Characteristics of cocoa farmers in East Kolaka Regency

Aspect	Category (%)					Average Score
	1	2	3	4	5	
Garage area	1,5	19,1	49,1	24,7	5,6	2,35
Cosmopolitan	6,4	28,1	39,0	24,0	2,6	2,88
Motivation for cocoa farming	9,4	29,9	32,6	25,5	3,4	2,84
Activeness of farmers in institutions	2,6	35,2	34,1	22,8	5,2	2,93
Average Total						2,75

Table 1 shows the characteristics of cocoa farmer respondents for the area of arable land which is a characteristic of farmers that needs to be known in supporting cocoa replanting. The results showed that most of the farmers (49.1%) had an area of cocoa cultivation between 2-2.9 hectares. Meanwhile, the respondent farmer's area of cocoa land ranges from 0.5 to 8 ha. If seen from the average area of farmers' cultivated land of 2.35 hectares, it can be categorized as cocoa farmers having a large enough land area, all of which are owned land. Another characteristic of cocoa farmers is the cosmopolitan level where the majority (39.0%) are in the medium category. Furthermore, the motivation level of farmers in cocoa farming (32.6 percent) is in the medium category. If seen from the average total score of farmers' motivation in farming with a value of 2.84, it indicates that the motivation of farmers in cocoa farming is in the low category. Finally, the activity level of most farmers in PCEI (35.2 percent) is in the low category. If seen from the average score of farmer activity in groups/ PCEI of 2.53, it indicates that the level of activity of farmers in LEMS is in the low category. Farmers are less active in participating in PCEI meetings and activities, less active in expressing opinions or discussing

at meetings held by PCEI. Overall, when viewed from the average value of the farmer's characteristic level of 2.75, the category tends to be still low.

Institutional Characteristics

The characteristics of the institutions studied include; member cooperation, role division, institutional rules, leadership and group cohesiveness. The research results can be seen in Table 2.

Table 2
Characteristics of cocoa farmer organizations in East Kolaka Regency

Aspect	Category (%)					Average Score
	1	2	3	4	5	
Member cooperation	8,2	32,2	34,5	21,7	3,4	2,79
The division of roles	3,0	29,2	34,1	30,3	3,4	3,02
Institution Rules	4,9	23,6	38,2	30,0	3,4	3,03
Leadership	1,5	19,5	46,1	31,1	1,9	3,12
Group cohesiveness	8,3	8,2	48,7	32,6	2,2	3,21
Total Average						3,06

Table 2 shows the characteristics of the dominant institution in category 3, which is quite good (moderate category). This condition can be explained from the indicators studied that the level of cooperation between farmers in institutions is mostly (34.2%) stating that sometimes there is cooperation within groups in cocoa cultivation. Based on the total value of the average score of the cooperation level of PCEI member farmers of 2.79, it means that the level of cooperation of PCEI member farmers in carrying out cocoa development activities tends to be low. Collaborative activities between cocoa farmers in cocoa farming activities are rarely carried out. Furthermore, the division of roles, the majority (34.1%) stated that there was a clear division of roles in PCEI. Judging from the total value of the average score of the division of roles with a value of 3.02, it is in a fairly clear category. This indicates that both PCEI member farmers and PCEI officials know their respective roles. Another aspect of institutional characteristics, namely institutional rules, namely the majority of PCEI member farmers (38.2%) stated that there were PCEI rules and were quite helpful in supporting cocoa replanting. Based on the average score, a value of 3.03 is obtained, meaning that the presence of PCEI in relation to the regulations made is felt to be sufficient to support farmers in cocoa development. Another aspect is institutional leadership, namely the majority of cocoa farmers (46.1%) consider PCEI leadership to be quite good, namely having the ability to lead, being trustworthy, being honest and being able to set an example for farmers. If seen from the average score of the leadership level of the PCEI board with a value of 3.12, it is in the fairly capable category. Farmers consider that the leadership of PCEI (PCEI administrators) is quite capable as a leader. Lastly is the level of group cohesiveness, the majority of PCEI member farmers (48.7 percent) stated that they were quite interested in PCEI. The farmer's interest in joining PCEI is that farmers feel cared for by frequently getting assistance, being able to borrow business capital at PCEI. Overall the characteristics of the institution for aspects that are assessed have an average value of 3.05 indicating that the characteristics of the PCEI institution as a forum for farmers in cocoa development in East Kolaka are in the fairly good category. The characteristic of the institution that is still low is that group cooperation needs to be improved, both cooperation between farmers and collaboration with relevant stakeholders. The division of roles, institutional rules and leadership as well as group/institution cohesiveness is good enough.

Supporting Factor Support

Support supporting factors studied included government support, support for extension institutions, support for LSM/NGO and support for market institutions. The research results in Table 3.

Table 3
Supporting factors in cocoa replanting

Aspect	Category (%)					Average Score
	1	2	3	4	5	
Government support	1,1	17,8	53,2	25,5	2,6	3,11
Extension agency support	2,2	24,0	39,7	31,1	3,0	3,09
NGO support	15,7	28,8	30,0	21,0	4,5	2,70
Market institutional support	3,4	18,7	41,6	33,7	1,1	3,13
Total Average						3,00

Table 3 shows the supporting factors in the development of category 3 cocoa, which is quite good (moderate category). This condition can be explained that the majority of cocoa farmers (53.7%) feel that there is sufficient government support in cocoa development. If seen from the total average value of government support, a value of 3.11 is obtained, meaning that government support for cocoa development in East Kolaka is in the medium category. Furthermore, the support from extension agencies, the majority (39.7%) of cocoa farmers feel that the support of agricultural extension agents is sufficient. If seen from the average value of support from agricultural extension institutions with a value of 3.09, it means that agricultural extension support is in the category of being in the middle of developing cocoa in East Kolaka. While the support from LSM/NGO, the majority (30.18%) of cocoa farmers feel that the support from LSM/NGO is sufficient. However, if seen based on the average total score with a value of 2.70, it means that LSM/NGO support is in the low category. lastly is the support from market institutions, most of the cocoa farmers (41.6%) feel that market institutions have sufficient support in replanting cocoa. If we look at the average value of market institution support for cocoa development with a value of 3.13, it is in the medium category, meaning that there is sufficient support from market institutions in cocoa replanting. Overall, supporting factor support based on a total average value of 3.00 means that the supporting factor support in the replanting program category is quite supportive. The support from the role of the government, extension institutions, and market institutions felt by cocoa farmers is quite supportive, while the support of LSM/NGO is still not involved in replanting cocoa in East Kolaka.

The Role of Communication in Farmer Learning

The role of communication is an illustration of how the process of exchanging messages (message processing) that occurs between communication actors in farmer institutions in the cocoa replanting program. The role of communication as a forum for learning with farmers through knowledge sharing (knowledge sharing) in the communication perspective examined in this study include roles in: access to information, mediation of information, methods of information communication, and the effectiveness of information communication. The research results in Table 4.

Table 4
The role of communication in cocoa replanting

Aspect	Category (%)					Average Score
	1	2	3	4	5	
Information access	2,2	35,2	36,7	22,8	3,0	2,89
Information mediation	1,1	35,2	34,5	24,7	4,5	2,96
Information communication methods	0,4	21,3	49,4	24,3	4,5	3,11

Effectiveness of information communication	0,4	22,8	47,6	25,8	3,4	3,09
Total Average						3,01

Table 4 shows the role of communication in the learning process of farmers in cocoa replanting activities that are dominant in category 3, which is moderate (moderate category). This situation can be explained that the majority of farmers (36.7%) in access to information are in the medium category. If seen from the average value of access to information score of 2.89, access to information by farmers tends to be still low. These results illustrate that access to information related to replanting cocoa is sometimes difficult for farmers to obtain. Most of the farmers (34.5%) played a role in mediating information. However, if seen from the average score of 2.96, the role of communication in mediating information communication for farmers is in the sufficient category but tends to be still low.

Furthermore, the role of the information communication method for the majority of cocoa farmers (49.4%) has quite a role. This is supported by the average score of 3.11 percent, meaning the role of communication in supporting farmer learning in moderate category cocoa replanting activities. Some of the information communication methods used by farmers to increase the knowledge and skills of cocoa farmers are conducting counseling, training and visits to the gardens of successful farmers who have previously replanted cocoa. The results of research by Yekinni et al. (2019) that the use of the extension method can be done through visits to farmers' gardens (89.2%) and home visits (78.5%). Next is the role in the effectiveness of information communication, most cocoa farmers (47.6%) stated that the role of farmer communication was quite effective in increasing knowledge and skills in cocoa replanting activities. If seen from the average score obtained, namely 3.01, then the role of communication in the learning process of farmers seen from the effectiveness of information communication based on farmer institutions is in the medium category. The success of PCEI in communicating information to PCEI member farmers so as to describe the level of knowledge as well as skills and attitudes of farmers can be seen from several existing farmers who have carried out nurseries, used organic fertilizers/compost, rejuvenated cocoa plants using shoot grafting seeds, carried out balanced fertilization, and controlling pests and plant diseases. If seen from the average score obtained at 3.06, it indicates that the role of communication in the learning process of farmers, especially in providing useful information, is in the medium category. Overall, the role of communication can be seen from the total average score of 3.02 indicating that the role of communication in supporting cocoa replanting in East Kolaka Regency is in the moderate category. The role of communication in supporting farmer learning that is still low is the role in accessing information and mediating information, while the role in information methods and the effectiveness of information communication is quite good but needs to be improved. To increase the role of communication in farmer learning the use of social media can be an option. This is supported by the results of research by Iwuchukwu, Eke, & Nwobodo, (2019) that Facebook and WhatsApp are very good as communication media in disseminating agricultural technological innovations. The results of research by Iwuchukwu, Eke, & Nwobodo, (2019) that the majority (70.1%) of respondents indicated that Facebook was a suitable social media for communicating different agricultural practices, while 69.1% indicated that Facebook was suitable for creating awareness and participation in agricultural programs. Whatsapp is suitable for communicating the market situation/price of agricultural commodities (56.7%) and various agricultural practices (53,6%).

Determinants of the Role of Communication in Farmer Learning

Analysis of the determinants that influence the role of communication in farmer learning using SEM-GSCA analysis. The relationship between variables is said to be significant if the test value or p-value is less than alpha (5% / 0.05). The results of the analysis (Figure 1) show that the characteristics of farmers (X1), the characteristics of institutions (X2), and the support of supporting factors (X3), have a positive and significant effect on the role of communication in farmer learning (Y). The role of communication in farmer learning is most dominantly influenced by farmer characteristics (X1) of 0.306 ($p=0.000$), when compared to the

magnitude of the influence of institutional characteristics (X2) of 0.183 (p=0.000) and supporting factor support (X3) of 0.114 (p = 0.028). The positive influence shows that the better the characteristics of the farmers, the characteristics of the institutions, and the support of the supporting factors, the more the role of communication in farmer learning will increase.

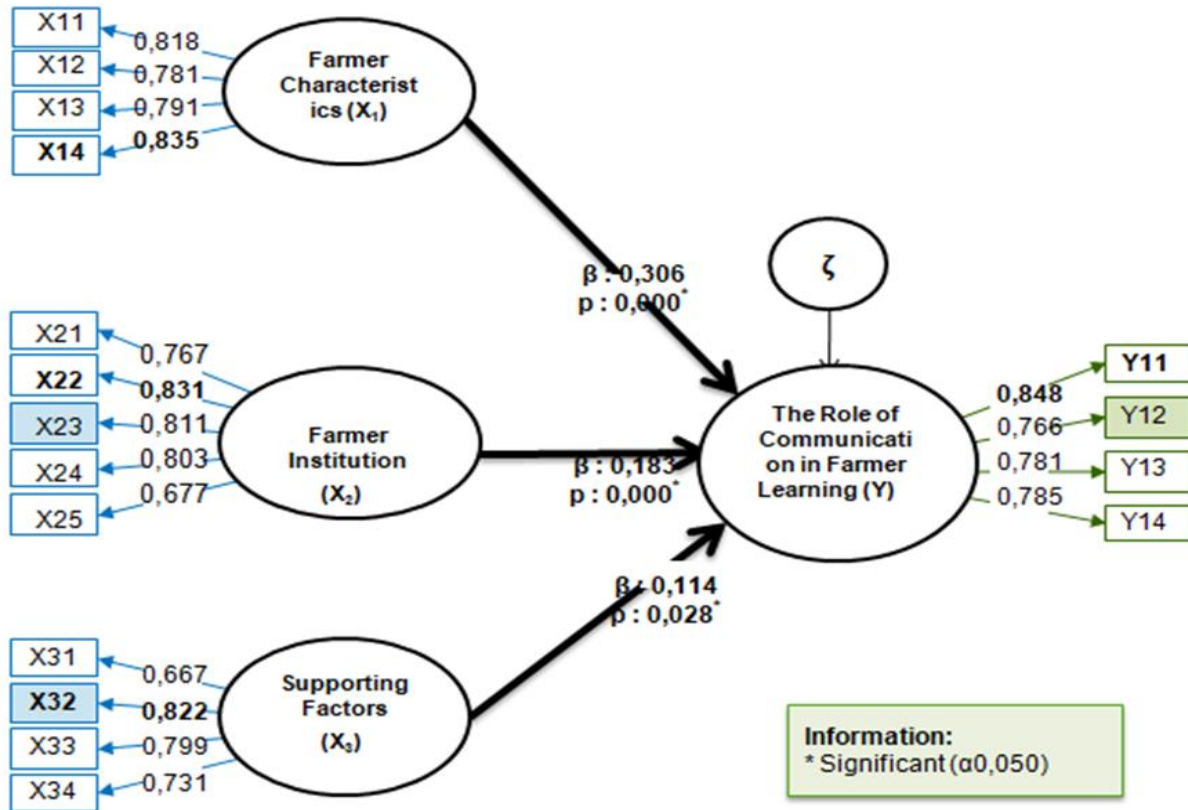


Figure 1. Relationship between research variables

Furthermore, to measure whether the model can be used in this research, model testing is carried out. The overall fit test of the model was carried out by analyzing the statistical Goodness of Fit (GOF) produced by the program, in this case the GSCA. Based on the guidelines for GOF measures and the results of the GOF statistics, an analysis of the overall fit of the model can be carried out (Table 5).

Table 5 Test results Goodness of fit Index

Goodness of fit Index	Cut of Value	Results	Description
FIT	> 0,500	0,56	Model good fit
AFIT	> 0,500	0,56	Model good fit
GFI	> 0,900	0,95	Model good fit
SRMR	< 0,080	0,41	Model Marginal fit

Table 5 shows that the GOF measurement values, namely the FIT, AFIT and GFI values, have met the suitability of the model and only the SRMR values are still not appropriate. That is, even though there are criteria that are not met, it does not mean that the model as a whole is not accepted, if only one of the GOF indicators is met, then that indicator can represent another model accuracy test indicator.

Several factors that influence the role of communication in the learning process of farmers on cocoa replanting are explained as follows: First, the characteristics of farmers. Farmer characteristics significantly influence the role of communication in farmer learning (Figure 1) with a coefficient value of 0.306 ($p=0.000$). This means that, the better the characteristics of farmers will cause the role of communication in farmer learning to be better. The results of this study are in accordance with research conducted by (Koesoemowardani, 2008).; Adawiyah & Mulyani, (2017) that one of the factors that influence the effectiveness of communication and the role of farmer communication in groups is the characteristics of group member farmers. Farmers' low access to information on agricultural innovations is a fundamental problem for farmers with weak characteristics (Cahyono, 2014; Agunga, Cahyono, Buck, & Scheer, 2016). If seen from the indicators that make up the characteristics of farmers, the indicator that has the dominant influence on the role of communication in farmer learning is the activeness of farmers in group/institutional activities with the highest loading factor value of 0.835 in shaping farmer characteristics. This means that the more active the farmer is in a group/institution, the more it influences the role of communication in the farmer's learning process. These results are in accordance with the results of research by (Koesoemowardani, 2008) that the communication pattern of farmers in farmer institutions is influenced by the level of participation of farmers in institutions. The results of the research by Bucăța & Rizescu, (2017) also support the findings of this study that the role of communication in an organization will be more effective if it is supported by internal communication between members so that they can cooperate effectively and actively participate in every organizational activity. The activeness of farmers in group/institutional activities can be seen from the presence of farmers in every PCEI meeting, being active in every PCEI activity and being involved in discussions held by PCEI.

The level of activity of PCEI cocoa farmers in PCEI activities in East Kolaka Regency is in the low average category (Table 1). Farmers are less active in participating in PCEI meetings and activities, less active in conducting discussions at meetings held by PCEI. The low activity of farmers in the PCEI institution has an effect on the low role of farmer communication in the farmer learning process such as low access to information, information discussion, training activities conducted by PCEI and information utilization. The research results of Oktarina & Rustiadi, (2008) support these findings which state that the weak effectiveness of farmer communication in a farmer organization is caused by the weak characteristics of farmers. Research Abdullah, (2019) support the finding that low individual participation in dialogue or discussion in using communication channels as a learning medium causes the level of community participation in development communication to also be low. Other farmer characteristic factors that have the potential to influence the role of communication in farmer learning are land area ownership, farmer motivation in farming and cosmopolitan level.

The second factor that influences the role of communication in farmer learning in cocoa replanting activities is the characteristics of the institution. Institutional characteristics significantly influence the role of communication in farmer learning (Figure 1) with a path coefficient value of 0.183 ($p=0.000$). The better the characteristics of the institution, the better the role of farmer communication in learning. The results of research by Sulaiman et al. (2015) support the findings which state that the characteristics of stakeholders have a real influence on the intensity of communication in village/kelurahan development planning meetings. Teo, Lim, & Fedric, (2007) the results of his research also stated in communication diffusion and information system adoption that organizational characteristics have a relatively important role in adoption decisions compared to innovation characteristics and environmental characteristics.

There are five indicators of institutional characteristics that are measured, all of which have a significant influence. Based on the factor loading value of the role sharing indicator (X2.2), which forms the highest

variable institutional characteristics with a loading value of 0.831. This means that the clearer the role of member farmers or the more evenly distributed the duties and responsibilities of farmers in PCEI will further increase farmer activities in participating in PCEI activities. The realization of communication within the group is very important for group administrators in realizing the occurrence of mutual interactions between group members in order to realize the implementation of group/organizational activities and goals (Christabel, 2014). The existence of a clear division of roles can increase the cohesiveness of group members and can strengthen the group (Arimbawa, Batoa, Iskandar, & Limi, n.d. 2016). PCEI is an institutional cocoa farmer in East Kolaka that has an institutional structure. The institutional structure regulates the role of each member based on their status in the group/institution (Abu Huraerah, 2010).

The results of the research on the division of roles in PCEI institutions (Table 2) are quite clear. The PCEI Chair has carried out his role according to his position as well as the secretary and treasurer. However, there are several PCEI where PCEI activities are concurrently carried out by the PCEI chairperson. PCEI correspondence and financial arrangements are handled by a PCEI chairperson. The role of the secretary and treasurer is limited to knowing only. Likewise, the supervisory board has not functioned properly. Some farmer members of PCEI are quite aware of their role, namely being involved in activities carried out by PCEI such as meetings, training and being involved in the implementation of activities carried out by PCEI, but there are still many farmer members of PCEI who do not know their duties and responsibilities as PCEI members. The existence of a fairly good division of roles in PCEI can increase the role of farmers in seeking information, conducting discussions in PCEI, being involved in activities and utilizing information through the role of farmer institutional communication. Other institutional characteristics that have the potential to influence the role of communication in farmer organizations to increase farmer capacity are institutional rules, leadership, cooperation and group cohesiveness.

Another factor that influences the role of communication in farmer learning in cocoa replanting activities is the support of supporting factors. The supporting factors have a significant effect on the role of communication in farmer learning (Figure 1) with a path coefficient value of 0.114 ($p=0.028$). This means that, the higher the supporting factor support will increase the role of communication in farmer learning is also higher. The results of this study are supported by the results of Adawiyah & Mulyani,(2017) that there are several factors that influence the role of communication in group activities, namely the role of assistants and agricultural extension. Amanah's research (2010) also supports the results of research which states that stakeholder support and the role of the community are needed in the planning, implementation and evaluation processes to follow-up as a strategy in development communication.

Based on the measurement model, all supporting factor support indicators, namely government support (X3.1), extension institutional support (X3.2), LSM/NGO support (X3.3), and market institutional support (X3.4) significantly form a variable of factor support support. Among the indicators of support for these supporting factors, support for extension institutions (X3.2) with a factor loading value of 0.822 is the most dominant factor forming the supporting factor support variable. The higher the role/support of extension institutions will increase the role of farmer communication in farmer learning. This fact is in line with the results of research by Adawiyah & Mulyani,(2017) that the role of farmer group communication is influenced by the role of a companion, namely agricultural extension workers. This means that, with the role of agricultural extension agents in cocoa replanting through the PCEI institution, it will increase the role of PCEI as an information media and social learning center for PCEI member farmers. Agricultural extension workers can play a role in educating, disseminating information/innovations, facilitating, consulting, supervising, monitoring and evaluating in supporting the community empowerment process (Mardikanto, 2009).

Agricultural extension institutional support as information dissemination for farmers, improvement of farmers' skills and attitudes through training and technical guidance. Agricultural extension workers can play a role in increasing access to information for farmers (Limi, Arimbawa, Rahmah, & CAHYONO, 2018). The results of this research show the support of extension institutions in replanting cocoa in the medium category

(Table 3). Several factors constrain extension support which are felt to be lacking, namely extension activities have not been carried out continuously, are not scheduled and are only carried out when there is a program from the agency. The mastery factor of information technology by extension workers is still lacking. Some extension agents have not mastered information technology so they experience difficulties in accessing and disseminating information to cocoa farmers. This condition is supported by the results of a study by Enwelu, Enwereuzor, Asadu, Nwalieji, & Ugwuoke, (2017) that extension workers' access to information and extension skills in using information and communication technology (ICT) are still inadequate. Satisfaction with the work of an extension worker is positively related to information seeking (Hossain, Azad, Al Mufthi, Alam, & Abdullah, 2018). Another factor, which also affects the role of agricultural extension workers, is that the number of extension workers is inadequate compared to the area served. Besides that, the role of farmer communication institutions (PCEI) has not fully supported farmer learning in facilitating information. This condition can be seen from the lack of PCEI activity as extension partners in supporting cocoa development, especially in the replanting program. For this reason, the performance of extension agents must be improved in providing guidance to farmer institutions and increasing the competence, skills and abilities of extension agents in professional development of farmers (Shah, Asmuni, & Ismail, 2013). Extension institutions can play a role as a driving force for social learning in groups/institutions. LEMS institutions can act as information centers and forums for farmer learning if they are supported by the role of agricultural extension workers in supporting the joint learning process between farmers. Social learning facilitates group learning, drawing from various sources of information and various perspectives, in order to build collective understanding (Murti & Mathez-Stiefel, 2019). Social learning provides space for stakeholders to approach collective problem solving by jointly defining existing challenges, producing changes in understanding of problems, enabling new meanings to emerge and being able to see their role in the changes needed.

Other supporting factors that have the potential to influence the role of communication in farmer learning in the cocoa replanting program are support from NGOs/NGOs, support from market institutions and support from the government in making policies to support cocoa replanting. The learning process for farmers needs to be supported by the role of a companion, for example extension workers, LSM/NGO and other relevant stakeholders. The communication skills of a companion (extensionist, advanced farmer) are important in order to establish communication with farmers. Extension agents and advanced farmers in assisting farmers must master and be skilled in the material presented so that farmers become enthusiastic and motivated to want to apply it. Muchtar et al., (2014) found that the characteristics of extension agents such as mastery of material and communication skills had a positive influence on farmers' activeness in sharing information with farmers. Through farmer institutional media, extension agents need to share information with farmers in reaching the same agreement to achieve the goal of replanting cocoa. Information sharing between farmers and extension workers is important considering that farmers already have experience and the impact of innovations adopted by farmers is on farmers and their families. Farmers' experiences affect the level of courage of farmers to take risks in adopting innovation behavior (Fausayana et al., 2017).

4. Conclusion

The results of the study can be concluded:

Communication plays a role in the effectiveness of farmer learning in replanting cocoa but still needs to be improved. The role of communication that is still low is the role in accessing information and mediating information while the role in communication methods and the effectiveness of information communication for farmer learning is quite good.

the factors that influence the role of communication in farmer learning are farmer characteristics, institutional characteristics and support supporting factors. These three factors can improve the learning process of farmers in cocoa replanting through the role of farmer institutional-based communication. Based on the research results, it can be suggested that farmer institutions can act as farmer learning institutions so that farmer institutions can communicate with stakeholders in cocoa replanting. Communication also needs to be done well

with farmers and institutional administrators so that all parties can interact and conduct dialogue in supporting the success of cocoa replanting.

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