

## **FACTORS AFFECTING FARMER PARTICIPATION IN PADDY-SPECIAL EFFORTS PROGRAM AT KARAWANG, INDONESIA**

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### **ABSTRACT**

The portion of poverty in Indonesia currently is still greater in rural than urban areas. Efforts to overcome poverty have been carried out through a special effort program on paddy by promoting farmer participation. The study was aimed to analyze descriptively the factors affecting farmer participation in paddy special effort program. The study was conducted in Karawang, West Java Province, Indonesia, from July to September 2017. Research samples were farmers who are members of farmer groups and farmer group associations (Gapoktan) with a total of 120 people using stratified random sampling technique. Research variables consisted of the characteristics of farmers, strengthening of farmer institutions, facilitators, program availability and farmer participation. Data were analyzed using descriptive statistics and multiple regression. The results of the study showed that farmer participation level were mostly high. Factors affecting farmer participation were social status, innovative behavior, moral economy, strengthening farmer groups, strengthening farmer group associations (Gapoktan), government support, the role of extension agents and NCO Village Builders (bintara pembina desa/babinsa) as well as the availability of programs.

**Keywords:** participation, paddy-special effort program, farmer group, extension agents

### **1. INTRODUCTION**

The portion of poverty in Indonesia currently is still greater occurrence in rural compare to urban areas. The Central Bureau of Statistics (2015) reported that poor population in Indonesia in March 2014 was 14,17 percent living in rural area which was greater than those living in urban area of 8,34 percent. By September 2014, poor population in Indonesia was 13,76 percent in rural area which was inversely by 8,16 percent in urban areas. Likewise in March 2015, poor population in Indonesia living in rural area was 14,21 percent which was still greater than those living in urban area of 8.28 percent. In fact, the majority of rural communities are people with

livelihoods as farmers. The amount of poverty in rural areas is very important to find solution in order to overcome the problem.

Extension activities that empower farmers in several countries have been proven to reduce poverty in rural areas. The empowerment emphasizes the participation of farmers in each program (Hauser *et al* 2016, Eastwood *et al* 2017, Anwarudin 2017, Anwarudin and Maryani, 2017, Maryani *et al* 2018). In response to these recommendations, the paradigm of agricultural and rural development in Indonesia must pay attention to the concept of empowerment. In the field of agriculture, empowerment can run in harmony with extension activities so that it becomes empowering extension. Rai and Smucker (2016) stated that participation must be exist at least at the planning, implementation and evaluation stages

The Ministry of Agriculture, in developing programs with farmers, has tried to implement the concept of empowerment. In order to create food security and food self-sufficiency, the empowerment program, namely Rural Agribusiness Development (PUAP) has been implemented starting in 2008 and continued with a special effort program (UPSUS) of paddy as part of the UPSUS PAJALE program (Paddy, Corn and Soybeans) in 2015. This program is a breakthrough of the Ministry of Agriculture for poverty alleviation and job creation in rural areas by promoting the highest participation of farmers. The study aimed to descriptively analyze the level of farmer participation and analyze the factors affecting farmer participation in supporting food self-sufficiency through paddy-special efforts programs.

## **2. RESEARCH METHOD**

The study was conducted in Karawang District, West Java from July to December 2017. This type of research is quantitative research with survey approach by taking data from a number of individuals who represent the population. Based on its objectives, this study was an explanatory research to find the relationship of a variable with other variables. The population of this study were farmers who are members of farmer groups and farmer group associations (Gapoktan). Sample size was 120 farmers that was determined by stratified random sampling technique.

The data in this study consisted of primary and secondary data. Primary data were obtained directly by researchers through data collection using questionnaires. Primary data sources were respondents who were sampled in this study. Secondary data were obtained from village monographs, documents and photos of village conditions and farmer groups or farmer group association that was previously available which support research activities. Secondary data sources came from village halls, farmer group or farmer group associations and related institutions/agencies.

Research variables consisted of the characteristics of farmers, strengthening of farmer institutions, facilitators, program availability and farmer participation. Characteristics of farmers include age, social status, economic status, innovative behavior, and economic morality. Strengthening farmer institutions includes strengthening farmer groups, strengthening farmer groups and government support. Facilitators include agricultural extension agents and NCO Village Builders (bintara pembina desa/babinsa). Program availability is programs that are managed by the district, provincial and central governments that are related to farmer groups. Meanwhile, farmer participation is the involvement of farmers in extension activities both at the planning, implementation and evaluation stages. The research instrument has passed the validity and reliability test. Data analysis techniques used in this study were descriptive statistical analysis techniques and multiple regression analysis.

### **3. RESULTS AND DISCUSSION**

#### **Farmer Participation**

Based on research data, farmer participation data was obtained. Data distribution and description of farmer participation variables are presented in Table 1.

**Table 1: Distribution of farmer participation level in rice-special efforts programs**

| <b>No.</b>   | <b>Respondent</b> |            | <b>Category</b> |
|--------------|-------------------|------------|-----------------|
|              | Size (people)     | %          |                 |
| 1.           | 33                | 27.5       | Very High       |
| 2.           | 48                | 40         | High            |
| 3.           | 39                | 32.5       | Low             |
| 4            | -                 | -          | Very Low        |
| <b>Total</b> | <b>120</b>        | <b>100</b> | <b>High</b>     |

The largest portion of the participation of farmers was in the high category (40%), followed by the low (32.5%) and very high (27.5%) categories. The data shows that respondents are spread at low to very high participation level. Likewise, the middle value of farmer participation was in the high category. The results of the study indicate that farmer participation varies and tends to be high in accordance with the report of Anwarudin (2017). This is expected to be potentially positive in the process of empowering farmers. Taylor and Grieken (2015) stated that participation is an important component as the generation of independence in the empowerment process.

The participation of farmers who tend to be high is expected to have an impact on the welfare of farmers as reported by Anwarudin and Maryani (2017) that participation is a tool for empowering farmer communities to improve their welfare. Participation is an important element that can increase the capacity of farmer communities toward the importance of technology. Rai and Smucker (2016) revealed that participation is an internal activity of farmers as an appreciation and empowerment tool to realize initiatives, control and correct activities, effectiveness of financing, and more accurate and relevant activities. Through participation, a sense of mutual understanding arises among members of farmer groups who are oriented to economic interests and maintaining group values, culture and strength (Ofuoku and Isife 2009).

### **Factors Affecting Farmer Participation**

In order to see the factors affecting farmer participation, multiple regression statistics were analyzed. The factors include the characteristics of farmers such as age, social status, economic status, innovative behavior and economic morality. Other factors are companion, strengthening farmer institutions and programs. The results of the analysis are presented in Table 2.

**Table 2: Results of statistical analysis of determinants of farmer participation**

| <b>Description</b>                         | <b>Parameter</b>  | <b>Value</b> | <b>.α</b> | <b>Decision</b>             |
|--|-------------------|--------------|-----------|-----------------------------|
| R square                                   | R <sup>2</sup>    | 0,664        |           |                             |
| Constant                                   | K                 | 2,65         | 0,096     | Meaningful                  |
| Age  | $\rho Y_1 X_{11}$ | - 0,74       | 0,183     | Not significantly different |
| Social status                              | $\rho Y_1 X_{12}$ | 1,68         | 0,000     | Significantly different     |
| Economic status                            | $\rho Y_1 X_{13}$ | - 0,82       | 0,214     | Not significantly different |
| Innovative behaviour                       | $\rho Y_1 X_{14}$ | 1,44         | 0,009     | Significantly different     |
| Moral economy                              | $\rho Y_1 X_{15}$ | 0,83         | 0,028     | Significantly different     |
| Strengthening farmer group                 | $\rho Y_1 X_{21}$ | 0,98         | 0,011     | Significantly different     |
| Strengthening of farmer group associations | $\rho Y_1 X_{22}$ | 0,46         | 0,077     | Significantly different     |
| Government support                         | $\rho Y_1 X_{23}$ | 0,34         | 0,085     | Significantly different     |
| The role of extension agent                | $\rho Y_1 X_{31}$ | 0,81         | 0,031     | Significantly different     |
| The role of NCO Village Builders           | $\rho Y_1 X_{32}$ | 0,22         | 0,098     | Significantly different     |
| Program Factor                             | $\rho Y_1 X_4$    | 0,86         | 0,016     | Significantly different     |

Based on Table 2, the equation can be developed as follows:

$$Y_1 = 2.65 + 1.68X_{12} + 1.44X_{14} + 0.83X_{15} + 0.98X_{21} + 0.467X_{22} + 0.4X_{23} + 0.81X_{31} + 0.22X_{32} + 0.86X_4$$

The equation informs that the factors influencing the participation of farmers in extension activities are social status, innovative behavior, economic morality, strengthening farmer groups, strengthening farmer group associations (Gapoktan), government support, the role of extension agents and NCO Village Builders as well as program factors. The existence of this influence is also proved by the coefficient of determination ( $R^2$ ) of 0.664. This value means that the variables of social status, innovative behavior, economic morality, strengthening farmer groups, strengthening farmer group associations (Gapoktan), government support, the role of extension agents and NCO Village Builders as well as program factors are 66.4%, while the remaining 35.6% is explained by other factors outside this research

Variable of farmer characteristics affecting farmer participation are social status, economic status, innovative behavior and economic morality. The results of this study are similar to the findings of Agboola *et al* (2015), Tewodros (2015) and Anwarudin (2017) that there is a relationship between the socio-economic characteristics of farmers and the participation of agricultural practices. Furthermore, regarding innovative behavior that influences farmer participation, Mardikanto (2009) explains that innovative nature is a desire to seek, find or apply new ideas as well as adventurous, therefore it will naturally appear in the farmer soul to get involved or take part in various activities in the community. Subsequently, economic morality that influence farmer participation indicate that the more rational the farmer is, the more often he participates in various activities and vice versa, if he is still being subsistent, his participation is lower. Eastwood *et al* (2017) revealed that subsistence farmers basically prioritize safety and do not want to make changes. Every alternative change is always seen as something that contains risks that will actually worsen the already bad situation. In contrast to the characteristics of subsistence farmers, Hauser *et al* (2016) argues that rational farmers always want to improve their fate by finding and choosing opportunities that they might do.

Institutional factors which include strengthening farmer groups, strengthening farmer groups and government support affect farmer participation. Strengthening farmer groups has activities in the form of increasing the ability to analyze the market and business opportunities, increasing the ability to analyze regional potency, increasing the ability to manage commercial farms and carrying out savings and loan activities for business capital which is also an indicator in this study. The indicator is suspected to be the trigger for the growth of entrepreneurial spirit (Tambunan, 2009) so as to stimulate the participation of farmers. Institutional strengthening is expected to make farmers more independent (Anwarudin and Maryani, 2017 and Maryani *et al.*,

2017), as well as increasing income and welfare of the farmers (Okpukpara 2009). The results of this study were also confirmed by Otieno *et. al.*, (2009), Harniati and Anwarudin (2018) who argued that the incorporation of farmers in groups as organization which full of cooperation can reduce financing and farmers become stronger so as to increase profits and prevent losses. Thus, the agricultural business becomes more profitable, has competitiveness, reduces dependence on middlemen and allows farmers to be more independent.

In relation to the program, respondents of this study were participants of the Special Effort Program (UPSUS) which are integrated with empowerment programs by government, farmer groups and farmer group associations as well as related agencies as stated by Ife (2002) that the institutional strengths owned by community are important and can be used to empower community. The concept of empowerment in the discourse of community development is always associated with the concept of participation (Taylor and Grieken 2015). According to Jones *et al* (2014), this participation is useful to overcome various problems surrounding poverty and unemployment. This is because the effort taken is to emphasize awakening of awareness and creative power of the local population so that they are willing and able to find ways to solve their own problems.

The influence of strengthening farmer groups and farmer group associations with farmer participation is a concern about the importance of participation itself which is a tool for empowering farmer communities to improve their welfare (Rai and Smucker 2016). Empowerment places people as centers that illustrate the capacity of local communities toward the importance of technology. Furthermore, it is also explained that participation is an internal activity of farmers as an appreciation and as an empowerment tool in terms of initiative, control and correction of activities, financing effectiveness, and more accurate and relevant activities. According to Ofuoku and Isife (2009), through participation in farmer groups, there is a sense of mutual understanding among group members who are oriented to economic interests and maintain the values, culture and strength of the group.

Considering the importance of farmer participation in community development, community development is seen as a vehicle for mobilizing rural population to be involved in various development programs because involvement can raise public awareness about their ability to develop their own environment (Jones *et al.*, 2014). Similarly, Soetomo (2006) stated that the general principle of community development is to prioritize community participation. Furthermore, Minh *et al* (2014) suggested that in the development of society, it is important to have active participation in the form of group action in solving problems and fulfilling their needs based on potentials that the community has. The participation in community development is important, thus efforts are necessary to perform in order to improve farmer participation. The

results of this study informed that one of the efforts that can be done to increase farmer participation is through farmer groups.

The object of this study was the rural community participants in the Special Effort Program (UPSUS) which is part of Empowerment Program organized by Ministry of Agriculture. The main challenges faced in empowering rural communities are limited knowledge, areas that are on the periphery and strong understanding of customs. Efforts to make changes to the condition of the community can be done by understanding the thoughts and actions of the community and trust in the empowering actors. Furthermore, they need to participate in the change process offered by providing opportunities to make rational choices. This process provides more effective results than providing a predetermined choice. According to Zubaedi (2007), the first step of these processes is to form Non-governmental Group (Kelompok Swadaya Masyarakat/KSM). In agriculture-based rural communities, Non-governmental Groups are farmer groups which are a vehicle for teaching and learning activities, a place for discussion to identify and overcome problems, planning activities and improving agriculture ability. Therefore, the development can open access to information, provide an explanation of the government programs that are being implemented, explain the norms of the community that need to be known, inform the rights of the community, and explain the benefits of change. Thus, farmer groups can increase farmer participation.

The companion factor also affects the participation of farmers. Table 2 shows that both facilitators and NCO Village Builders involvement have a contribution in farmer participation, which means those factors can be determinants for increasing farmer participation. This is allegedly related to the Paddy Special Efforts Program (UPSUS) having an operational strategy established by the Ministry of Agriculture. According to operational strategies set by Ministry of Agriculture, several solutions were suggested by Anwarudin (2017) including training for farmers as UPSUS implementers who were assisted by extension officers as the main actors of the program. Training and assistance are two different activities. Training often has very limited time mechanism, certain and less suitable if implemented for farmers. Training is often also tied to project activities "there is training because there are projects". Assistance will be more suitable because it is not limited to time, anytime and anywhere. Assistance also emphasizes the dominance of farmers or farmers have greater role because they are only assisting and facilitating. In relation to aspects of community development that are based on empowering activities in the field, the activities that must be carried out are assistance rather than training. If there are training activities, these activities must come from initiatives and be carried out by the community itself, not determined from "government" as stated by Mabuza *et al* (2012).

Program factors have an effect on farmer participation. The higher the availability and performance of the program, the higher the level of farmer participation. The increase of one point of availability and program performance will increase farmer participation by 0,86 points. Paddy-special efforts programs are an integral part of Ministry of Agriculture program empowering farmers. In the series of processes, community empowerment is carried out in the hope of improving community welfare by promoting farmers participation. The study of paddy-special programs as community empowerment program that is capable of generating farmer participation aimed at the program background, program stages, program steps, program principles, and solutions to the program's weaknesses. Based on its background and objectives, paddy-special effort programs can fulfill the perspective of social justice as a foundation for community development as stated by Ife (2002) that the perspectives of social justice as the basis of community development are disparity, empowerment, need and rights. Based on the stages, paddy-special program needs to pay attention to Wrihatnolo and Dwidjowijoto's (2007) statement that as a process, community development has three stages, namely awareness, capacity building and enrichment. Based on the steps, paddy-special program began with the existence of farmer groups and the Farmers Groups Associations (Gapoktan). It is expected that this farmer group is a community self-help group that truly understands the importance of grouping (Zubaedi 2007). Based on its principles, the paddy-special effort program should have principles based on human development, autonomy, decentralization, oriented towards the poor people, participation, equality and gender justice, democracy, transparency and accountability, priority, collaboration, sustainability and simplicity. These principles are part of the 26 principles of community development proposed by Jim Ife (2002).

The weaknesses of this program in the term of perspective of community development and the efforts of the solution or anticipation have been put forward by Anwarudin (2017) as follows. First, there is still a doubt that the continuity of the paddy-special efforts program is a non-governmental activity. Based on the technical policies, this program has too many interventions both from the central government and regional governments. In general, it is realized that implementing programs through external interventions that are oriented towards community development does not affect the sustainability process. Programs from external parties, both government and non-government, can indeed encourage the growth of local activities, yet these activities commonly stop after external programs also stop. Programs that are expected to materialize sustainable processes require time and gradual processes because they have to go through the learning process. The solution and anticipation for this doubt is the involvement of the external party must be placed as part of the process of fostering and developing the capabilities and potential of the community so that its nature is not a dominant factor, yet merely encouraging, stimulating, facilitating and contributing to provide conducive climate for the potential development from within. Therefore, the conditions that should be carried out are

external parties is to encourage the community to have the ability to build themselves independently and sustainably. Second, it is still doubtful that paddy-special effort program will form business independence. One that reduces self-reliance in this program is the assistance for farmers. The solution and anticipation that can be done is by fostering public awareness that the program has a greater benefit aspect for the common interest than just getting aid funds. Third, regarding the formation of Farmer Group Associations (Gapoktan), here it appears that, the formation of farmer group associations generally focuses on the “top” interests, namely as a “vehicle” to channel and carry out various policies from outside the village, in this case the Ministry of Agriculture and local government . The formation of Farmer Group Associations (Gapoktan), although later it can be an institution that represents the needs of farmers as a representative institution, yet some that occur not from rooted internal needs. This is a recurring symptom as it often happened, which is only concerned with mere establishment to pursue projects. Therefore, anticipation must be made through coaching and guarding to become independent, professional and have a broad network business entity.

### **3. CONCLUSION**

Based on the results of the study, it can be concluded that the level of farmer participation in supporting food self-sufficiency through Paddy-Special Efforts Program in Karawang District is high. Factors affecting farmer participation are social status, innovative behavior, moral economy, strengthening of farmer groups, strengthening farmer group associations (gapoktan), government support, the role of extension agents and NCO Village Builders (bintara pembina desa/babinsa) as well as program availability.

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