

The Role of Extension Towards Empowering Independent Smallholder Farmers of Oil Palm Plantation in Riau Province, Indonesia

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ABSTRACT

The objective of the study is to know the influence of extension's role toward empowerment of independent smallholder farmers of oil palm. This study was used explanation's research, whereas 180 independent smallholder farmers of oil palm were taken as repondents by dispropotionate stratified random sampling in three districts in Riau Province, Indonesia: Kampar, Rokan Hulu, and Indragiri Hilir. Stuructural Equation Modelling was used to analyze the data. The results showed that the empowerment of farmers significantly influenced by the role of dissemination, facilitation, supervision, and monitoring and evaluation, while the education's role does not affect to the empowerment of farmers. Therefore, the role of extension education needs to be improved through knowledge transfer of extension.

Keywords: *Extension's role; independent smallholder farmers; oil palm, empowerment*

INTRODUCTION

Agricultural extension is one of the necessary, facilitating the development of agriculture (Mardikanto *cit* Mosher, 2009), while its recommendation is addressing the social impacts of oil palm plantations. WWF also states that strengthen farmer extension services to improve smallholder (WWF, 2011). So it can be said that the role of education in plantation activities is very important. In fact, in Riau, activity of extension still has not received serious attention by the government. Conditions alignments extension of plantation is still lacking, which only became small part of the extension of staple food, although the new agricultural extension policy be polyvalent extension.

Typology of smallholder farmers can be divided into two forms, firstly is the farmers who became a partner for the state and private plantation, called Nucleus Estate Smallholder (NES) farmers, secondly is the people who own oil palm plantation independently, called Independent Smallholder farmers. However, the production of oil palm of NES is better than independent smallholder, in term of agribusiness management of input, process, and output. In contrast with independent smallholder, who can not meet the optimum production of oil palm plantations.

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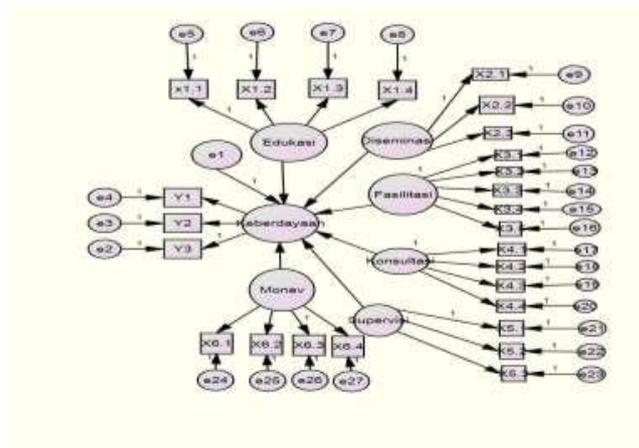
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Optimal production of oil palm plantation can reach 30 tonnes FFB/Ha/Year. However, the production of oil palm by independent smallholder farmers only around 16 tonnes of FFB (Kuswanto. 2008). The plant oil palm trees are the factors of production are needed as well at this stage of the cultivation which includes: preparation of seedlings, planting, maintenance and harvesting. The results of several research reports indicate that these activities still take place naturally without any intervention of a third party. It means extension as a companion society can not perform its role as an agent that can realize the empowerment of farmers in order to achieve optimal production. It raises a questions: is there a relationship extension's role towards independent smallholders in Riau Province. Therefore, this research aims to know the influence of extension's role toward empowerment of independent smallholder farmers.

RESEARCH METHODE

This study intended to discover and develop the theory, so that the result or product research can explain why the occurrence of a specific symptom or social reality, while the approach used was a survey approach, this approach is used to describe the specific character of a population with respect to the attitudes and behavior (Faisal. 2005). In this study, site selection considerations undertaken purposively by researchers to find out how the role of extension in empowering independent smallholder in Riau Province. There are 12 districts/ cities in Riau, but only three districts were taken as sample, namely District of Kampar, Rokan Hulu and Indragiri Hilir. The location determination is based on the number of independent smallholder farmers on the order the first, the second and the third in the three districts respectively.

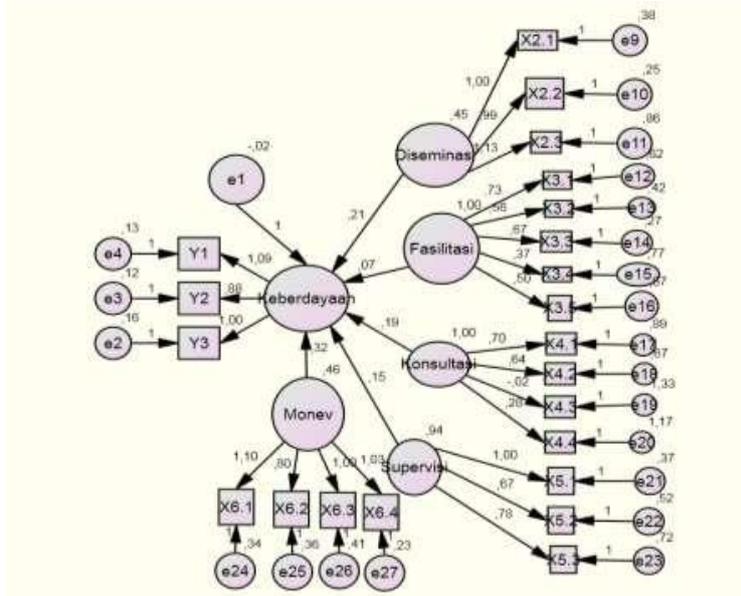
In term of determining the effect of empowerment to farmers, analytical tools Structural Equation Modeling (SEM) was used, assisted by software Amos 19 program. Accordance with the rare step used in SEM models structured as follows:



Picture.1. The Model of Extension's role toward Empowering Independent Smallholder Farmers

RESULTS AND DISCUSSION

Having analyzed by looking at some of the parameter that determines the appropriateness of a model for the structural models used were obtained as follows:



Picture.2. The Model of Extension's role toward Empowering Independent Smallholder Farmers after analyzed

The result using the Amos program showed the value and significance of the regression coefficient of each variable as follows:

Table 1. Regression coefficients and Significant Value Relationships between Variables

Regression Analysis	Estimat ed	S.E.	Coefesien Regression	Sig
Empowerment <--- Education	0,034	,048	0,708	0,479
Empowerment <--- Dissemination	0,206	,038	5,366	0,000
Empowerment <--- Fasilitasi	0,072	,021	3,395	0,000
Empowerment <--- Konsultasi	0,186	,029	6,337	0,000
Empowerment <--- Supervisi	0,150	,026	5,736	0,000
Empowerment <--- M & E	0,321	,045	7,112	0,000

Based on the test results of multiple regression analysis, it can be arranged as the following formula:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + u$$

$$Y = b_0 + X_1 + 5.366X_2 + 3.395X_3 + 6.338X_4 + 5.736X_5 + 7.112X_6$$

From the above equation, explaining that the influence of each variable on independent smallholder farmers are as follows:

1. $b_2 = 5.366$, it means that the direction of influence, if the variable indicates the role of educator as improved dissemination of the unit there will be an increase to independent smallholder's empowerment(Y) of 5.366, assuming other variables constant.
2. $b_3 = 3.395$, it means that the direction of influence, indicates if the variable role in facilitating enhanced extension of the unit there will be an increase to independent smallholder's empowerment(Y) of 3.395, assuming other variables constant.
3. $b_4 = 6.337$, it means that the direction of influence, if the variable indicates the role of the educator as increased consulting unit, there will be an increase to independent smallholder's empowerment(Y) of 6.337, assuming other variables constant.
4. $b_5 = 5.736$, it means that the direction of influence, if the variable indicates the role of educator as improved supervision of the unit there will be an increase to independent smallholder's empowerment (Y) of 5.736, assuming other variables constant.
5. $b_6 = 7.112$, it means that the direction of influence, if the variable indicates the role of educator as improved monitoring and evaluation of the unit, there will be an increase to independent smallholder's empowerment(Y) of 7.112, assuming other variables constant.

Thus it can be said that the five roles (dissemination, consultation, facilitation, supervision, and monitoring and evaluation) significantly affected to independent smallholder farmers. However, the role of extension in education is not significant in Riau Province. This is consistent with the observations and interviews to farmers and extensionists. In fact, farmers feel that they know the general cultivation of oil palm plantations. It is hand in hand with the results of the study Arifudin et al (2013), while it showed that the diffusion process oil palm cultivation technology of independent farmers occurred naturally without intervention of extension's role, particularly in education.

CONCLUSIONS AND RECOMMENDATIONS

Empowerment of independent smallholder farmers influenced significantly by the role of dissemination, the role of facilitation, the role of supervision, and the role of monitoring and evaluation. However, the role of education does not affect toward

the empowerment of independent smallholder farmers, therefore it needs to be improved through knowledge transfer programs in by training to farmers in oil palm agribusiness. In addition, extension's role is very important for improving plantation of independent smallholder farmers, therefore both government and local government should pay attention to extension's programs, particularly in oil palm plantation.

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