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**THE MOTIVATION OF FARMERS ON COFFEE PLANTS AGRI  
BUSINESS BASED ON AGRO-TOURISM IN KAYUMAS VILLAGE,  
ARJASA DISTRICT, SITUBONDO REGENCY**

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**ABSTRACT:**

Kayumas Village is one of the largest coffee producers in Situbondo Regency, with an area of 1,024 hectares of smallholder plantations. Behind extensive plantations, there are still obstacles in the marketing of coffee in the form of the length of the marketing chain, thus causing the economy of farmers to remain in a low category. The weak economy is to see the level of motivation of farmers towards agro-based coffee agribusiness, which aims to reduce the marketing chain and improve the economy of farmers. The Research Method is by using multiple linear regression analysis. This research conducted on eight farmer groups, with a total sample of 91 respondents. The results of this study indicate age, education, and extension have a significant influence on agro-based coffee agribusiness motivation. While the land area and duration of farming have no considerable effect on agro-based coffee agribusiness motivation, thus to increase the motivation of farmers, the extension can be carried out which emphasizes three aspects both of the intensity of extension, the relevance of the material, and the competence of the instructor.

## **INTRODUCTION:**

Coffee is one of the strategic commodities that has an essential role in the agricultural sector in Indonesia. The position of coffee as a vital commodity has a considerable function because it acts as a driver of the national economy and becomes a source of foreign exchange. Indonesia's coffee exports ranked third in the world after Brazil and Vietnam, with export volumes reaching 384,815 tons. The export scale coffee supplier consists of several regions, one of which is Situbondo Regency. Coffee production in Situbondo Regency has problems with low productivity and quality results caused by factors such as pests and diseases, poor weather, and management N. Wang (2015).

The problem that affects the factors of coffee production is the existence of discrimination in conducting farming, starting from the cultivation process, where not all farmers use superior varieties and also do not use appropriate technology. Besides the problems in the cultivation factor, another problem lies in the marketing factor. Marketing improvements that have been improved from the production sector cannot always solve the problem. Therefore a strategy change is needed that prioritises the marketing of the agribusiness process. The marketing can be in the form of agro-tourism, which involves all aspects to be marketed to consumers.

Agro-tourism does not require an overhaul of agribusiness activities. Agrotourism is carried out by educating agribusiness activities carried out by involving residents in their planning and management Filippo Sgroi., et.al., (2018). Farming activities in the form of educational agro-tourism are alternatives to agribusiness activities that have fixated on production factors. In the implementation of educational agro-tourism in Kayumas Village this is not focused on one subsystem, but all inter-related agribusiness subsystems. With business development in all subsystems, reliable Human Resources (HR) needed.

The development of human resources (HR) can be done with the existence of intensive and efficient extension to improve Human Resources (HR) or farmer competence in its agribusiness. Capability These human resources are characteristics of farmers. Features of farmers can see from the level of formal education. Also, the age of the farmer, the length of farming carried out, and the area of land can affect the motivation of farmers in the framework of their agribusiness. Besides the characteristics of the peasants, it is also necessary to manage the human resources (HR) of farmers using the extension to increase the motivation of farmers.

In coffee agro-tourism activities, the motivation of farmers is in a vital position to elaborate coffee agribusiness, where motivation can determine the process and ultimately determine its success. Motivation is not only related to desires, but furthermore, motivation plays an active role in farmers to implement agro-based coffee agribusiness to increase their economic level. Motivation will make farmers have goals and strategies in achieving goals. The existence of a strong motivation in the peasant will bring difficulties and also fight challenges to complete the final process of agribusiness goals.

## **LITERATURE REVIEW:**

### **Motivation**

Ahmed (2016), Motivation is an expression of performance or intention that is implemented

in moving, continuing, or encouraging an action to complete a task to achieve something desirable. Motivation in agro – based coffee agribusiness is a contextualization of causes or reasons that make someone do coffee agribusiness with the ultimate goal of agro-based. Motivation refers to a process within the farmer that causes it to move towards agro-based coffee agribusiness in either pleasant or not. Based on Herzberg's theory stated by Yong (2017), motivation divided into two indicators, namely intrinsic motivation and extrinsic motivation. Gerhart (2015), intrinsic motivation is arising from within the individual himself without any coercion or encouragement from others but based on his own will because the individual is interested and happy at a goal. Kian (2015), Extrinsic motivation comes from outside the individual so that someone wants to do something.

### **Characteristics:**

Abi., et.al, (2018), the characteristics of farmers are closely related to serving as benchmarks in predicting behaviour in various conditions and job duties. Characteristics consist of age, education, land area and farming time. Chhetri., et.al (2017), the age of a person can determine the performance of the person in carrying out the tasks he is doing. Farmers who are older than 65 years usually tend to be sluggish at the level of adoption of new science innovations explained by extension agents. Jaganathan., et. Al (2012), education has a significant and positive relationship with the level of knowledge, this is because farmers who have a higher level of education have broader insights compared to farmers who are less educated/ illiterate. Yamada., et.al (2015), informal learning in the form of training and extension has a very significant influence on the absorption of information technology by farmers. Furthermore, Jaganathan., et.al (2012), farming experience has a significant impact on the incorporation of information related to knowledge in sights. The land area owned will illustrate the economic level of the farmers. From this financial level, it will determine how technology used. Galina., et.al (2016), The use of technology that is getting better will be inherent about the income obtained by farmers, where with this condition economic stability will be received by farmers.

### **Extension:**

Extension in the general sense is a social science that studies the system of the process of change in individuals or groups to achieve a planned goal. The intensity of extension is how often a counsellor provides extension material to the target. Budi., et.al (2018), the power of extension has an authentic and positive relationship with an awareness of farming, motivation to do agriculture, management, marketing, and groups. Extension with relevant material can improve the quality of farmers who give an extension. Linda (2015), information submitted by extension agents if suitable by the urgency of farmers, has a positive and real impact on work productivity and empowerment of farmers. The success of farmer in conducting their farming is inseparable from the competencies possessed by extension agents. Competence is a skill that correlates with ability, knowledge/insight, and attitudes that use as guidelines in carrying out job responsibilities. Maryam and Mohamed (2017), Competence is a descriptive tool that identifies the competencies needed to perform roles, effectively in the organisation and helps in fulfilling its strategic objectives. Okeowo (2015), instructor competencies have an impact on the material delivered, as well as relevant communication.

### **Agro-tourism:**

Agro-tourism is a correlation between the tourism and agricultural business sectors. Schilling (2012), agro-tourism is a series of tourist activities that utilise the location or agrarian industry from the beginning of production to agricultural products in various systems and scales to expand knowledge, understanding, experience, and recreation in agriculture. Choenkwan (2016) states that agro-tourism is not limited to production, but agro-tourism is a process and strategy in agricultural development, which impacts on the social environment. Sumin (2018), states that agro-tourism takes advantage of the benefits of sustainable agricultural production, improving the quality of life of farmers, and increasing market accessibility. Thomas and Moore (2018), namely rural agricultural agro-tourism seems to be the recipient of economic benefits from tourists who stabilise their income in tourist areas so that managers and communities around the country side produce more products, and then these products are marketed totourists.

### **RESEARCH METHOD:**

The research method used in this study is descriptive quantitative research methods, namely research methods used to describe or explain a problem quantitatively (numbers) regarding trends, behaviours or opinions of a population by examining samples whose results can be generalised. John W. Creswell (2016), quantitative research is a method for testing specific theories by examining variables.

The population in this study were all coffee farmers in Kayumas Village, Arjasa District, Situbondo Regency with a total of 949 farmers consisting of 8 farmer groups. Sampling uses the Proportionate Stratified Random Sampling technique where sampling is done intentionally with specific considerations based on the purpose of the study. AshisTalukder MD (2016), Sampling can be done using Slovin formula. If the population (N) is 949 people, and the level of error (e) is 10%, then the sample size (n) is 91 people.

Retrieval of data in this study was carried out by using a questionnaire (questionnaire) that was by the problems in the research so that the primary data obtained supported by secondary data. The type of questionnaire in this study is a direct questionnaire, where the questionnaire was distributed directly to the research respondents. The questionnaire was submitted directly to the respondent in his residence so that the filling out of the questionnaire took place without any pressure. The questionnaire consists of 50 questions divided into several variables.

Data analysis in this study was carried out using the Multiple Linear Regression method using the Ordinary Least Squares (OLS) approach. The equation of multiple linear regression in this study is as follows:

$$Y = \alpha + b_1X_{1.1} + b_1X_{1.2} + b_1X_{1.3} + b_1X_{1.4} + b_2X_2 + e$$

Where:

Y = Motivation of Coffee Farmers

$\alpha$  = Constants

- b1 and b2 = Regression coefficient
- X1.1 = Age
- X1.2 = Education
- X1.3 = Area of land
- X1.4 = Duration of Farmer
- X2 = Extension

Before hypothesis testing did, in the multiple linear regression equation models, the classical assumption test must be done. The classic assumption test is a statistical requirement that must meet in multiple regression analysis. According to Utomo (2017), there are three things in the classic assumption test; this is the assumption test for normality, multicollinearity, and heteroscedasticity.

After the classical assumption test, the next step is to test multiple linear regression with four stages. The first test is the analysis of the correlation coefficient, which is intended to determine the level of closeness of the relationship between the independent variables on the dependent variable. Second is the coefficient of determination ( $R^2$ ) which is used to see the feasibility of the study, which show on whether the change in the independent variable will follow by the dependent variable in the same proportion. The third is the Simultaneous F Test; this test is carried out to find out simultaneously or together the independent variables have a significant effect or not on the dependent variable. The fourth is the partial T-test, used to test parameters (regression coefficients and constants) which are estimated to estimate multiple linear regression equations are the right parameters or not.

## **RESULT AND DISCUSSION:**

### **Feasibility Test of Linear Regression:**

#### Dual Correlation Analysis (R)

Dual Correlation Analysis obtains an R-value of 0.910. So this analysis shows that there is a robust relationship between Characteristics Variables (Age, Education, Land Area, duration of farming) and extension on farmers' motivation in agro-based coffee agribusiness.

#### The Determination Coefficient ( $R^2$ )

Determination Coefficient obtained the value of  $R^2$  (R Square) of 0.828 or (82.8%). It shows that the percentage of the contribution of the independent variable Characteristics (Age, Education Area, and duration of farming) and Extension to the level of motivation of farmers in agro-based coffee agribusiness is 82.8%. In other words, the level of motivation of farmers can be explained or influenced by the characteristic variables and extension by 82.8%, while the remaining 17.2% is explained or controlled by other variables not examined

#### Simultaneous

F test results to determine the effect of characteristic variables and extension on the level of motivation. Simultaneous F test uses a method that looks at the probability value of F-count (sig) where if (sig) shows a value above 5% or 0.05, it can be said that the estimated regression model is not feasible whereas (sig) shows a value below 5% or 0.05 then the regression model is expected to be possible. The F test results show that the amount (sig) is at the number 0,000, which means that the regression model is feasible to use. In conclusion, the characteristic variables and extension simultaneously (simultaneous) have an influence on the Motivation of Farmers in agro-based coffee agribusiness.

**Partial T-Test:**

The T-Test Results divided into Five items. The five items are sub Characteristics variables and Extension variables. In the sub-characteristics variable namely age (X-1.1) sig 0.003, Education (X-1.2) sig 0,000, has a sig value <0.05, which means that this sub-variable has a significant influence on the motivation variable. While the land area (X-1.3) sig 0.283, and the duration of farming (X-1.4) sig 0.816 has a value of sig> 0.05, which means that this sub-variable does not have a significant effect on the motivation variable. In the Extension variable (X-2) sig 0,000. In this variable, the value of sig <0.05, which means that this variable has a significant influence on the motivation variable with a confidence level of 95%.

**Multiple Linear Regression Analysis:**

The estimated regression model is  $Y = \alpha + b_1X_1 + b_2X_2$  where to fill the constants "a" and "b" the results obtained in table 1 below:

**Table 1: Analysis of Estimates of the Model**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	6.236	2.692		2.316	.023
Age	1.787	.575	.284	3.105	.003
Education	1.739	.421	.271	4.127	.000
Land Area	.429	.397	.058	1.080	.283
Farming Experience	.116	.496	.018	.233	.816
Extension	.439	.035	.718	12.430	.000

**Source:** Primary Data processed, 2020

Based on table 1, the regression model received as follows:

$$Y = \alpha + b_1X_{1.1} + b_1X_{1.2} + b_1X_{1.3} + b_1X_{1.4} + b_2X_2 + e$$

$$Y = (6.236) + 1,787 X_{1.1} + 1,739 X_{1.2} + 0,429 X_{1.3} + 0,116 X_{1.4} + 0,439 X_2 + 2,56353$$

**DATA INTERPRETATION:**

**The standard error of the estimate:**

The standard error of the evaluation is a measure of prediction error. In this multiple linear regression equation, it shows the number 2.56353. It means that mistakes that can occur in predicting farmers' motivation towards agro-based coffee agribusiness are equal to 2.56353 or when it is at 2.56%.

### **Constant:**

The constant shows the value of 6.236. This regular shows that if the independent variables namely Characteristics (Age, Education, Area, and duration of farming), extension(intensity of extension, relevance of extension materials, and competency of instructors) are assumed to be constant or even worth 0 then farmer motivation in agro-based coffee agribusiness has a value of 6.236.

### **The Influence of Age on the Motivation of Farmers:**

Arun Khatri-Chhetri., et.al (2017), a person's age can use as a benchmark for the performance of the person in carrying out the tasks he is doing. DK Singh., et.al (2009), age is very closely related to one's motivation. Age has a significant influence on Motivation variables. These results can see in Table 1, which shows the age regression coefficient (X1.1) of 1,787. The coefficient is positive, meaning that every increase in age is equal to the research interval of 10 years; there is an increase in motivation of 1.787. Age in the equation of this model has a significant impact on the level of motivation of farmers in agro-based coffee agribusiness activities; this is evident from the sig value, which shows the number 0.003. Apart from the Sig Value, significance can see through t count, where t on t table with respondents 91 people show the amount 1.98698. Based on table 1 shows the number 3.105, which means it is higher than t table. From the two methods stated that age has a significant effect on motivation variables.

### **The Influence of Education on Farmers' Motivation:**

Solomon Asefaa, et.al (2016), the level of education held by farmers can prevent farmers from doing things that are detrimental to their agribusiness activities. Education has a significant influence on Motivation variables. These results can see in Table 1, which shows the age regression coefficient (X1.2) of 1.739. The coefficient is positive, meaning that every increase in education, whether from school to elementary school, elementary school to junior high school and so on, then there is an increase in motivation by 1,739. Education in the equation of this model has a significant impact on the level of motivation of farmers in agro-based coffee agribusiness activities; this is evident from the sig value, which shows the number 0,000. Apart from the Sig Value, significance can see through t count, where t on t table with respondents 91 people show the amount 1.98698. Based on table 1 shows the number 4.127, which means it is higher than t table. From the two methods stated that education has a significant effect on motivation variables.

### **The Effect of Land Area on the Motivation of Farmers:**

D. Jaganathan et.al (2012). The area of land is an indicator that is closely related to farmers' insight into their farming activities. The land area has no significant effect on Motivation variables. These results can see in table 1, which shows the age regression coefficient (X1.3) of 0.429. The coefficient is positive, meaning that every increase in land area by the research interval is 3 Ha, then an increase in motivation is 0.429. The extent of the equation of this model

has no significant impact on the level of motivation of farmers in agro-tourism-based coffee agribusiness activities; this is evident from the sig value, which shows the number 0.283. Apart from the Sig Value, significance can see through t count, where the value of t on t table with respondents 91 people shows the number 1.98698. Based on table 1 shows the number 1.080, which means it is smaller than t table. From the two methods stated that the land area has no significant effect on the motivation variable.

### **The Effect of Farming Time on Farmers 'Motivation:**

Research conducted by D. Jaganathan., et.al (2012), shows that the duration of farming does not have a significant effect on farmers' motivation in agriculture. Length of Farming is having no significant impact on Motivation variables. These results can see in Table 1, which shows the age regression coefficient (X1.4) of 0.116. The coefficient is positive, meaning that every increase in the length of farming is by the research interval of 10 years, then an increase in motivation is 0.116. The duration of agriculture in the equation of this model has an insignificant impact on the level of motivation of farmers in agro-tourism-based coffee agribusiness activities; this is evident from the sig value which shows the number 0.816. Apart from the Sig Value, significance can see through t count, where the value of t on t table with respondents 91 people shows the number 1.98698. Based on table 1 shows the number 0.233, which means it is smaller than t table. From the two methods stated that the duration of farming has no significant effect on the motivation variable.

### **The Influence of Extension on Farmers Motivation:**

The extension can be used to accelerate information transfer between stakeholders or extension agents to farmers Masese Millicent Auma., et.al (2018). Extension variables divided into extension intensity, the relevance of extension material, and competency of extension agents. Myra Keep (2019), the denser intensity of extension will have an impact on the absorption of information and the breadth of insight of farmers. The exact selection of the material or the relevance of the equipment needed by farmers will significantly increase the motivation of farmers D. Jaganathan., et.al (2012). Competence is a skill someone has related to knowledge, skills, and attitudes in doing a job Heikki Topi (2019). Meanwhile, MurariSuedi., et.al (2017) states that the competence of extension agents is closely related to their ability to carry out tasks in changing knowledge and information adaptation.

The extension has a significant influence on the Motivation variable. These results can see in Table 1, which shows the extension regression coefficient (X2) of 0.439. The coefficient is positive, meaning that every increase in Extension is 1%, there is an increase in motivation of 0.439. Extension on the equation of this model has a significant impact on the level of motivation of farmers in agro-based coffee agribusiness activities; this is evident from the sig value, which shows the number 0,000. Apart from the Sig Value, significance can see through t count, where t on t table with respondents 91 people show the amount 1.98698. Based on table 1 shows the number 12.430, which means it is higher than t table. From the two methods stated that extension has a significant effect on motivation variables. Extension variables divided into three sub-variables, namely the intensity of extension, the relevance of extension material, and the competence of counsellors.

Extension variables are considered to provide a new perspective to increase farmers' motivation. The Extension is an activity which in its implementation can improve according to needs. The Extension conducted at high intensity has a real impact on doubling farmers'

motivation. Also, the relevance of the material regarding the agribusiness object of farmers is considered to be able to influence the motivation of farmers significantly. In the last aspect, the competence of extension agents has the most significant impact on increasing the motivation of farmers. The competency of the instructor will correlate with the instructor who is carrying out their duties to approach the farmers so that they can know their characteristics. These characteristics then use as a basis for determining methods and media that can provide a real influence to increase farmers' motivation.

## CONCLUSION:

Characteristics of farmers divided into four categories, namely age, education area, and duration of farming. Age regression coefficient (X1.1) is 1,787 and Sig value is 0.003. Education ((X1.2) of 1.739 with a Sig 0,000 Value, Land Area (X1.3) of 0.429 with a Sig Value of 0.238, Farming Business Time (X1.4) of 0.116 with a Sig Value of 0.816. While in Extension (X2) Coefficient Regression is 0.439 with a Sig 0,000 value, thus age, education, and Extension are significantly affected because they have a positive regression coefficient and Sig <0.05 values, while the land area and duration of farming are not significant because they have a positive regression coefficient but have a value Sig > 0.05.

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