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Pattern Of Partnership Between Sugarcane Farmers And PT. Jhonlin Batu Mandiri In Bombana District

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Abstract

This study aims to understand the partnership model between sugarcane farmers and PT Jhonlin Batu Mandiri in Bombana Regency and to analyze the factors that influence sugarcane farmers' decisions to participate in the partnership with PT Jhonlin Batu Mandiri. The research was conducted from June 2021 to June 2024, involving a sample of 48 farmers, comprising 19 partner farmers and 29 non-partner farmers, determined using Slovin's formula. The data were analyzed using descriptive quantitative methods. The partnership model between sugarcane farmers and PT Jhonlin Batu Mandiri was examined using descriptive qualitative analysis with the approach of Miles and Huberman (2014). To analyze the factors influencing the decision of sugarcane farmers to join the partnership with PT. Jhonlin Batu Mandiri, binary logistic ***regression analysis was employed. The results of the study indicate that:*** *Partnership patterns between sugarcane farmers and PT Jhonlin Batu Mandiri follows the nucleus-plasma pattern. In this pattern, the land used is owned by the plasma farmers. The nucleus company, PT Jhonlin Batu Mandiri, provides production facilities, technical management guidance, assistance with land preparation, provision of seedlings, fertilizers, harvesting labor, and takes on the processing and marketing of the production. The partner farmers are responsible for meeting the company's needs as agreed upon in the contract or agreement. The factors influencing the decisions of sugarcane farmers to join the partnership with PT Jhonlin Batu Mandiri are primarily the size of their land and capital limitations. Other factors, such as age, length of education, farming experience, and the use of agricultural technology, do not significantly impact their decision to enter into the partnership.*

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Keywords: Partnership; Sugarcane Farmers; Decision.

INTRODUCTION

Indonesia is a developing country with the agricultural sector as a source of livelihood for its population. The agricultural sector is a sector that Indonesia relies on because it is able to provide recovery in overcoming the ongoing economic crisis. This situation involves the agricultural sector as one of the reliable sectors in national economic recovery. Agriculture in a broad sense includes subsectors of food crops, horticulture, plantations, and livestock, and fisheries. (Soekartawi, 1999). One of the plantation crops is sugarcane, which is a plantation commodity that is widely cultivated by farmers and private companies (Bugis, 2016).

Sugarcane (*Saccharum officinarum L.*) is a seasonal plantation crop that is harvested once in its life cycle. This crop is grown largely in monoculture in Indonesia (Kementerian Pertanian Indonesia, 2018). Sugarcane plants produce many benefits, especially in the processing of sugar raw materials. The existence of sugarcane in the sugar industry plays an important role for the people of Indonesia and other industrial sectors because sugar is one of the components needed for public consumption and is also needed as a raw material for example for the processed food industry. This is an implication of the development of the population which is certain to continue to increase every year. The Ministry of SOEs (2021) states that Indonesia needs 5 million tons of sugar consisting of 2.75 million tons for direct public consumption and 2.25 million tons for the needs of the National sugar production industry, and is only able to meet 53% of the total needs, the remaining 47% of these needs are met through imports.

One of the companies with the prospect of developing sugarcane as a producer of sugar raw material production that is currently actively producing is PT. Jhonlin Batu Mandiri, located in Lantari Jaya District, Bombana Regency. PT Jhonlin Batu Mandiri began operations in 2017 with a land area of 30,000 ha, and is able to absorb a maximum of 15,000 workers, with a white crystal sugar production capacity of up to 1,200 tons per day. The high sugar production is indicated by the smooth partnership system between sugarcane farmers in Aneka Marga Village, North Rarowatu Sub-district, Bombana Regency and the company.

Through the pattern and form of partnership, the Sugarcane plantation industry of PT Jhonlin Batu Mandiri is expected to open up employment opportunities for the community and can improve the people's economy, so that there will be economic equity and community welfare. Initial information at the research location found that the number of independent sugarcane farmers or non-partner farmers was greater than the number of partner farmers. this

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raises an idea about the causes of sugarcane farmers deciding to enter into a partnership or not enter into a partnership with the sugar factory PT Jhonlin Batu Mandiri. According to Soekartawi (1998), the decision is based on factors that affect the life and future of farmers such as age, education level, land area, number of family dependents and farming experience. the more farmers decide to partner the better because it will maintain the continuous availability of sugar raw materials and will also increase farmers' income evenly. However, the greater the number of farmers who do not enter into a partnership with PT. Jhonlin Batu Mandiri, it is feared that it will have an impact on reducing the productivity of sugar cane as a raw material for sugar, which will lead to a decrease in the amount of sugar production.

In connection with this, the concept of revitalizing the national sugar industry which concretely discusses the achievement of sustainability between production and consumption, both direct consumption and industrial consumption and most importantly includes efforts to realize a prosperous farming community through competitive and equitable plantations, the partnership concept is the right step to meet these challenges (Hafsah, 2020). Partnership is the right choice because farmers need a party that can provide *inputs*, buy and sell products produced by farmers, can guide and foster farmers through mutually beneficial cooperation (Nuhung, 2006).

The partnership between sugarcane farmers and PT Jhonlin Batu Mandiri, which is established on the basis of mutual benefit, sometimes runs less harmoniously and not in accordance with the desired expectations, this is the result of each party still tends not to comply with the agreement that has been decided together. This interesting phenomenon stimulated the researcher to conduct a study entitled "Pattern of Partnership between Sugarcane Farmers and PT Jhonlin Batu Mandiri in Bombana Regency".

METHOD

The population in this study consists of 92 sugarcane farmers whose farms are located close to the company PT Jhonlin Batu Mandiri. There are 37 sugarcane farmers who are partners of the company and 55 other sugarcane farmers who are not partners. Sampling was conducted using *stratified random sampling* method, which means that sampling takes into account the level in the population randomly with proportional composition. The sample size in this study was determined using the Slovin formula with the final result being a sample of 19 sugarcane farmer partners; a sample of 29 non-partner sugarcane farmers.

The types of data in this study are quantitative data and qualitative data sourced from primary data and secondary data. Primary data comes directly from sugarcane farmers who are

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partners and non-partners with PT. Jhonlin Batu Mandiri obtained through an in-depth interview process related to the research topic using a questionnaire as the main tool, and secondary data comes from the Plantation Office, Southeast Sulawesi Provincial Statistics Agency, and so on.

Data collection techniques were conducted through interviews and note-taking. The partnership pattern between sugarcane farmers and PT Jhonlin Batu Mandiri in Aneka Marga Village, North Rarowatu Sub-district, Bombana Regency was analyzed using a descriptive qualitative method based on the Miles and Hubberman (2014) approach of data reduction, data presentation, and conclusion drawing. Factors influencing sugarcane farmers' decision to partner with PT Jhonlin Batu Mandiri were analyzed using binary logistic regression analysis.

RESULTS AND DISCUSSION

Pattern of Sugarcane Farmer Partnership with PT. Jhonlin Batu Mandiri

There are a number of partnership patterns that have been described in partnership theory. The partnership patterns include the core-plasma partnership pattern, subcontracting, general trading, agency and KOA (Agribusiness Operational Cooperation). Each of these partnership patterns has its own characteristics. Based on the results of research in the field with the characteristics mentioned in Sumardjo's theory (2004), it can be concluded that the partnership pattern applied by PT Jhonlin Batu Mandiri with sugarcane farmers is the core-plasma partnership pattern.

The core-plasma partnership pattern is a relationship between the partner farmers as plasma and the company as a core business partner. The land used is owned by plasma farmers. The core company provides production facilities, management technical guidance, assistance in the form of land cultivation, provision of seeds, fertilizers, harvesting labor, accommodating and processing and marketing production. Meanwhile, the core partner farmers are tasked with fulfilling the needs of the core company as agreed in the contract or agreement letter. The following are the rights and obligations of partner sugarcane farmers and PT Jhonlin Batu Mandiri:

1. Rights of Sugarcane Farmers in Partnership

   The rights received by sugarcane farmers in accordance with the agreement in the cooperation agreement are as follows:

   a. Obtaining capital loans in the form of KUR funds
   b. Obtaining technical guidance on sugarcane cultivation

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c. Obtaining seedling loans
d. Obtaining a fertilizer loan
e. Gain market assurance

2. Rights of PT. Jhonlin Batu Mandiri

   PT. Jhonlin Batu Mandiri also has rights in accordance with the agreement that has been agreed upon in the employment agreement letter. The rights possessed by PT Jhonlin Batu Mandiri are:

   a. Supervise partner farmers
   b. Receive and grind all sugarcane products owned by farmers
   c. Obtaining sugarcane with Fresh Clean Sweet standard (MBS)
   d. Deducting the proceeds from the sale of sugar belonging to partner sugarcane farmers

3. Obligations of Partner Sugarcane Farmers

   Farmer obligations are something that must be fulfilled by sugarcane farmers to PT. Jhonlin Batu Mandiri in accordance with the agreement that has been signed in the cooperation agreement letter. These obligations include:

   a. Developing RDKK
   b. Carry out technical guidance provided by PT. Jhonlin Batu Mandiri
   c. Grind all sugarcane owned by partner farmers to PT. Jhonlin Batu Mandiri
   d. Paying off principal/credit loans

4. Liability of PT Jhonlin Batu Mandiri

   The obligation of PT Jhonlin Batu Mandiri is something that must be fulfilled by the company to partner sugarcane farmers in accordance with the previously signed agreement. These obligations include the following:

   a. Carry out registration and measurement of land owned by sugarcane farmers
   b. Provide technical guidance to partner farmers
   c. Conducting supervision and supervision in sugarcane farming activities

Factor Analysis of Influence on Farmer Partnering

The analysis of factors influencing sugarcane farmers' decision to partner with PT Jhonlin Batu Mandiri is shown in the table below.

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Table 1 Factors influencing sugarcane farmers' decision to enter into partnerships

Variables	Coefficient	S.E.	Wald	Df	Sig.	Exp(Y)
Age (X1)	-.088	.088	1.005	1	.316	.915
Years of Education (X2)	-.217	.248	.761	1	.383	.805
Land Area (X3)	1.258*	.497	6.414	1	.011	3.517
Farming Experience (X4)	-.548	.617	.788	1	.375	.578
Capital Limitations (X5)	3.073*	1.464	4.405	1	.036	21.599
Mastery of Farming Technology (X6)	2.876	2.027	2.014	1	.156	17.743
Constant	-.232	6.604	.001	1	.972	.793
Chi Square				43,132		
-2 log Likelihood Block Number = 0				64,443		
-2 log Likelihood Block Number = 1				21,311		
Negekerke R Square				0,802		

Source: Primary Data Processing Results, 2024

Description

* = significance (at 95% confidence level)

X^2_{table} at df 7 (α = 10%) = 10,644

X^2_{table} at df 7 (α = 5%) = 12,591

X^2_{table} at df 7 (α = 1%) = 16,811

X^2_{table} at df 1 (α = 10%) = 2,711

X^2_{table} at df 1 (α = 5%) = 3,841

X^2_{table} at df 1 (α = 1%) = 4,982

1. Table 1 shows that the value of X^2 calculated is 43.132 where the value is greater than X^2 table at the level of free degree 7 and α = 0.01 which is 16.811 so it can be concluded that the independent variables which include age, length of education, land area, farming experience, capital limitations and mastery of farming technology can be included in the model.
2. Table 1 shows that the iteration history (a, b, c) and *iteration history* (a, b, c) in the appendix can be seen that the *log likelihood* at *block number* = 0 is 64.443 greater than the value of *block number* = 1 which is 21.311. Based on this, it can be said that the regression model is good.

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3. Table 1 shows that the *Negelkerke R-Square* value of 0.802 indicates that the model built in the study has a relatively high level of accuracy in explaining the variables of farmers' decisions to partner with PT Jhonlin Batu Mandiri. In other words, about 80.2% of the variables in this decision can be explained by the independent variables included in the model, such as age, years of education, land area, farming experience, capital limitations, and mastery of farming technology, while the remaining 19.8% is influenced by other variables not included in the model.

In general, the *Negelkerke R-Square* value of 0.802 can be taken as an indication that the model has a good ability to describe the factors influencing farmers' decisions regarding partnership with PT Jhonlin Batu Mandiri. Although it was not possible to achieve 100% absolute precision in this study, the 80.2% level indicates that the model has a strong explanatory power of the variables considered.

4. Table 1 can be written *logistic regression* equation as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X + \beta X_{4\,55} + \beta_6 X_6 + \varepsilon$$

$$Y = -0.232 - 0.088\ X_1 - 0.217\ X_2 + 1.258\ X_3 - 0.548\ X_4 + 3.073\ X_5 + 2.876\ X_6 + \varepsilon$$

The Wald test that has been carried out can be obtained the results that there are 2 dependent variables that have a real effect on the independent variable, namely the variable land area (X_3) and the availability of capital (X_5), while age (X_1), length of education (X_2), farming experience (X_4), and the use of farming technology (X_6) have an influence that is not visible on the farmer's decision to enter into a partnership with PT Jhonlin Batu Mandiri. The following is a discussion of each variable:

1. Age

The age of the respondent is calculated from the day of birth until the time the research is conducted which is expressed in years. This age variable is stated to have no significant effect on the probability of sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 1 where the table shows that the age variable has a Wald statistical value smaller than the value of the X^2_{table} at df 1 (1,005 < 3,841) and a significance value greater than α = 0.005, namely 0.316.

The results of this study are not in accordance with the opinion stated by Soekartawi (1993) that a person's age can influence decisions in the application of technology. The tendency is that younger farmers will be more responsive to all forms of change available. Based on the research that has been conducted, the majority of sugarcane farmers in Aneka Marga Village

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are partner farmers aged 49 - 58 years and non-partner farmers aged 39 - 48 years. This shows that the age of respondent farmers varies, so it can be concluded that the influence of age is not seen in the decision of farmers to enter into partnerships. Thus, although the theory as proposed by Soekartawi (1993) states that age can affect the response to technology or change, the results of this study indicate that in the context of a partnership with PT Jhonlin Batu Mandiri, age does not show a significant influence. This is based on the statistical findings which show a low Wald value and high significance, indicating that age is not statistically able to significantly differentiate between partnered and non-partnered farmers in their decision to partner.

2. Length of Education

The length of education is the time used by respondent sugarcane farmers to complete education expressed in units of years. This length of education variable is stated to have no significant effect on the probability of sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 3.9 where the table shows that the variable length of education has a Wald statistical value that is smaller than the value of the X^2_{table} at df 1 (0.761 < 3.841) and the significance value is greater than α = 0.005, namely 0.383.

The results of this study are not in accordance with the opinion stated by Soekartawi (1993) that a person's education can influence decisions in the application of technology. The higher the education of farmers, the easier it is for farmers to accept new technology and the more rational mindset. Based on the research that has been done that the majority of partner sugarcane farmers in the village of various clans take education for 6 years or equivalent to elementary school and 12 years or equivalent to high school, while non-partner sugarcane farmers take the majority of education 6 years or equivalent to elementary school and 9 years or equivalent to junior high school.

3. Land Area

The area of land used by farmers in sugarcane farming in one planting season. This land area variable is stated to have a significant effect on the probability of sugarcane farmers' decisions to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 3.9 where the table shows that the land area variable has a Wald statistical value greater than the value of the X^2_{table} at df 1 (6.414> 3.841) and a significance value smaller than α = 0.05, namely 0.011.

Based on Table 1, it is also obtained that the land area variable has a coefficient value = 1.258 and an exp value = 3.517. The variable value of 1.258 indicates that if the land area increases by 1 ha, the probability of farmers to enter into a partnership with PT Jhonlin Batu

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Mandiri will increase by 1.258. Meanwhile, the value of exp = 3.517 means that the opportunity for sugarcane farmers to make partnerships is 3.517 times compared to not making partnerships. This means that sugarcane farmers have a higher chance of making a partnership than the opportunity not to make a partnership. This proves that the larger the land area owned by respondent farmers, the farmers tend to decide to enter into partnerships.

The results of this study are in accordance with the opinion expressed by Soekartawi (1993), that land area is always positively related to innovation adoption. Many new advanced technologies require a large scale of operation and high economic resources for the purposes of these innovations. This is in line with existing field conditions where the wider the land area of sugarcane farmers will increasingly require greater funds. The reality in the field is that farmers who participate in partnerships in Aneka Marga Village have a larger land area between 2-6 hectares compared to the land area owned by non-partner farmers which tends to be smaller, between 0.5-2 hectares. It can be said that the land area of respondent farmers shows a real variation, so it can be concluded that land area has a real influence on farmers' decisions to enter into a partnership with PT Jhonlin Batu Mandiri. The larger the land area owned by farmers will increasingly make farmers to decide to make partnerships, on the contrary, the smaller the land area owned by farmers will make farmers increasingly unavailable in making partnerships because farmers consider that new innovations in the form of partnerships will require large areas of land and resources in its application, so that it is considered burdensome for farmers.

4. Farming Experience

Farming experience is the length of time farmers in sugarcane farming expressed in units of know. This farming experience variable is stated to have no significant effect on the probability of sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 1 where the table shows that the farming experience variable has a Wald statistical value that is smaller than the value of the X^2_{table} at df 1 (0.788 < 3.841) with a significance level greater than α = 0.005, namely 0.375.

The results of this study are not in accordance with the opinion stated by Hasan (2002), that one's farming experience can influence decisions in the application of new technology or innovation. The deeper the experience in farming will make farmers easy to apply new technologies and innovations to solve problems in their farming activities. In addition, the longer farming experience farmers have, the more able they are to consider the good and bad and profit and loss in applying new innovations in their farms. Based on the research that has been done, the majority of partner sugarcane farmers have farming experience between 3-4 years

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totaling 10 farmers while non-partner farmers have farming experience which is between 1-2 years totaling 23 people. This shows that there is a difference between the experience of farming owned by partner farmers and non-partner farmers.

5. Limited Capital

This capital limitation variable is stated to significantly affect the probability of sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 3.9 where the table shows that the capital limitation variable has a Wald statistical value greater than the value of the X^2_{table} at df 1 (4.405 > 3.841) and a significance value smaller than α = 0.05, namely 0.036.

Table 1 also shows that the capital limitation variable has a coefficient value = 3.073 and an exp value = 21.599. This means that the chances of sugarcane farmers doing partnerships are 21.599 times compared to not doing partnerships. This means that sugarcane farmers have a higher chance of making a partnership than the opportunity not to make a partnership. This proves that the more limited capital owned by respondent farmers, the farmers tend to decide to enter into partnerships.

The results show that capital limitation is a very decisive factor for sugarcane farmers in Bombana Regency in choosing to partner with PT Jhonlin Batu Mandiri. The significant positive coefficient and high odds ratio indicate that the more limited capital farmers have, the more likely they are to choose to partner with the company. This makes sense in the context of a partnership where PT. Jhonlin Batu Mandiri provides facilities such as production facilities, technical guidance, land cultivation assistance, provision of seeds and fertilizers, which is very helpful for farmers who may not have enough capital to do all of that themselves.

6. Use of farming technology

The variable use of farming technology is stated to have no significant effect on the probability of sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri. This is evidenced in Table 1 where the table shows that the variable use of farming technology has a Wald statistical value that is smaller than the value of the X^2_{table} at df 1 (2.014 < 3.841) with a significance level greater than α = 0.005, namely 0.156.

The results show that mastery of farming technology has no significant influence on the decision of sugarcane farmers in Aneka Marga Village to partner with PT Jhonlin Batu Mandiri. Although there is a slight increase in the odds (1.051 times), this difference is not statistically significant. Therefore, the farming technology mastery factor is not considered a major determinant in farmers' decision to join this partnership.

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CONCLUSION

The results of research on the partnership pattern between sugarcane farmers and PT Jhonlin Batu Mandiri can be concluded as follows:

1. The partnership pattern that is carried out between sugarcane farmers and PT Jhonlin Batu Mandiri is the plasma core partnership pattern. In this pattern, the land used is owned by plasma farmers. The nucleus company provides production facilities, management technical guidance, assistance in the form of land processing, provision of seeds, fertilizers, harvesting labor, as well as accommodating, managing, and marketing production results. Meanwhile, partner farmers are tasked with fulfilling the needs of the nucleus company in accordance with the agreement in the contract or letter of agreement.
2. Factors that influence sugarcane farmers' decision to enter into a partnership with PT Jhonlin Batu Mandiri are land area and capital limitations. Factors such as age, years of education, farming experience, and use of farming technology do not appear to have an effect on sugarcane farmers' decisions to enter into partnerships.

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