The Effect of Palm Sugar Production on Community Income in Dadakitan Village, Baolan District, Tolitoli Regency

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Abstract

This study aims to determine the Influence of Palm Sugar Production on Community Income in Dadakitan Village, Baolan District, Tolitoli Regency. This study uses an associative quantitative research method to determine the influence of independent variables on dependent variables, data sources obtained from observations, interviews, documentation and questionnaires and the type of data is primary data and secondary data with a total of 85 respondents in Dadakitan Village, Baolan District, Tolitoli Regency. Based on the research that has been carried out by collecting data from the results of the research questionnaire with the help of the SPSS Version 26 data processing application, it can be concluded that the results of the hypothesis test have a partial influence between production and income. This is proven by the results of the t-test which shows a Sig. value of $0.000 < 0.05$ and a calculated t-value of $11.085 >$ a table t-value of 1.992. with the variable influence of palm sugar production level on community income of 59.7%. In addition, palm sugar production also helps the economy of the community in Dadakitan village, especially for palm sugar artisans from their production are able to meet their daily needs.

Keywords: *Production, Income, Palm Sugar*

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INTRODUCTION

Indonesia is an agrarian country, which means that the agricultural sector still plays an important role in the overall national economy. One of the agricultural subsectors that is quite important in national development is the plantation subsector. A plantation commodity that is widely preserved by the community is coconut. The use of coconut can be used as a raw material for cosmetics, white coconuts, art trinkets, shampoo-making materials, margarine, activated carbon, raw materials for medicines, and so on. In addition to coconuts that can be processed into various products with high economic value, another product that is no less important than coconut is sap. Sap is a liquid that is absorbed from the male flowers of palm trees that have released saplar trees. The male flowers are shorter than the female flowers, about 50 cm long, while the female flowers reach 175 cm. The tapped part of the palm tree is the stem of a male flower.

The development of potential agricultural products in the market is one of the solutions that is expected to overcome the impact of the global economic crisis. Agricultural opportunities in Indonesia are still very large. In addition to being supported by a very large area, soil fertility also supports the development of traditional agriculture towards modern agriculture. One of the agricultural commodities in Indonesia that has high economic value is oil palm plants.

The palm plant (Arenga Pinnata Merr) belongs to the arecaceae tribe (areca nut), which is a closed seed plant (angiosperm), where the seeds are wrapped in the flesh of the fruit. The palm tree plant or tree is almost similar to the coconut tree (cocus nucivera). However, palm trees have differences in their trunks. Coconut trees have clean tree trunks, namely leaf and cotton stalks are easy to take while palm trees have very dirty trunks because the trunk is wrapped in palm oil which is black and very strong so that even old leaf scabs are very difficult to pick up or remove from the trunk. Palm plants are plants that produce industrial materials because almost all parts of this plant can be used and have economic value. Palm plants are mostly cultivated by farmers and have not been cultivated on a large scale, because crop management has not applied good cultivation techniques causing low crop productivity.

Although the benefits of palm trees are quite extensive, most of the people who take advantage of the benefits of the existence of this biological resource have not been cultivated properly. Some Indonesian people still rely on naturally grown palm trees for various needs (Widyawati, 2012:54).

Brown sugar from Dadakitan Village has a very prospective market opportunity because it is organic-based and guaranteed cleanliness. Dadakitan Village with a total of 852 heads of families whose income comes from plantation products, such as coconut, cocoa, and cloves, and there are several people who have gardens carrying out palm sugar making business activities, which is due to palm trees that grow naturally in the garden but there are also those who grow them themselves. The production of palm sugar is a promising business opportunity because it can help the economy of palm sugar farmers in Dadakitan Village, because it can be produced two to three times a week.

Dadakitan Village is one of the areas that has the potential for palm sugar processing businesses in Tolitoli Regency, precisely in Baolan District. Palm sugar production activities, in the city of Tolitoli palm sugar are better known as brown sugar. In Dadakitan Village, palm sugar production is carried out traditionally, also

supported by a combustion method that only uses one combustion furnace so that it takes a long time for one palm sugar production, which is about 4-6 hours by producing 15 kg/3 days. The fuel used to cook palm sugar is firewood.

Through this background, it is necessary to conduct a study related to the Influence of Palm Sugar Production on Community Income in Dadakitan Village, Baolan District, Tolitoli Regency. With the aim of finding out the influence of palm sugar production on the people of Dadakitan Village, Baolan District, Tolitoli.

METHODOLOGY

This study uses a quantitative approach with an associative method that aims to analyze the causal relationship between the independent variable (X) and the bound variable (Y) based on numerical data. The quantitative approach was chosen because it is able to provide an objective and systematic measurement of the phenomenon being studied, especially in testing the influence of independent variables on dependent variables through statistical analysis (Sugiyono, 2015). This research was carried out in Dadakitan Village, Baolan District, Tolitoli Regency, with the consideration that most of the people in the area are engaged in the palm sugar making business. The research lasted for approximately three months, from March to May 2023.

The population in this study is the entire community of Dadakitan Village, Baolan District, Tolitoli Regency, which totals 852 families. The sample was determined using an incidental sampling technique, which is sampling based on respondents who were met by chance and considered to meet the criteria as a data source. The number of samples was determined using the Slovin formula, so that as many as 85 respondents were obtained who were considered to be able to represent the characteristics of the study population.

The data analysis technique is carried out through several stages. The initial stage includes validity tests and reliability tests of research instruments using the SPSS application. The validity test aims to ensure that each question item in the questionnaire is able to measure the variables being studied, with the criterion of the value of r calculated to be greater than the r of the table. Next, a reliability test was carried out to determine the consistency level of the instrument, where the questionnaire was declared reliable if the Cronbach's Alpha value was greater than 0.7.

Before the regression analysis was carried out, this study first conducted a classical assumption test, which included a normality test and a heteroscedasticity test. The normality test is performed using the Kolmogorov–Smirnov test to ensure that the data is distributed normally. The heteroscedasticity test was carried out using the Glejser method and supported by scatterplot analysis to find out whether there is a residual variance inequality in the regression model. The model is declared free of heteroscedasticity if the significance value is ≥ 0.05.

The main analysis used in this study is simple linear regression analysis, which aims to determine the direction and magnitude of the influence of variable X on variable Y with the equation model $Y = a + bX$. Furthermore, the t-test was used to test the significance of the influence of the independent variable partially on the bound variable, with a decision-making criterion based on a significance value

of 0.05. In addition, the determination coefficient (R^2) is used to measure the extent to which independent variables are able to explain the variation of dependent variables, so that the level of strength of the model in this study can be known.

RESULTS AND DISCUSSION

The results of the study showed that all research instruments had met the feasibility criteria for analysis. The validity test proves that all statement items on the production and revenue variables are declared valid because they have a calculated r value greater than r of the table and a significance value below 0.05. Furthermore, the reliability test showed that both variables had a Cronbach's Alpha value above 0.7, so the questionnaire was declared reliable. The normality test through the P–P Plot graph and the Kolmogorov–Smirnov test yielded an Asymp value. The sig is 0.054 (> 0.05), which indicates that the data is normally distributed and worthy of further analysis using simple linear regression.

Table 1. Simple Regression Analysis

Variable	Koefisien ß	Standar Error
Constanta	6.361	2.415
Produksi	1.067	0.096

Table 2. Test Results t

Variable	Sig.	Kriteria	Keterangan
Produksi	0.000	< 0.05	Berpengaruh
Variabel	**t hitung**	**> t tabel**	**Keterangan**
Pendapatan	11.085	1.992	Berpengaruh

Table 3. R Square

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.773[a]	.597	.592	3.047
a. Predictors: (Constant), Produksi				
b. Dependent Variable: Pendapatan				

The results of simple linear regression analysis showed that the production variable had a positive effect on income with a regression equation (Y = 6.361 + 1.067X), which means that every one unit increase in production would increase revenue by 1.067 units. The hypothesis test through the t-test reinforces this finding, where the significance value of 0.000 (< 0.05) and the calculated t of 11.085 is greater than the t of the table of 1.992, so the hypothesis is accepted. In addition, a determination coefficient value (R^2) of 0.597 indicates that production affects revenue by 59.7%, while the rest is influenced by other factors outside the model. Thus, it can be concluded that palm sugar production has a significant effect on increasing the income of the people of Dadakitan Village, Baolan District, Tolitoli Regency, in line

with the results of previous research which stated that the palm sugar business is feasible and able to improve the welfare of the community.

CONCLUSION

Based on the results of the study, it can be concluded that palm sugar production has a significant effect on people's income, which is evidenced by the results of the t-test with a significance value of $0.000 < 0.05$ and a calculated t-value of 11.085 greater than the t table of 1.992, as well as an influence contribution of 59.7%. Therefore, palm sugar artisans are advised to improve product quality to encourage increased income, the Dadakitan Village government is expected to provide support through counseling and distribution innovation so that marketing is wider, and researchers are further advised to develop research by adding other relevant variables to obtain more comprehensive results.

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