

Correlation Analysis Between Performance of Rubber Processing and Marketing Unit (PMU), Farmer's Income and Its Welfare Level in Bayung Lencir Sub-District Musi Banyuasin Regency

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Abstract. The purposes of this research were: (1) to analyze the Bayung Lencir PMU performance and the level of household income of member rubber farmer's, (2) to analyze the correlation between Bayung Lencir PMU performance and their member rubber farming income, and (3) to analyze the prosperity level of rubber farmers who are members of Bayung Lencir PMU. The data used are data from January 2020 to December 2020. The results of this research indicate that the performance of the Bayung Lencir PMU is in the medium category with an average score is 15.03. The average total household income of member rubber farmers is 62,493,291 IDR per year or 5,207,774 IDR per month. There is no significant correlation or relationship between the Bayung Lencir PMU performance and their member rubber farming income. The prosperity level of rubber farmers who are members of the Bayung Lencir PMU of rubber material based on household income is 60.00% of the farmers are classified as prosperous and 40.00% of the farmers are classified as not prosperous.

Keywords : income, PMU performance, welfare

1. Introduction

The agricultural sector is the main base of the national economy of the Indonesian state. Plantations are one of the sub-sectors that have a great important role because they experience the most consistent growth both in terms of land area and production results. Rubber commodity is one of the plantation commodities in Indonesia that can support the national economy. Indonesia is the second largest country after Thailand as a world rubber producing country [1]–[4].

South Sumatra Province is one of the provinces that is the largest rubber production center in Indonesia. Musi Banyuasin Regency has 134,908 ha of total land with a total production of 140,332 tons. Bayung Lencir District is an area with the largest area of community rubber plantations in the Musi Banyuasin Regency area with a land area of 42,824 ha with a total production of 65,652 tons [1], [3], [4]

The performance of PMU is important because the good performance of the PMU will be able to affect the farmers' income. UPPB has the function to provide technical activities and business development of smallholder groups in the processing and marketing of rubber product (slab). PMU Bayung Lencir is an PMU located in Bayung Lencir Village. The sales of

slab in PMU are carried out by auction. PMU Bayung Lencir is expected to be able to provide effective solutions in improving the quality of product, income, and welfare of rubber farmers [1], [2], [5].

2. Methodology

This research was carried out in Bayung Lencir Village, Musi Banyuasin Regency. The data collection process was carried out in February 2021. The method used in this study is survey method. The samples taken in this study were 60 farmers. The data collected in this study consists of primary data and secondary data. PMU Performance was analyzed using scoring measurement techniques (ordinal scale) to assess answers from questionnaires. The Performance Class Interval value is measured by the Criteria High, Medium and Low. Meanwhile, the correlation between the performance of PMU Bayung Lencir and the income from rubber farming was analyzed using the Rank-Spearman correlation coefficient test. The improvement of the welfare of PMU members was analyzed by comparing the total household income of farmers with the value of the Living Cost Standard (KHL). The KHL standard used in this study is according to the Regulation of the Minister of Manpower of the Republic of Indonesia Number 18 of 2020 concerning the Living Cost Standard Regulation.

3. Result and Discussion

3.1 Identification of PMU Bayung Lencir

OMU Bayung Lencir is in Bayung Lencir Village. This PMU was established on August 5, 2016 and has legality with the number STR-UPPB:06-10-0816-0011. The reason for the establishment of the PMU is because the potential for rubber product is quite high, while the price obtained by farmers is still low, and the quality of rubber is still lacking. The marketing system of slab is carried out by auction every 2 weeks. PMU cooperates has some auction participant (about 3-5 participant). Farmers product must be meet the requirements and quality standards that have been stated in the agreement.

3.2 PMU Performance

The performance of PMU is measured by some indicators which can be seen in Table 1 to 3 in the following.

Table 1. UPPB Performance Measurement Results

No.	Components of Performance Indicators	Average Score	Criterion
1	Technical Activities	9.33	Moderate
2	Business Development Activities	5.70	Low
	Total Score	15.03	Moderate

Table 2. Measurement of Components of Technical Activities

No.	Technical Activities	Average Score	Criterion
1	Tapping Skills Development	2.30	Moderate
2	Use of Equipment	2.43	High

3	Implementation of Slab Processing and Marketing	2.60	High
4	Introduction to Slab Quality Standards	2.00	Moderate
Total Score		9.33	Moderate

Table 3. Measurement of Components of Business Development Activities

No.	Business Development Activities	Average Score	Criterion
1	Provision of Clumping Materials	2.47	High
2	Production Facilities Provider	1.00	Low
3	Transportation	1.00	Low
4	Capital	1.23	Low
Sum		5.70	Low

3.3 Rubber Farming Income and Other Source of Income

The average amount of slab production produced by farmers in 2020 is 5,475 kg/land area/ year with an average arable area of 2.18 hectares. The selling price of slab in 2020 are fluctuations ranging from IDR 7,000 to IDR 12,000 / kg. The average selling price of slab in 2020 is IDR 9,708 / kg. The average income of rubber farming farmers who are members of PMU in 2020 can be seen in Table 4. This table shows that the average amount of farmer income is IDR 49,626,624/land area/ year.

Table 4. Average Income of Rubber Farming

No.	Description	Average (IDR/land area/year)	Average (IDR/land area/month)
1	Revenue	53,159,521	4,429,960
2	Total Production Costs	3,532,897	294,408
3	Income	49,626,624	4,135,552

Table 5. Average Other Source of Income

No.	Type of Work	Average (IDR/land area/year)	Average (IDR/month)
1	UPPB Board	1,599,997	133,333
2	Merchant	3,320,004	276,667
3	Teacher	3,200,004	266,667
4	Odd Labor	1,400,004	116,667
5	Employee	1,080,000	90,000
6	Palm Oil Farming	1,599,997	133,333
7	Livestock	666,660	55,555
Sum		12,866,667	1,072,222

3.4 Total Household Income

The total household income of farmers is the result of the sum of the income of rubber farming and income outside the rubber farming business obtained by rubber farmers and their families which can be seen in Table 6.

Table 6. Average Total Household Income of Rubber Farmers

No.	Description	Average (IDR/year)	Average (IDR/month)	Percentage (%)
1	Rubber Farming Revenue	49,626,624	4,135,552	79.41
2	Income Outside rubber farming	12,866,667	1,072,222	20.59
3	Total Household Income	62,493,291	5,207,774	100.00

Table 6. shows that the average total household income of rubber farmers members of PMU is IDR 5,207,774 per month or IDR 62,493,291 per year. The contribution generated by the income of rubber farming is the total household income of farmers is 79.41%, while the contribution from income outside the rubber farming business is only 20.59%.

3.5 The Relationship between the Performance of PMU and the Income of Member Farmers' Rubber Farming Business

The relationship was analyzed using a spearman rank correlation test (RS) which can be that value of the sig. (2-tailed) which is 0.879. Based on the rules of the decision, the result shows that the value of the sig. (2-tailed) greater than 0.050. It means that there is no correlation between the performance of PMU and farmers income.

3.6 The Level of Welfare of Rubber Farmers

The welfare level of PMU members is analyzed based on the Living Cost Standard (KHL) of the farmer's family. The standard components of the KHL in Bayung Lencir Village can be seen in Table 7.

Table 7. KHL Standard Components in Bayung Lencir Village in 2020

No.	Component	Living Cost Standard (IDR/month)
1	Food and Drink	568,200
2	Clothing	149,750
3	Housing	355,250
4	Education	13,500
5	Health	81,000
6	Transportation and Communication	262,000
7	Recreation, Savings, and Social Security	5,000
	Sum	1,434,700

The welfare level is based only on the income of rubber farming, namely as many as 46.67% of farmers are classified as prosperous and 53.33% of farmers are classified as not prosperous. The average rubber farmer who is classified as prosperous has a cultivation area of more than 2 hectares and has a family of between 2 and 4 people.

The level of welfare based on the total household income of farmers is that as many as 60.00% of farmers are classified as prosperous and 40.00% of farmers are classified as non-prosperous. With additional income outside the rubber farming business, the welfare of rubber

farming families can increase by 13.33%. It can be concluded that farming families who have incomes outside of rubber farming tend to be more prosperous.

4. Conclusions

Based on the results and discussion, the conclusions obtained were (1) The performance of UPPB Bayung Lencir was classified as moderate with an average score of 15.03. The average total household income of member rubber farmers is IDR 62,493,291 per year or IDR 5,207,774 per month. (2) There is no significant correlation or relationship between the performance of UPPB Bayung Lencir and the income of rubber farming business of member farmers in Bayung Lencir Village. (3) The level of welfare of rubber farmers members of UPPB Bayung Lencir based on rubber farming income, namely 46.67% of farming families are classified as prosperous and 53.33% are not prosperous. Meanwhile, based on the total household income of farmers, as many as 60.00% of farmer families are classified as prosperous and 40.00% are not prosperous.

The advice given by the researcher is (1) To UPPB Bayung Lencir to establish cooperation with providers of production and capital facilities in an effort to increase rubber farming income. (2) Future government policies are expected to lead to price policies and increased rubber productivity. The stable price of rubber and the increase in productivity will have an impact on improving the welfare of rubber farmers in the future.

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