

Analysis of Income and Welfare Level of Rubber Farmers in Ujung Tanjung Village, Banyuasin III District, Banyuasin Regency

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Article History: Received: 12 Mei 24, Final Revision: 25 June 24, Accepted: 30 June 2024, Online Publication: 30 July 2024

ABSTRACT

Rubber is a plantation commodity that has a very important role in Indonesia. Rubber plants are widespread throughout Indonesia, especially on the island of Sumatra, and also on other islands. This research was conducted in Ujung Tanjung Village, Banyuasin III District, Banyuasin Regency. The objectives of this study were (1) to calculate the cost and income of rubber farming. (2) to analyzing the welfare level of rubber farmers using welfare indicators according to the Central Statistics Agency. The research method used in this study is the survey method. The sampling method used is proportional stratified random sampling. The data used in this study consisted of primary data and secondary data. Data collection was carried out in December 2022 until it was completed. The conclusions of this study are (1) The income of rubber farming farmers in Ujung Tanjung Village obtained an average income of. IDR 35,694,800.22/lg/year or equal to IDR 2,970,816.69/lg/month. (2) Rubber farmers in Ujung Tanjung Village have a low welfare level of 9.37% and rubber farmers have a moderate level of farmer welfare of 50.00% while rubber farmers have a high level of farmer welfare of 40.63% of all farmer respondents rubber in the village of Ujung tanjung. (3) The strategy for developing rubber farming in Ujung Tanjung Village is in quadrant I supporting aggressive strategies, these strategies are utilizing available resources to meet demand, increasing production by utilizing fertilizer assistance from the government, and increasing cultivation land with available land to increase production.

Keywords: income, rubber, SWOT, welfare

INTRODUCTION

Rubber has a very important role in the plantation sector in Indonesia. Apart from functioning as a job provider, this commodity also makes a significant contribution as a source of income from non-oil and gas exports and plays a role in encouraging economic growth in new rubber development areas. Rubber plants are widespread throughout Indonesia, especially on the island of Sumatra.

Many lands in Indonesia have ideal conditions for planting rubber, especially on the island of Sumatra and several islands in Java. (Budiman, 2012). Banyuasin Regency in South Sumatra Province recorded high rubber production, reaching 103,024 tons. This can be attributed to the physiological conditions of the area which is in the lowlands and the soil conditions that support the development of the agricultural sector, especially

rubber plantations. As a source of livelihood for local communities, rubber plantations have spread to all sub-districts in Banyuasin Regency. In 2020, it can be seen that Banyuasin III District is the first largest district with a rubber plantation area reaching 19,721 hectares, and the second highest amount of rubber production after Sumbawa District, namely 17,291 tons (BPS Banyuasin Regency, 2021).

In Ujung Tanjung Village, Banyuasin III District, Banyuasin Regency, the presence of rubber plantations has had a positive impact on community welfare. The existence of a rubber plantation in this village has opened up employment opportunities for the surrounding residents, who can now work as rubber farmers. The rubber area in the Banyuasin area reaches 101,662 hectares and is spread across various villages in Banyuasin Regency, including Ujung Tanjung Village. This means that the number of local residents involved in rubber farming activities contributes positively to their family income.

Economic welfare of farmers is a condition of a person's life that is able to meet the needs of food, clothing and shelter, especially for his and his family's life in a sufficient and adequate manner (Suryadi in Muksit, 2017). People in Ujung Tanjung Village, District III, Banyuasin Regency, work as rubber farmers to meet their daily needs. To improve the welfare of rubber farmers in Ujung Tanjung Village, an appropriate strategy is needed to develop rubber farming in order to improve welfare in Ujung Tanjung Village.

Rubber farmers' income is influenced by several main factors, such as the selling price of

rubber, plant productivity, production costs, as well as government policies regarding prices and subsidies. The level of welfare of rubber farmers includes aspects such as access to education, health, infrastructure and general socio-economic conditions.

Rubber is an important commodity for the Indonesian economy, especially in South Sumatra Province. Ujung Tanjung Village, Banyuasin III District, Banyuasin Regency is one of the rubber production center villages in the region. Analysis of the income and level of welfare of rubber farmers in this village is important to understand their economic conditions and formulate appropriate policies to improve their welfare.

Based on the description that has been explained, the author is interested in conducting research with the title Analysis of Income and Welfare Level of Rubber Farmers in Ujung Tanjung Village, Banyuasin Regency. It is hoped that the analysis carried out will determine the level of farmer welfare and provide strategic input in improving farmer welfare.

The aim of this research is to calculate the average income earned by farmers from rubber farming in Ujung Tanjung Village, Banyuasin Regency, analyze the level of welfare of rubber farmers using welfare indicators according to the Central Statistics Agency and analyze strategies that farmers can use to develop rubber farming in Ujung Tanjung Village, Banyuasin Regency.

MATERIALS AND METHODS

The research was conducted in Ujung Tanjung village, Banyuasin III district, Banyuasin district. The location determination was carried out deliberately (*purposive*) with the consideration that most of the farmers in Ujung Tanjung village there cultivate rubber plants as their primary commodity. Data collection was carried out in December 2022 until it was completed. The sampling method carried out in this study is *Proportionate stratified random sampling*. The number of samples obtained from the calculation

used was 32 farmer families with an equal distribution based on the age of the rubber plants cultivated by farmers. To answer the first objective, which is to calculate the average income of rubber farming in Ujung Tanjung Village, Banyuasin City by:

$$Pd = TP - BT$$

$$TP = JP \cdot HP$$

$$BT = BTT + BT$$

to measure the level of household welfare of rubber farmers using indicators adjusted by

information about population, health and nutrition, education, employment, and other social. Each classification is determined by subtracting the highest total score from the lowest total score.

$$RS = \frac{SkT - SkR}{JKI}$$

Keterangan :

RS = Score Range

SkT = Highest Score (7x3)

SkR = Lowest Score (7x1)

JKI = Number of clasification used (2)

To answer the third objective, which is to

analyze the strategy carried out for the prospects for the development of rubber farming in Ujung Tanjung Village, Banyuasin City, this problem can be analyzed with SWOT. The SwOT matrix is a tool to compile strategic factors consisting of 4 types of strategies, namely the SO (strengths-opportunities) strategy, the Wo strategy (weaknesses-weaknesses), the ST strategy (strengths-threats) and the WT strategy (weaknesses-threats).

RESULTS AND DISCUSSION

Ujung Tanjung Village is part of Banyuasin III District which is located in Banyuasin Regency. Ujung Tanjung Village is located in a lowland surrounded by rice fields and the Kesambi River. Ujung Tanjung Village has a tropical climate. The area of Ujung Tanjung village is 1100 ha. The population in Ujung Tanjung Village who are of productive age, namely the population aged 15-64 years, is more than the population of non-productive age, namely the population aged 0 to 14 years and those over 64 years old. Ujung Tanjung Village is a village where most of the residents work as farmers. Not only from the agricultural sector, the livelihood in Ujung Tanjung Village is also from outside the agricultural sector. The number of dependents of the respondents' farmer families mostly amounted to 4 to 6 people. The

area of land used by rubber farmers cultivated by rubber farmers in Ujung Tanjung Village, has an average land area of 1 hectare.

Analysis of Rubber Farmer's

Production Cost

Production costs are the costs incurred by rubber farmers in trying to make a product valuable. The costs incurred are calculated starting from cultivating the land until it is ready for harvest. Fixed costs are costs that are not exhausted in one production, where the amount of fixed costs incurred will not affect the amount of production to be produced. Average amount of rubber farmers per area of arable land in Ujung Tanjung Village:

Table 1. Costs of Continuing Rubber Cultivation in Ujung Tanjung Village

No	Fixed Cost Components	Average Depreciation Value (RP/Lg/Yr)	Percentage (%)
1.	Hoe	14.662,50	4,17
2.	Machete	7.775,00	2,21
3.	Tapper Bowl	110,742,19	31,53
4.	Tapping Gutter	66.445.31	18,92
5.	Tapping Knife	23.468,75	6,68
6.	Bucket	30.062,50	8,56
7.	Freezer	25.078,13	7,14
8.	Ring	55.371,09	15,70
9.	Handsprayer	17.562,50	5,00
	Sum	351.167,97	100,00

Source: Primary data processed. 2023.

Receipts are the results of rubber production that are sold at a predetermined price. The high and low acceptance is also affected by the price. The acceptance of rubber farming in more detail can be seen below:

Table 2. Variable Costs of Rubber Farming in Ujung Tanjung Village

No.	Fixed Cost Component	Average Variable Cost Value (Rp/Lg/Thn)	Percentage (%)
1.	NPK Fertilizer	304.687,50	63,20
2.	Urea Fertilizer	177.343,75	36,80
Sum		482.031,25	100,00

Source: Primary data processed. 2023.

Rubber farming income is the subtraction between the total revenue from rubber farming and the total cost of rubber farming production incurred to produce the rubber production :

Table 3. Average Income of Rubber Farming in Ujung Tanjung Village

No.	Component	Fees Rp/Lg/yr
1.	Production Cost (Kg/lg/thn)	4566
2.	Selling Price	8000
	Average Revenue (Rp/lg/yr)	36.528.000

Source: Primary data processed. 2023.

Rubber farming income is the subtraction between the total revenue from rubber farming and the total cost of rubber farming production incurred to produce the rubber production.

Table 4. Average Rubber Farming Income in Ujung Tanjung Village

No.	Component	Fees Rp/lg/thn
1.	Acceptance	36.528.000,00
2.	Production Cost	833.199,22
	Average Income (Rp/lg/thn)	35.694.800,78

Source: Primary data processed. 2023.

Prosperity level

Welfare in the context of the modern world refers to the situation where a person can meet his basic needs, including food, clothing, shelter, clean

water, and the opportunity to be educated and have sufficient work, thereby improving his quality of life and social status on a par with other citizens.

SWOT analysis

Matrix Analysis

IFAS matrix analysis is a matrix calculation of internal factors by determining which factors are a strength or weakness in an

organization or company. The internal factors and weight scores can be seen in the table:

Table 5 : Matrix Interval Factor Analysis Summary

Internal Factors	Weight	Rating	Weight Score
Strength			
1. Good Land Condition	0,153	3,188	0,487
2. Expertise in farming	0,172	3,594	0,620
3. Relatively low production cost	0,154	3,219	0,497
4. Wisdom does not require high technology	0,187	3,906	0,732
Sub Total Strenght			
Debilitation			
1. Rubber prices fall	0,094	1,969	0,186
2. Limited capital	0,073	1,531	0,112
3. Maintenance of rubber plantations	0,081	1,688	0,137
4. The presence of pests	0,084	1,750	0,147
Sub Total Weakness			0,582
Total Internal Factors			2,186
Total Internal Factor Difference			1,022

Source: Primary data processed. 2023.

From the table above, the total weight score of the IFAS matrix on the strategy to maintain the production and income of rubber farmers is 2.186. So it can be concluded that the rubber farmers in Ujung Tanjung Village are not

able to utilize the existing strengths to overcome a weakness in activities to increase the production of rubber farmers in Ujung Tanjung Village, Banyuasin III District, Banyuasin Regency.

Table 6: Matrix External Factor Analysis Summary

External Factors	Weight	Rating	Weight Score
Chance			
1. Increasing demand for rubber	0,169	3,406	0,575
2. Affordable communication and information	0,184	3,719	0,685
3. Vacant land inventory	0,156	3,156	0,493
1. 4. Farmers get fertilizer assistance from the government	0,147	2,969	0,437
Sub Total Opportunities			2,190
Threat			
1. Climate influences affecting rubber production	0,094	1,906	0,180
2. Unstable prices	0,074	1,500	0,111
3. Absence of extension workers	0,090	1,813	0,163
4. Increased transportation costs	0,085	1,719	0,146
Sub Total Weakness			0,601
Total Internal Factors			2,787
Total Internal Factor Difference			1,589

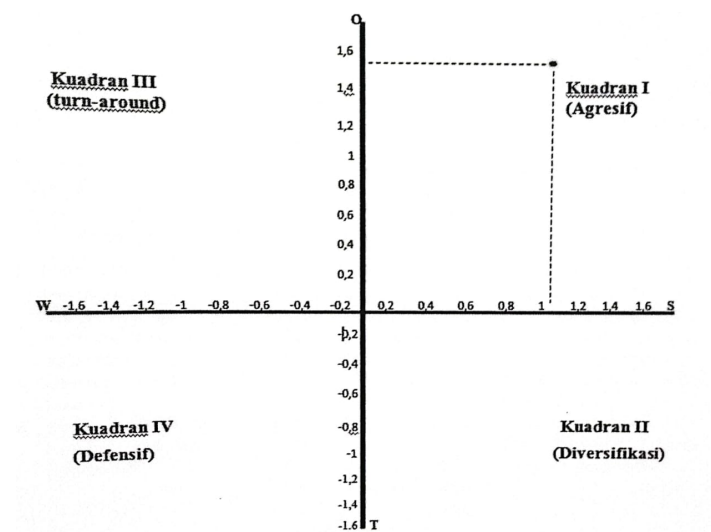
Source: Primary data processed. 2023.

Based on the data in the table above, it is

known that the results of the EFAS matrix analysis

in rubber farming in Ujung Tanjung Village obtained a large total weight score of 2,645. The EFAS matrix total weight score is 2,787 which is above 2,500. This means that rubber farming in the village has been able to take advantage of an existing opportunity to overcome a threat faced. The best opportunity is in the affordable market communication and information factor with a weight score of 0.184, while the highest threat is in the climate change threat factor that affects rubber production with a weight score of 0.094. The results of the IFE and EFE matrices produce a

total score where this total score is generated from 4 indicators, namely strength and sluggishness, opportunities and threats in the preparation of the position matrix analysis diagram, then the diary is the difference from the 4 indicators. The difference from the IFE matrix between strength and weakness is 1.022 or the value of X while the difference from opportunity and threat is 1.589 or the value of Y, based on this value, the position of the coordinate point can be seen in the figure below:



Gambar 1. SWOT Matrix Results

After being calculated and mapped on the SWOT analysis diagram matrix, it is known that rubber plantations in Ujung Tanjung Village are positioned in quadrant I, meaning that where the rubber farming has opportunities and strengths so that they can take advantage of the existing

opportunities, the plan that can be implemented is rapid. The SWOT matrix contains a combination of *Strenghts-Opportunities* (SO) strategies. *Weaknesess Oppurtunities* (WO), *Strenghts-Threats* (ST), and *Weakness-Threats* (WT).

Table 7. SWOT Matrix for Rubber Farming in Ujung Tanjung Village

Internal Eksternal	Power (S)	Weakness (W)
	1. Good land conditions 2. Expertise in farming 3. Relatively low Production Costs 4. Easy casting 5. The existence of farmer groups	1. Types of rubber seedlings that are not good 2. Limited capital 3. Maintenance of rubber plantations 4. The presence of pests and plant diseases
Chance (O)	Strategy(S)	WO Strategy
1. Increased demand for rubber 2. Affordable communication and information 3. Availability of vacant land 4. Farmers get fertilizer assistance from the government.	1. Utilizing the resources owned (good land conditions) to meet demand 2. Increase rubber production by utilizing the help of fertilizers. 3. Increasing cultivated land with available land for increased production.	1. Fertilize to improve poor types of seedlings 2. Increase rubber production by providing puluk assistance to increase income. 3. Optimize the existing land well.
Threat (T)	ST Strategy	WT Strategy
1. Climate influences affecting rubber production 2. Unstable prices 3. Absence of extension workers 4. Increased transportation costs	1. Increase production by utilizing relatively low production costs 2. Increasing the participation of farmer groups as a means of counseling, education and access to capital 3. Improve the quality of rubber in unstable price conditions so that it can increase prices.	1. Carry out pest and disease prevention and control to reduce the risk of plants being attacked by pests and diseased plants 2. Extension and training programs to increase the knowledge of rubber farmers.

Source: Primary data processed. 2023.

WO Strategy

The SO strategy is an approach that relies on the internal strength of rubber farming to optimize existing opportunities. Here are some strategic steps taken based on the SWOT analysis and SWOT matrix:

1. Utilizing the potential of the resources owned, especially good land conditions, to meet demand. Increasing rubber sap production is the main focus, because the more sap produced will have an impact on increasing farmers' income. Plantation land in Ujung Tanjung Village, which is suitable for rubber plant cultivation, has the potential to increase production.
2. Increase rubber production by optimizing

fertilizer assistance. This fertilizer assistance is an encouragement for farmers to increase rubber production. With the support of fertilizers, farmers are expected to be more motivated to increase their rubber production.

3. Expanding cultivation land by utilizing vacant land in Ujung Tanjung Village. The availability of vacant land is an opportunity to develop rubber farming and increase the productivity of quality crops. By utilizing existing agricultural facilities, it is hoped that it can encourage the growth of rubber farming in a sustainable manner.

WO Strategy

The proposed strategy is to take the *opportunities* that exist in rubber farming in Ujung Tanjung Village by overcoming or *reducing the weaknesses* they have. Based on the table above, here are some alternatives that can be applied:

1. Improving poor types of seedlings through fertilization. By providing the appropriate fertilizer and in the right dose, the fertility of the plant can be increased resulting in more rubber sap with better quality. This has the potential to increase the income of rubber farmers in the area.
2. Increase rubber production by utilizing the help of fertilizers. The provision of fertilizer assistance from the government or related agencies can help increase rubber production and directly increase farmers' income. This support plays an important role in taking advantage of existing market opportunities.
3. Optimizing the use of existing cultivated land through tillage and pest eradication, as well as the application of effective fertilization. In this way, the yield of rubber products can be improved both in terms of quality and production quantity. The impact is that farmers can take advantage of existing market opportunities to develop more profitable rubber farming.

ST Strategy

The *Strengths - Threats* Strategy is a plan that aims to utilize the strengths of rubber farmers in Ujung Tanjung Village to avoid potential threats that may occur. Based on the results of the analysis,

CONCLUSION

Based on the results of the research that has been carried out, the following conclusions can be drawn: The income of rubber farming farmers in Ujung Tanjung Village is obtained by an average income of Rp Rp35.694.800,22 / lg / thn Rp2.970.816,69 / lg / bln (with arable land area

there are several alternatives that can be applied as follows:

1. Increase rubber production by taking advantage of relatively low production costs. Farmers can increase rubber production by optimizing the assistance provided by the government in the form of fertilizers, pesticides, and vinegar. With this assistance, production costs can be reduced so that farmers do not experience obstacles in doing business in the rubber sector.
2. Increasing participation in farmer groups as a means of counseling, education, and access to capital. Farmer groups have a very important role in rubber farming, because through active participation in groups, farmers can get many benefits such as counseling on better farming techniques, education on business management, and easier access to capital for farming development.
3. Improve the quality of rubber sap in the face of unstable price fluctuations. By improving the quality of the sap produced, farmers can obtain a higher price in the market. The quality referred to here can include low moisture content in the rubber, as rubber sap with a low moisture content usually has a higher price.

Strategi WT

A strategy that focuses on activities that are resistant to challenges, with the aim of minimizing existing weaknesses and trying to overcome threats. One strategy that can be implemented is implementing pest and disease prevention and control to reduce the risk of plants being attacked by pests and disease, as well as providing treatment to sick plants.

1,42 lg 1,75 ha). The average score for each indicator of the welfare of rubber farmers in Ujung Tanjung Village is 2.21, which means that the level of welfare of rubber farmers in Ujung Tanjung Village is at medium criteria. The rubber farming development strategy in Ujung Tanjung Village is

positioned in quadrant I, supporting an aggressive strategy or SO strategy, which is a strategy created by using all strengths to take advantage of existing opportunities. Based on the SWOT analysis carried out using the SWOT matrix, the SO strategy is obtained as follows: Utilizing existing resources (good land conditions) to meet demand. In this case increasing rubber latex production is quite important because the more latex produced, the more farmers' income will increase. Increasing

rubber production by utilizing fertilizer assistance. With this fertilizer assistance, farmers are increasingly enthusiastic about increasing their rubber production. Increase cultivation land by utilizing the availability of empty land in Ujung Tanjung Village. The availability of existing agricultural facilities can encourage the development of rubber farming in order to increase the productivity of quality harvests

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