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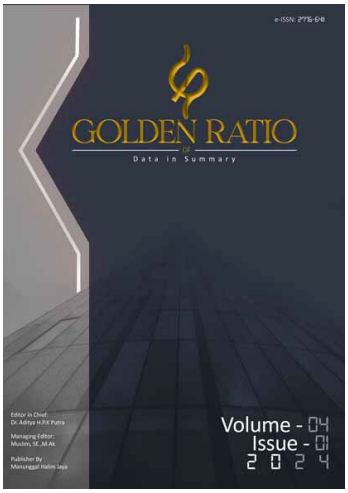

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DESCRIPTIVE OF QUANTITATIVE DATA | SUPPLEMENTARY

Analysis of Income from Palm Sugar Artisans in Makmur Village, Palolo District, Sigi Regency

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Abstract: This research aims to find out how much Palm Sugar Craftsman earn per month in Makmur Village, the research method is the method used in this research is the qualitative descriptive analysis method. By using primary data sources and secondary data. Data analysis in this research uses the income and revenue analysis method. Based on the results of research in Makmur Village the conclusion is that the income or profit results were IDR 1.098.335. From the receipt of IDR 1.710.000 from sales of Palm Sugar for ninenty pieces of Palm Sugar for a month, valued at eighteen thousand rupiah, the total costs of IDR 611.665 was obtained from fixed costs plus variable costs. To get income or profit, use TR-TC or 1.710.000-611.665 so you will get a result of IDR 1.108.335. The results of the R/C Ratio analysis show that the Palm Sugar business in Makmur Village provides profits with an R/C value shows that the Palm Sugar business in Makmur Village, Palolo District is worth running.

Keywords: Income, Craftsman, Palm Sugar.

1. INTRODUCTION

Indonesia, as an agrarian country, has a majority of its population working as farmers, with most of them earning their livelihoods from the agricultural sector. The development of the agricultural sector has always been a primary focus in each stage of national development because agriculture is one of the sectors that can support economic growth across various sectors. In the perspective of national economic development in Indonesia, serious attention is needed for the development of national agriculture, specifically the agricultural sector (Partowijoto, 2003).

Sigi Regency is one of the major centers for Palm Sugar production on a large scale. People involved in Palm Sugar production use various raw materials. The Palm Sugar business is a significant source of income for the residents of Sigi Regency, particularly for the people in Makmur Village, Palolo District. They utilize sap as the raw material for making Palm Sugar. The fruit juice used in the production of Palm Sugar is evaporated sap. There are many factors to consider in producing high-quality Palm Sugar. The most important factors include preparing the sap and tapping process, handling the sap before processing, and the processing and final handling of the produced Palm Sugar (Lutony, 1993). Palm Sugar, which has a yellowish or brownish color, is made from the sap of the palm or sugar palm tree. Sap is a liquid found in the unopened flowers of the sugar palm, obtained through tapping. The collected sap is slowly boiled until it thickens, then molded until it hardens. Once hardened, Palm Sugar can be consumed or sold for added value (Rahmawati, 2012).

Makmur Village, located in Palolo District, Sigi Regency, has the potential for Palm Sugar production. This potential is supported by the presence of sugar palm trees in the area, which the local community utilizes to meet their daily needs through Palm Sugar production. Although this village is well-known for producing Palm Sugar, traditional methods are still used to mold the sugar into solid forms using coconut shells. However, high production quantities do not necessarily guarantee high income for the artisans, and they may not be aware of the production costs of their

Palm Sugar business or whether these costs exceed the income generated from their production. Researchers are still uncertain whether the costs are high or not.

The objective of this study is to analyze the income of Palm Sugar artisans in Makmur Village and the production costs incurred by the farmers. This research aims to determine the income of Palm Sugar artisans in Makmur Village and the production costs they bear. Therefore, a study is needed to analyze the income of Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency. Based on the above description, the problems and objectives of the research on Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, are as follows: The problems addressed in this research include: determining the monthly income of Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency; assessing the total costs and revenues of the artisans during one month of Palm Sugar production in Makmur Village, Palolo District, Sigi Regency; and evaluating the feasibility of the Palm Sugar business for the artisans in Makmur Village, Palolo District, Sigi Regency. The objectives of this study are to: determine the monthly income from Palm Sugar production in Makmur Village, Palolo District, Sigi Regency; assess the total costs and income from one month of Palm Sugar production by artisans in Makmur Village, Palolo District, Sigi Regency; and evaluate the feasibility of the Palm Sugar business for artisans in Makmur Village, Palolo District, Sigi Regency.

2. LITERATURE REVIEW

2.1 Production Theory

Production is an activity aimed at creating products and enhancing the utility of goods and services. This work aims to meet human development needs. Welfare can be achieved when the supply of goods is sufficient. According to Asauri in Nanan's journal (2015), production involves transforming inputs into outputs and encompasses all activities that generate goods and services, supporting a company's production or other activities that assist in producing goods or services. Heizer and Render, in Nanang's journal (2015), also describe production as the process of creating goods and services. According to Sahrony (2001), the production function is the relationship between the level of output produced and the input factors, including labor, land, capital, and technology. The determination of production factors that minimize production costs while increasing total costs is achieved during project evaluation. Producers must consider the payment rates for additional production factors used and the amount of additional sales revenue generated by these factors.

2.2 Income Theory

Total profit according to margin over a certain period is referred to as income. Companies seeking to maximize profits will make marginal decisions, allowing them to adjust controllable variables for maximum profit (Gratio, 2013). Income includes net income and net profit. Gross income measures the production of services produced by the agricultural sector, while net profit is the total income minus the total operational costs incurred (Soekartawi, 2001). A company's profit and loss are recognized after sales revenue is deducted from the cost of goods sold, marketing expenses, and general expenses. In determining net profit, all unsellable product portions must be weighed based on market value. When calculating net profit, all changes in added value from the beginning to the end of the first year must also be considered. These changes are particularly important for perennial crops (Soekartawi, 2003). To calculate total income, the following formula is used:

$$\pi = TR - TC$$

Description:
π = Total Income/Profit
TR = Total Revenue
TC = Total Cost

Thus, total income/profit is obtained by subtracting total costs from total revenue. According to Suratiyah (2015), total costs can be calculated by adding fixed costs (FC) and variable costs (VC) using the following formula:

$$TC = FC + VC$$

Description:
FC = Fixed Cost
TC = Total Cost
VC = Variable Cost
TR = P x Q

Therefore, to achieve maximum profit, fixed costs are added to variable costs, resulting in total costs or maximum profit.

2.3 Revenue Theory

According to Boediono (2002), revenue refers to the income generated from the sale of products. The formula for total revenue is:

$$TR = P \times Q$$

Description:
TR = Total Revenue
P = Price
Q = Quantity of output produced

Therefore, to determine the total production revenue, the selling price is multiplied by the output/quantity produced.

2.4 Cost Theory

Cost is one of the most important factors in decision-making. A clear understanding of the cost concept is crucial when making return decisions. For determining the costs incurred by a furniture company, the following formula is used:

$$TC = FC + VC$$

Description:
TC = Total cost of the furniture business
FC = Fixed cost of the furniture business
VC = Variable cost of the furniture business

According to Ftharrozi (2003), costs can be categorized by type:

a. Total cost is the entire cost incurred by the furniture industry to produce a product. Total cost is the sum of fixed and variable costs.
b. Fixed costs are obligations that must be paid and do not change in amount over a period, including depreciation of equipment and machinery, salaries of permanent employees, maintenance, and repair costs of systems and infrastructure.
c. Variable costs are obligations that must be paid and can vary in amount over a period, including raw materials, electricity, supporting materials, and wages.

Previous Research

Kurniati (2018) stated that the Palm Sugar industry in Pageraji village is efficient, with an average efficiency level of 1.16. For each classification of business size, the larger the business, the higher the efficiency. The average per capita income from the Palm Sugar industry is Rp 15,981.84 per month, meeting only 2.26 percent of the living costs that need to be fulfilled. The average per capita family income is Rp 92,709.09, meeting only 15.22 percent of the living costs. Ridwan (2020) found that the average net income of farmers producing molded sugar is higher than that of farmers processing sap sugar, with an average income of Rp 10,864,500 for molded sugar and Rp 7,555,200 for sap sugar. The average selling price of Palm Sugar is higher (Rp 2,044,800) compared to molded sugar (Rp 1,300,500), and the average income from molded sugar is higher (Rp 12,208,000). Even though granular sugar is priced at Rp 9,600,000/-, only 17 percent of farmers produce Palm Sugar. Yulianita (2017) conducted research titled "Income Analysis of Coconut Palm Sugar Business: A Case Study in Simpangkiri District, Subursalam City." According to the survey results, the income of coconut sugar project participants is Rp 10,284,428 per month.

3. RESEARCH DESIGN AND METHOD

This research was conducted in Makmur Village, Palolo District, Sigi Regency. This area is one of the villages in Palolo District where the community is engaged in Palm Sugar production, specifically utilizing sugar palm sap as the raw material. The study is accurate as of January 2024. The data collection methods included interviews and observations. The sampling method chosen for this research is descriptive (descriptive research). This research aims to investigate and clarify a phenomenon or social reality by describing a set of variables related to the problem or entity being studied. The goal of this descriptive research is to comprehensively describe, explain, and address the research problems. This study uses both quantitative and qualitative data sources. Quantitative data, which are numerical and can be analyzed statistically, are naturally expressed in numerical form. Qualitative data, on the other hand, are described verbally and cannot be analyzed numerically. The data sources in this research are obtained from primary and secondary data. Primary data is collected by interviewing respondents (sugar palm artisans) directly using questionnaires designed according to the research problems. Secondary data is obtained from relevant institutions, including data from the village office and literature that supports this research. The data analysis methods used in this research are:

1. Total Cost Analysis

   According to Suratiyah (2015), total cost is calculated by adding fixed costs (FC) and variable costs (VC) using the following formula:

$$TC=FC+VC$$

   Description:
   TC = Total Cost
   FC = Fixed Cost
   VC = Variable Cost

2. Total Revenue Analysis

   According to Suratiyah (2015), total revenue (TR) is generally calculated by multiplying the production quantity (Y) by the selling price (Py) using the following formula:

$$TR=Py\times Y$$

   Description:
   TR = Total Revenue
   Py = Product Price

Y = Production Quantity

3. Income Analysis

According to Suratiyah (2015), income (I) is the difference between total revenue (TR) and total cost (TC), expressed by the following formula:

$$I=TR-TC$$

Description:
I = Income
TR = Total Revenue
TC = Total Cost

4. Revenue and Cost (R/C) Analysis

According to Suratiyah (2015), the R/C ratio is the comparison between total revenue and total cost, calculated using the following formula:

$$R/C = \frac{TR}{TC}$$

Description:
Revenue = Total revenue obtained
Cost = Total cost incurred

There are three criteria in this calculation:

a. If R/C > 1, the farming business is profitable.
b. If R/C = 1, the farming business breaks even.
c. If R/C < 1, the farming business incurs a loss.

4. RESULT AND DISCUSSION

4.1 Variable Costs

Table 1 outlines the variable costs incurred by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, over one month.

Table 1. Variable Costs for Palm Sugar Artisans in Makmur Village (Monthly)

No.	Variable Cost	Price (Rp)	Quantity	Total Cost (Rp)
1	Palm Sugar	20,000	10 (Jerricans)	200,000
2	Candlenut	10,000	1 (Pack)	10,000
3	Lime	10,000	1 (Pack)	10,000
4	Coconut Shell	10,000	10 (Pieces)	100,000
5	Plastic	25,000	1 (Pack)	25,000
6	Firewood	50,000	5 (Bundles)	250,000
	Total			**595,000**

Source: Processed Primary Data, 2024

Table 1 shows that the variable costs incurred by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, for one month of production amount to Rp 595,000. The breakdown is as follows: the price of sugar palm sap is Rp 20,000 per jerrican, with an initial purchase of 10 jerricans totaling Rp 200,000. Candlenut costs Rp 10,000 for one pack, totaling Rp 10,000. Lime also costs Rp 10,000 for one pack, totaling Rp 10,000. Coconut shells cost Rp 10,000 per piece, with an initial purchase of 10 pieces totaling Rp 100,000. Plastic costs Rp 25,000 for one pack, totaling Rp 25,000.

Firewood costs Rp 50,000 per bundle, with an initial purchase of 5 bundles totaling Rp 250,000. Thus, the total variable costs amount to Rp 595,000.

4.2 Fixed Costs

Fixed costs are the expenditures that do not vary with the level of production. Fixed costs only include depreciation of equipment. See Table 2 for the total fixed costs incurred by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency.

Table 2. Fixed Costs for Palm Sugar Artisans in Makmur Village (Monthly)

No.	Fixed Cost	Price (Rp)	Quantity	Total Price (Rp)	Economic Life (Months)	Depreciation/Month (Rp)
1	Kettle	520,000	1	520,000	36	14,444
2	Stirring Spoon	10,000	1	10,000	12	833
3	Jerricans	10,000	5	50,000	36	1,388
	Total					**16,665**

Source: Processed Primary Data, 2024

Table 2 indicates the fixed costs for the Palm Sugar business, including a kettle priced at Rp 520,000 with an economic life of 36 months, resulting in a monthly depreciation of Rp 14,444. The stirring spoon costs Rp 10,000 with an economic life of 12 months, resulting in a monthly depreciation of Rp 833. Five jerricans cost Rp 50,000 with an economic life of 36 months, resulting in a monthly depreciation of Rp 1,388. Therefore, the total fixed costs amount to Rp 16,665 per month.

4.3 Total Costs

Total costs are the sum of fixed and variable costs. See Table 3 for the total costs incurred by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency.

Table 3. Total Costs for Palm Sugar Artisans in Makmur Village (Monthly)

No.	Type of Cost	Amount/Month (Rp)
1	Variable Costs	595,000
2	Fixed Costs	16,665
	Total	**611,665**

Source: Processed Primary Data, 2024

Table 3 shows that the total costs incurred by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, for one month of production amount to Rp 611,665. This total is derived from the sum of fixed costs (Rp 16,665) and variable costs (Rp 595,000), resulting in Rp 611,665.

4.4 Revenue

Revenue is the product of the quantity of Palm Sugar produced and the selling price of Palm Sugar. See Table 4 for the total revenue obtained by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency.

Table 4. Revenue for Palm Sugar Artisans in Makmur Village (Monthly)

No.	Revenue	Amount
1	Palm Sugar Output (Pieces)	95
2	Price (Rp)	18,000
	Total Revenue (Rp)	**1,710,000**

Source: Processed Primary Data, 2024

Table 4 shows that the total revenue obtained by Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, for one month of production is Rp 1,710,000. This amount is derived from multiplying the production output of 95 pieces by the price of Rp 18,000 per piece, resulting in Rp 1,710,000.

4.5 Income

Income information for Palm Sugar artisans in Makmur Village, Palolo District, Sigi Regency, is provided in Table 5.

Table 5. Income and Feasibility for Palm Sugar Artisans in Makmur Village (Monthly)

No.	Description	Amount/Month (Rp)
1	Revenue (TR)	1,710,000
2	Total Cost (TC)	611,665
3	Income (I)	1,098,335
4	R/C Ratio	2.79

Source: Processed Primary Data, 2024

Table 5 shows that the income of Palm Sugar producers in Makmur Village, Palolo District, Sigi Regency, is Rp 1,098,335. Based on the R/C ratio analysis, the feasibility of this business is 2.79, which is greater than 1, indicating that the business is profitable and feasible. This conclusion is drawn from the difference between total revenue and total costs over one month of production. The R/C ratio greater than 1 suggests that the revenue exceeds the total costs, making the business profitable and worth pursuing.

5. CONCLUSIONS

Based on the discussion presented above, the research conducted in Makmur Village, Palolo District, Sigi Regency, concludes that the income generated is Rp 1,710,000. The total production cost for Palm Sugar producers is Rp 611,665, which includes both fixed and variable costs. To calculate the income or profit, the formula TR-TC (Total Revenue - Total Cost) is used, resulting in an income of Rp 1,098,335. The R/C Ratio analysis indicates that the Palm Sugar business in Makmur Village, Palolo District, is profitable, with an R/C Ratio of 2.79. The feasibility value of the Palm Sugar project shows that it is viable for implementation in Makmur Village, Palolo District. Based on the conclusions drawn from the research, several recommendations are proposed. To increase the income of Palm Sugar producers, it is essential to boost production. This, however, depends on the artisans' ability to find larger markets. Additionally, to enhance the income from Palm Sugar, it is necessary to mold the sugar into various shapes to attract consumer interest. Artisans are also encouraged to actively participate in corporate programs such as training and seminars organized by the government and relevant institutions. These measures aim to improve the skills and market reach of the Palm Sugar artisans, ultimately leading to increased production and higher income.

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