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Added Value From Coffee Processing In Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency (Case Study: Rongi Coffee By BUMDES Lamando Jaya)

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Abstract

This study was conducted to analyze the value added generated from the processing of Rongi Coffee by the Lamando Jaya Village-Owned Enterprise (BUMDes) in Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency. The Hayami method was used in this study to calculate the value added from the coffee production process. The results show that Rongi coffee processing generates a value added of Rp71,547/kg with a value-added ratio of 49.68%. The profit obtained reaches Rp44,547/kg with a profit ratio of 62.23%. The main factors influencing this value added include raw material prices, labor costs, and production efficiency. Marketing strategies and product quality improvement are recommended to enhance competitiveness and the well-being of local farmers

Keywords: Rongi coffee, value added, Bumdes, Hayami method, marketing

INTRODUCTION

The agricultural sector plays a strategic role in Indonesia's economy, particularly in providing employment, increasing community income, and supporting economic development in rural areas. One of the plantation commodities with significant economic value is coffee. In addition to being a commodity for domestic trade and export, the coffee industry also offers opportunities for agroindustrial development by processing the harvest into products with higher market value. The development of agroindustry based on local commodities is one strategy to increase the value-added of agricultural products, expand employment opportunities, and strengthen the rural economy (Amalia, 2015).

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One local coffee product with development potential is Rongi Coffee, which originates from Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency. Rongi Coffee is a Robusta coffee known for its local characteristics and traditional processing methods. The name "Rongi Coffee" derives from the village's former name before it was renamed Sandang Pangan Village. The potential of this coffee is supported by community activities, as the majority of residents are engaged in agriculture, including coffee cultivation. The number of coffee farmers in the village is estimated to range from 200 to 300 people, with cultivation areas located at elevations of more than 200 meters above sea level.

The development of Rongi Coffee is not limited to cultivation but also involves processing the harvest into ground coffee. In this process, the Lamando Jaya Village-Owned Enterprise (BUMDes) plays a key role in managing local resources by processing coffee beans into market-ready products. The involvement of young people in this business venture is part of an effort to increase the economic value of local commodities. Rongi Coffee is marketed as 100% authentic coffee and has been certified under the Home Industry Food Production Certificate (SPP-IRT). The existence of this processing business indicates opportunities for the development of a coffee agroindustry that can support increased community income and the village economy.

Although it has development potential, Kopi Rongi's sales data indicates a decline in the number of products sold. According to the sales records of the Kopi Rongi business, operated by BUMDes Lamando Jaya, the number of products sold in 2022 reached 6,606 packages, while in 2023 it decreased to 6,227 packages. Each package contains 75 grams of ground coffee. Consequently, sales volume decreased by 379 packages, or approximately 5.74%, compared to the previous year. This data reflects product sales records and therefore does not directly represent the total volume of coffee production at the farmer level. Nevertheless, this decline provides relevant information for assessing business development, particularly regarding raw material processing, value addition, and the business's ability to generate profits.

Processing agricultural produce into market-ready products is one way to increase the value added of plantation commodities. In the coffee industry, this process may include raw material selection, post-harvest processing, roasting, grinding, packaging, and marketing. Each stage requires the use of raw materials, labor, and production costs that affect the economic value of the final product. Therefore, the amount of value added is determined not only by the difference between the selling price of the processed product and the price of raw materials but also by other input costs and the contribution of labor in the processing.

Value-added analysis can be used to determine the economic value created through the process of transforming raw materials into final products. One approach that can be used is the

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Hayami method, which allows for the calculation of value added based on output value, raw material costs, contributions from other inputs, labor, and business profits. Through this approach, business operators can gain insight into the efficiency of processing and the distribution of the economic value generated. This information is crucial for small-scale agro-industries and village-owned enterprises in formulating business development strategies based on local commodities.

A number of previous studies have shown that coffee processing can generate varying levels of value added depending on the characteristics of the raw materials, processing methods, and production cost structure. Wibowo (2022), in a study on the processing of Arabica coffee beans at Rumah Kopi Banjarsengon in Jember, found that value added varied according to the processing method used. The highest value added was achieved through the natural processing method at Rp10,158/kg, with a value-added ratio of 54.40%. Meanwhile, Pasyah (2023) found that processing coffee beans into ground coffee at the Kopi Kawahaku home-based industry in Kendari City generated a value added of Rp13,859/kg with a value-added ratio of 49%. Rahmalia (2023) also reported that the processing of ground coffee at the Tjap Tugu Liwa agroindustry generated added value of Rp12,689.54/kg with a ratio of 30.17%.

These various studies provide an overview of the value added in coffee processing businesses across several regions in Indonesia. However, the characteristics of raw materials, processing methods, business scale, and market conditions in each agroindustry can result in varying levels of value added. Therefore, a specific study is needed on the Rongi Coffee processing business managed by the Lamando Jaya Village-Owned Enterprise (BUMDes) in Sandang Pangan Village. This study is important for obtaining empirical information regarding the amount of value added generated from processing coffee beans into ground coffee, as well as its contribution to the development of businesses based on local potential.

Based on the above, this study aims to analyze the value added from processing coffee beans into ground coffee at the Kopi Rongi business operated by BUMDes Lamando Jaya in Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency. The research results are expected to serve as a basis for business managers to evaluate processing activities and develop the local coffee business, as well as to provide information for relevant parties in supporting the development of plantation agroindustry in rural areas.

METHOD

This study was conducted at the Kopi Rongi business managed by BUMDes Lamando Jaya in Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency. The selection of the

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research location was based on the presence of a business that processes Robusta coffee beans into ground coffee, which has the potential to generate added value for local commodities. This study focuses on analyzing the added value generated from the process of processing coffee beans into ground coffee.

The data used in this study included quantitative data related to raw material usage, the quantity of products produced, product selling prices, other input costs, labor utilization, and labor wages in the coffee processing process. These data were used as the basis for calculating value added and business profits. Data sources, data collection techniques, and the observation period were adjusted to the actual conditions of the study.

Data analysis was conducted using the value-added method proposed by Hayami et al. (1987). This method was used to determine the amount of value added generated from processing coffee beans into ground coffee, while also identifying labor income and profits resulting from the processing activities. Calculations were based on the units of raw materials processed so that the analysis results could reflect the economic value generated during the production process.

The analysis began with calculating the conversion factor, which is the ratio of the amount of ground coffee produced to the amount of coffee beans used as raw material. Next, the labor coefficient is calculated based on the ratio of the number of labor-days (HOK) used to the amount of raw material processed. The output value is obtained by multiplying the conversion factor by the selling price of ground coffee. After that, the value added is calculated by subtracting the cost of raw materials and other input costs per kilogram of raw material from the output value.

The formula for calculating value added is as follows:

VA = NO - RB - OIC

Notes:

(NT) = Value added (Rp/kg of raw material).

(NO) = Output value (Rp/kg of raw material).

(HB) = Raw material price (Rp/kg).

(IOL) = Contribution of other inputs (Rp/kg of raw material).

The value-added ratio is calculated by comparing value added to output value, then multiplying by 100%. Labor income is calculated by multiplying the labor coefficient by the wage per HOK. The labor share is obtained by comparing labor income to value added. Meanwhile, processing profit is calculated by subtracting labor income from value added, while the profit rate is calculated by comparing profit to value added.

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Mathematically, these calculations are expressed as follows:

RNT = (NT / NO) × 100%

PTK = KTK × UTK

PTK_s = (PTK / NT) × 100%

KU = NT − PTK

TKU = (KU / NT) × 100%

Notes:

(RNT) = Value-added ratio (%).

(PTK) = Labor income (Rp/kg of raw material).

(KTK) = Labor coefficient (HOK/kg of raw material).

(UTK) = Labor wages (Rp/HOK).

(PTK_s) = Labor share (%).

(KU) = Business profit (Rp/kg of raw material).

(TKU) = Profit rate (%).

The results of the subsequent calculations are presented in a table analyzing value added using the Hayami method to facilitate the interpretation of output value, value added, value-added ratio, labor income, and business profit. The results of the analysis are used to illustrate the economic value generated through the processing of coffee beans into ground coffee at the Kopi Rongi business, which is managed by BUMDes Lamando Jaya.

RESULTS AND DISCUSSION

Kopi Rongi Production and Marketing Process

The processing of Kopi Rongi, managed by BUMDes Lamando Jaya in Sandang Pangan Village, involves several stages: roasting, grinding, and packaging. Based on an interview with the BUMDes chairperson, roasting is done traditionally using a wok heated over a stove. In a single production cycle, the roasting process takes about two days and involves one worker paid a wage of Rp300,000. This process is carried out to bring out the coffee's distinctive aroma and flavor before moving on to the next stage of processing.

After roasting, the coffee beans are cooled to room temperature and then ground using a grinder to produce coffee powder. The next step is packaging using special Kopi Rongi packaging to maintain product quality and establish its identity as the village's flagship product. This sequence of processes demonstrates that the Kopi Rongi business combines traditional processing methods during the roasting stage with the use of machinery during the grinding stage.

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For marketing, the Lamando Jaya Village-Owned Enterprise (BUMDes) relies on word-of-mouth promotion and direct sales through shops and coffee shops around Baubau City and Buton Island. The product is also marketed through partnerships with local businesses, including coffee shops and souvenir stores. This strategy allows the product to reach consumers outside the village, although marketing efforts still rely heavily on direct promotion and local business networks.

These production and marketing processes play a crucial role in creating added value for Rongi Coffee. Processing coffee beans into ground coffee yields a market-ready product with a selling price different from that of the raw material. However, the amount of added value generated depends on the quantity of product produced, the price of raw materials, other input costs, and the labor used during processing.

Raw Material Supply and Labor Use

Raw materials are the primary component in the processing of Rongi Coffee. Based on primary data from 2025, BUMDes Lamando Jaya sources coffee beans directly from farmers in Sandang Pangan Village and surrounding villages. The price of the raw materials ranges from Rp35,000 to Rp50,000 per kilogram, while the price used in the value-added calculation is Rp50,000 per kilogram.

Table 1 shows that the use of raw materials in business calculations amounts to 18.75 kg per month, with a total raw material cost of Rp937,500.

Table 1. Rongi coffee raw material usage in 2025

Description	Amount
Coffee bean raw materials	18.75 kg/month
Raw material price	Rp50,000/kg
Total raw material cost	Rp937,500/month

Procuring raw materials directly from farmers demonstrates a link between coffee cultivation and agroindustry at the village level. This procurement model can facilitate access to raw materials for the Village-Owned Enterprise (BUMDes) while opening up marketing opportunities for local farmers. However, the sustainability of processing activities remains influenced by the availability of raw materials, the consistency of coffee bean quality, and fluctuations in purchase prices.

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In terms of labor, the production process involves one worker specifically tasked with roasting. This worker receives a wage of Rp300,000 for a single production run lasting approximately two days. Meanwhile, grinding, packaging, and marketing are handled directly by the BUMDes chairperson without additional labor.

This labor utilization pattern indicates that most production stages are managed directly by the BUMDes management, while the roasting process employs paid labor. This condition must be taken into account in the value-added analysis because the calculation of labor income and profit heavily depends on the number of workers included in the calculation. Therefore, the analysis results reflect the labor components recorded in the study, not the total value of the work time of all parties involved.

Production and Selling Price of Rongi Coffee

Based on the study findings, the use of 18.75 kg of raw materials yields 15 kg of ground coffee in a single monthly production cycle. Thus, there is a difference of 3.75 kg between the weight of the raw materials and the final product. This difference is reflected in a conversion factor of 0.8, meaning that every one kilogram of coffee beans produces 0.8 kg of ground coffee.

The selling price of Rongi Coffee used in the calculation is Rp180,000 per kilogram. This price serves as the basis for calculating the output value based on the quantity of product produced from each kilogram of raw materials. The output value is not the same as the selling price per kilogram of the product because the Hayami method accounts for the conversion factor from raw materials to the final product.

A comparison of the quantities of raw materials, production output, and selling price serves as the basis for assessing the economic value generated during processing. The greater the output value generated with controlled input usage, the greater the potential for value added. However, assessing the economic feasibility of a business still requires consistent calculations of other input costs and labor expenses.

Value-Added Analysis of Rongi Coffee Using the Hayami Method

A value-added analysis was conducted to determine the economic value generated from processing coffee beans into ground coffee at the Lamando Jaya BUMDes enterprise. The calculation used the Hayami method, taking into account the amount of output, raw materials, labor, selling price, raw material costs, and contributions from other inputs. The results of the calculation are presented in Table 2.

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Table 2. Value-Added Analysis of Rongi Coffee Processing in 2025

Calculation Components	Value
Output, Inputs, and Prices	
1. Output (kg)	15
2. Raw material input (kg)	18.75
3. Labor (HOK)	1.7
4. Conversion factor	0.80
5. Labor coefficient (HOK/kg)	0.09
6. Output price (Rp/kg)	180,000
7. Labor wage (Rp/HOK)	300,000
Revenue and Profit	
8. Raw material price (Rp/kg)	50,000
9. Other input costs (Rp/kg)	22,453
10. Output value (Rp/kg of raw material)	144,000
11a. Value added (Rp/kg of raw material)	71,547
11b. Value-added ratio (%)	49.68
12a. Labor income (Rp/kg of raw material)	27,000
12b. Labor share (%)	37.74
13a. Profit (Rp/kg of raw material)	44,547
13b. Profit Margin (%)	62.23

Based on Table 2, the output value of Rongi coffee processing reaches Rp144,000 per kilogram of raw material. This value is obtained by multiplying the conversion factor of 0.80 by the selling price of ground coffee, which is Rp180,000 per kilogram. In other words, every kilogram of processed coffee beans generates an output value of Rp144,000 before deducting the cost of raw materials and other input costs.

The recorded value added was Rp71,547 per kilogram of raw material, with a value-added ratio of 49.68%. This figure indicates that processing coffee beans into ground coffee generates additional economic value after deducting the cost of raw materials and other input costs. Based on the criteria used in this study—where a value-added ratio below 15% is considered low, 15–40% is moderate, and over 40% is high—Rongi Coffee's value-added ratio falls into the high category. Thus, the processing of coffee beans into ground coffee at BUMDes Lamando Jaya has the potential to generate significant economic value for the business.

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Labor income, as calculated using the Hayami method, amounts to Rp27,000 per kilogram of raw material, with labor accounting for 37.74% of the value added. Meanwhile, processing profit is recorded at Rp44,547 per kilogram of raw material, with a profit margin of 62.23%. These results indicate that, based on the calculated components, the portion of value added allocated as profit is greater than the portion allocated as labor income.

Nevertheless, these profit figures must be understood within the limitations of the Hayami method's calculations and the cost components included. The BUMDes management handles grinding, packaging, and marketing without additional labor , which is not accounted for in the calculations. If the management's working hours and other unaccounted-for costs were factored in, the overall business profit could differ. Therefore, these figures are more accurately interpreted as profit based on the available calculation components.

Overall, the analysis results indicate that processing coffee beans into ground coffee provides positive value added for the Kopi Rongi business. This value added is generated through roasting, grinding, and packaging activities that produce a ready-to-sell product. This finding aligns with Pasyah's (2023) study on the Kopi Kawahaku business in Kendari City, which reported a value-added amount of Rp13,859 per kilogram with a ratio of 49%. The similarity in these ratios indicates that small-scale coffee processing businesses can generate relatively high value-added ratios, even though the nominal values differ depending on the prices of raw materials, selling prices, and the cost structures of each business.

Rahmalia's (2023) study on the Tjap Tugu Liwa agroindustry also found a value-added amount of Rp12,689.54 per kilogram with a ratio of 30.17%. The difference in results compared to Kopi Rongi demonstrates that value added cannot be generalized across businesses because it is influenced by each business's specific production conditions and cost structure. Therefore, the findings from the Kopi Rongi study can serve as a basis for evaluation by BUMDes Lamando Jaya to maintain product quality, control input costs, and develop marketing strategies so that the economic value generated from coffee processing can be sustained.

CONCLUSION

Based on the research findings regarding the value-added analysis of Rongi Coffee processing at BUMDes Lamando Jaya in Sandang Pangan Village, Sampolawa Subdistrict, South Buton Regency, it can be concluded that the Rongi Coffee processing involves traditional roasting of coffee beans, grinding into coffee powder, and packaging before being marketed to consumers. These processing activities produce ground coffee that has a higher selling price than the raw material.

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An analysis using the Hayami method shows that processing coffee beans into Rongi Coffee generates a value-added of Rp71,547 per kilogram of raw material, with a value-added ratio of 49.68%. The processing profit is recorded at Rp44,547 per kilogram of raw material, with a profit margin of 62.23%. This value-added ratio falls into the "high" category based on the criteria used in the study. These findings from the " " study indicate that processing coffee beans into ground coffee has the potential to generate economic value for the development of the Kopi Rongi business managed by BUMDes Lamando Jaya.

BUMDes Lamando Jaya is expected to improve production process efficiency through better workforce management, control of input costs, and the use of processing technologies appropriate to the business's capacity. Developing product variations, improving packaging, and expanding marketing strategies should also be considered to enhance Kopi Rongi's competitiveness and broaden its consumer reach.

In addition, strengthening cooperation between the BUMDes and local coffee farmers is necessary to ensure the availability and quality of raw materials. Support from the government and relevant parties through processing training, business management assistance, and access to capital is also expected to support the business's sustainability. Further research is recommended to assess the financial feasibility and marketing strategies of Kopi Rongi so that the business's development potential can be evaluated more comprehensively.

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